THE UNIVERSITY of EDINBURGH

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Reading the Landscape of Ezekiel 40-48:
a Theology of Resilience

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ABBREVIATIONS

ASV	American Standard Version
BBB	Bonner biblische Beiträge
BCE	before the common era
BDB	F. Brown, S. R. Driver, and C. A. Briggs, *Hebrew and English Lexicon of the Old Testament*
c.	circa
CE	common era
cf.	compare
EDS	Ecosystem disservices
ERV	English Revised Version
ESV	English Standard Version
JSOT	*Journal for the Study of the Old Testament*
KJV	King James Version
LXX	Septuagint
MT	Masoretic Text
NAB	New American Bible
NASB	New American Standard Bible
NATO	North Atlantic Treaty Organization
NIV	New International Version
NKJV	New King James Version
NRSV	New Revised Standard Version
PL	Jacques P. Migne, *Patrologia Latina* (Paris, 1845)
RINAP	Royal Inscriptions of the Neo-Assyrian Period
RSV	Revised Standard Version
SBLDS	Society of Biblical Literature Dissertation Series
TWOT	*Theological Wordbook of the Old Testament*
UNISDR	United Nations International Strategy for Disaster Risk Reduction
v(v).	verse(s)

ABSTRACT

The Old Testament book of Ezekiel presents (in chapters 40 to 48) a landscape restoration plan after the destruction of Jerusalem. Objects, spatial elements, units, buildings, structures and landscapes are described and measured in the 'visions of God'.

The hypothesis of my study is that spatial planning plays an important role in influencing landscape structures in a way that cities are made less vulnerable and more resilient to multi-hazard threats. In order to explore new ways of conceptualising this envisioned plan, I combine the methods of landscape architecture with a study of Hebrew literature. First, the concept of a 'Pattern Language', developed by the widely influential architect and design theorist Christopher Alexander, is used to re-categorize the spatial patterns evident in Ezekiel's vision. Patterns believed to be 'archetypal', deeply rooted in the nature of things and a part of human nature, are recognised. Secondly, in order to know which patterns are more significant, and how they are arranged, textual observation is conducted by choosing two words – 'behold' and 'measure' – as the indicators of the sequence of experience in the landscape. The result displays a thematic chiasm and a parallel structure. Landscape patterns including ENCIRCLING/ROUND ABOUT STRUCTURES, FOURFOLD MEASUREMENT, SQUARED SPACES and WATER FROM UNDERNEATH, play out scenes of awe and measurement in the landscape. With regard to the historical context of the landscape of Ezekiel 40-48, this thesis explores historical landscapes in the ancient Near East, and concludes that Ezekiel 40-48 demonstrates archetypal patterns that are shared with other cultures. However, archetypal patterns based on the nature of things and human nature should not be viewed as evidence of imitation or borrowing. Moreover, it is very likely that the ancient Israelite Iron Age town planning strategies serve as the basic concept of Ezekiel 40-48.

Inspired by the Hebrew literary art that naturally forms corresponding themes, my research further argues that Ezekiel 40-48 can be understood as an ancient resilient landscape plan that encompasses rigidity and ductility, and two processes: resistance and recovery. Given the ancient hazards described in Ezekiel (the sword, famine, evil creatures, and pestilence), the mechanism of landscape resilience in Ezekiel 40-48 is similar to modern time ecosystem resilience, as well as disaster risk reduction, and epidemiology/public health of war and defence policy.

Ezekiel 40-48 plans a self-sufficient city that is resistant to wars with its capacity to ensure food and water security. The riparian ecosystem provides medicinal resources with a life-giving river running through the land to strengthen the ability to recover. The thesis supports Greenberg's view that Ezekiel 40-48 fulfils the divine promises of 'the covenant of wellbeing' in Ezekiel 37.24b-28.

In conclusion, this thesis develops a new theological way of reading Ezekiel 40-48 which prioritizes landscape. An understanding of the ancient planning in Ezekiel 40-48 may shed light on our reading of the text and our way of viewing the visions, as well as our planning of the environment.

LAY SUMMARY

The book of Ezekiel in the Hebrew scriptures describes the experiences and visions of the prophet Ezekiel at the time of the Israelite exile in Babylon. Chapters 40 to 48 present an ancient report of an ideal environment that prophet Ezekiel experiences through 'visions of God'. In these visions, large and small spaces are carefully measured and described. Many are known to scholars, but many questions about the landscape elements have remained unresolved. This study understands Ezekiel 40-48 as a landscape plan. As a plan there should be problems to solve and goals to achieve. By exploring the planning concept of Ezekiel 40-48 this study hopes to show how ancient minds dreamt a renewed homeland by means of landscape planning. This study uses architecture theorist Christopher Alexander's pattern language to analyse the space patterns in their written form. Alexander's patterns identify universal archetypes that, when followed, can form good spaces. Alexander's hierarchy of patterns prove to be useful for exploring the patterns in Ezekiel 40-48 from the regional level and the town/city to the small patterns in the households. The literary structures of Ezekiel 40-48 show how the patterns can be organised to correspond to each other, and which patterns might be of special significance. After exploring the patterns, this study discusses Ezekiel's plan in light of archaeological and historical developments in landscape planning. Ancient Mesopotamian and Israelite/Judean cultures demonstrate similar landscape patterns, but Ezekiel 40-48 seems to have its own way of planning. Walls and rooms are combined to form encircling structures. These become the basic framework of the vision in Ezekiel 40-48. The patterns reveal a concept that combines building-and-planting and building-and-filling to fight against ancient wartime curses/hazards, and show the builder's wisdom. This study suggests that Ezekiel 40-48 can be applied to modern day studies of resilience, because an ecologically resilient system has to be able to resist (the hazards) and recover (from the damage), and to be able to go through the process of resistance towards recovery following a trauma or impact. The hope is to make the landscape resilient to hazards all around.

CHAPTER 1: INTRODUCTION

What is the vision? What is the problem? These are the questions that are essential for developing a good plan that meets the real needs of a physical landscape. Present day landscape architects, planners and architects often challenge each other with these questions in order to develop a better strategy to solve the problems and to encourage creative thinking from the very beginning of the planning process. Ezekiel 40-48, when read as a single literary unit based on its final form, can be understood as a piece of work that represents a utopian future restoration.[1] The full breadth of the plan has not yet been studied from the perspective of present day landscape architecture, taking degrees of both idealism and realism into consideration. Bearing in mind the fundamental questions 'What is the vision?' and 'What is the problem?' that are assumed to be common concerns for most architectural and landscape planners, this research focuses on the landscape and buildings described in Ezekiel 40-48, in light of historical and present day understandings of resilient landscape planning and design. The aim of this research is to demonstrate a conceptual framework for Ezekiel 40-48 by exploring the spatial patterns and landscape characteristics and finding an explanation for the necessity of the specific plan in Ezekiel 40-48. The underlying concept, which can give rise to different interpretations of the meaning of the given landscape, could help the development of contemporary landscape hermeneutics. Accordingly, the main research question is: What might be the planning concept that could help us conceptualise the landscape which features in Ezekiel 40-48? In order to answer this question, this thesis seeks to use interdisciplinary approaches and theories by combining the methods of landscape architecture with a study of Hebrew literature. Sub-questions of this thesis include: Can present day landscape and architecture planning/design concept and method be applied to the textual analysis of scripture? Is it possible to use Biblical scholarship to develop a landscape hermeneutic of contemporary relevance to theology?

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[1] Thilo Alexander Rudnig, *Heilig und Profan: Redaktionskritische Studien zu Ez 40-48* (Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft; Bd. 287; Berlin: De Gruyter, 2000), pp. 58-64.

1.1 Why do I read Ezekiel 40-48 from the perspective of landscape architecture?

As I read Ezekiel 40-48 I am amazed by Ezekiel's capacity to describe the landscapes. In referring to 'Ezekiel' or 'the author of Ezekiel', it is not my intent to oversimplify the book's complex redaction history.[2] The focus of the present study is on the book in its final literary form. Generally, when I speak of 'Ezekiel' or 'the author(s)', I refer to a historical Ezekiel and/or possible authors and redactors responsible for the chapters in its present form.

Being aware that the landscape in Ezekiel 40-48 might play two simultaneous roles, descriptive and metaphoric, my modern landscape literacy tells me that reading it as a landscape planning project might open a way for interpretation. If so, what is the vision, and what might be the problem behind Ezekiel 40-48? As I further investigate, the range of language, symbolism, allegory, mystery, and the vitality of the message in Ezekiel emerges as rich and complex, I am reminded of Professor Davidson's famous words: 'The student of the book must take leave of his task with a certain sense of defeat'.[3] According to Cameron Mackay:

> Chapters 40-42 are occupied with temple-measurements, an architectural jigsaw which commentaries reveal as a practicable ground-plan; yet just that and nothing more; 43-46 are largely devoted to ceremonial, appreciation of which asks familiarity with Mosaic ritual; in 47.1-12 a mystic river brings a gleam of sunshine, but thereafter we are fog-bound in the division of the land, matter-of fact enough but generally regarded, in odd contrast to the temple-plan, as nebulous.[4]

In this description of reading Ezekiel 40-48, the 'practicable' ground-plan and the 'nebulous' division of the land create an odd contrast. A river brings up a 'gleam of sunshine', but this seems to be out of the 'plan' and is described as being 'mystic'. Jerome, in his commentary on the Book of Ezekiel in 414 CE, describes Ezekiel 40-48 as 'the ocean of Scriptures and labyrinth of God's mysteries' (*Scripturarum*

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[2] Readers interested in Ezekiel's redaction history will find an abundance of scholarly analysis and debate. See W. Zimmerli, *Ezekiel: A Commentary on the Book of the Prophet Ezekiel*, ed. by F. M. Cross and K. Baltzer, trans. by R. E. Clements, 2 vols (Philadelphia: Fortress Press, 1979).

[3] A. B. Davidson, *A Commentary on Ezekiel The Book of the Prophet Ezekiel, with Notes and Introduction,* Cambridge Bible Series (Cambridge: University Press, 1892)

[4] Cameron Mackay, 'Why Study Ezekiel 40-48?' *The Evangelical Quarterly,* 37.3 (July-Sept. 1965), pp. 155-67.

oceanum et mysteriorum Dei labyrinthus).[5] In a letter to Eustochium, Jerome used *The Aeneid* to describe his experience of writing the commentary on Ezekiel 40-48:

> the labyrinth in high Crete had a path
> built out of blind walls, an ambiguous
> maze of a thousand ways, ...
> that mocked all signs of finding a way out
> a puzzle ... irresolvable and irretraceable [Aen. 5.588-91][6]

Jerome's labyrinth, maze, puzzle, and Cameron's jigsaw are examples of how spatial metaphors are used for describing the mysterious characteristics of Ezekiel 40-48. The single-path labyrinth and the tricky, entrapping maze might reveal scholars' confusion while studying these chapters.

Indeed, Ezekiel 40-48 might be abstract and confusing. Nevertheless, in the twelfth century, *In visionem Ezechielis* by Richard of St Victor (d. 1173) includes a number of highly detailed and exceptionally well-considered plans and elevations based on Ezekiel 40-48. According to the historian Karl Kinsella, Richard was perhaps among the first to use the term 'plan' (*planum*) to describe an architectural drawing that derives from medieval geometrical terminology to represent in two dimensions a three-dimensional structure.[7] Kinsella states:

> Richard was frustrated by the inherent inability of 'plane' figures to represent three dimensions and he was therefore forced to innovate in his drawings, by producing both plans and elevations to give the viewer a complete picture.[8]

Drawing on geometrical terminology, Richard's concept of the plans in Ezekiel 40-

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[5] This is the summary of his original text: 'Ita et ego, sanctarum scripturarum ingressus oceanum et mysteriorum Dei ut sic loquar labyrinthum - de quo scriptum est: *Posuit tenebras latibulum suum* et*: Nubes in circuitu eius [...]'* (So I, having entered on the ocean of holy scriptures and mysteries of God shall speak like the labyrinth about which it is written: 'he put his refuge in darkness' and 'clouds are all around him' Ps. 96.2) See Saint Jerome, *S. Hieronymi Presbyteri Opera. Pars I, Opera Exegetica. 4, Commentariorum in Hiezechielem Libri XIV, Cura et studio Francisci Glorie* (Turnholti: Brepols, 1964), PL 448.

[6] This translation is from Allen Mandelbaum's translation of *The Aeneid* (New York: Bantam Books, 1971).
Ut quondam Creta fertur Labyrinthus in alta
parietibus textum caecis iter ancipitemque
mille viis habuisse dolum, qua signa sequendi
frangeret indeprensus et irremeabilis error.

[7] Karl Kinsella, 'Richard of St Victor's Solutions to Problems of Architectural Representation in the Twelfth Century', *Architectural History*, 59 (2016), pp. 3-24.

[8] Ibid., p. 19.

48 is very close to present day landscape architecture. Instead of constructing a three-dimensional model from two-dimensional information, as Richard of St. Victor painstakingly attempts, my research tries to understand Ezekiel 40-48 based on the layout of the plan, in which an underlying planning concept is assumed. Moving on from the medieval labyrinth that is used as a spatial metaphor to imagine Ezekiel 40-48, and the practical plans developed by Richard of St. Victor, 'Utopia', depicted by Sir Thomas More in his 1516 book *Utopia* (which literally means 'no place'), has been chosen to describe the tensions and ambiguities of Ezekiel 40-48 as a literary utopia.[9] Finally, highlighting the nature of technical details, modern time scholars find a 'blueprint', which is a production of the technical drawing documenting architectural and engineering design used between the nineteenth and mid-twentieth-centuries, useful to define Ezekiel 40-48.[10]

From the labyrinth to a blueprint, the successive use of spatial metaphors attempting to express what is being described in Ezekiel 40-48 inspires me to ask: What can be our contemporary contribution as we further explore new ways of conceptualizing this envisioned plan? The way that the temple, the river, and the land are assembled as a package raises intriguing possibilities for my research to fully assess Ezekiel 40-48 as a whole piece of landscape plan.

1.2 Why do I use Alexander's 'Pattern Language' as a method?

As a landscape architect my experience tells me that the best way to understand a plan is to talk to the planner. If this is not possible, observe and analyse the plan. Our situation now is that the original planners/designers of Ezekiel 40-48 are not available. The attempt to extract the knowledge from what we have — a written landscape in Ezekiel 40-48 in its final form — is like 'reverse engineering', also called 'back engineering', a process and an analysis extracting knowledge or design

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[9] Stephen L. Cook, 'Ezekiel's God incarnate!: The God that the temple blueprint creates', in *The God Ezekiel Creates,* ed. by P. M. Joyce and Dalit Rom-Shiloni (London: Bloomsbury, 2015), pp. 132-49.
[10] For instance, see Corrine Patton, 'Ezekiel's Blueprint for the Temple of Jerusalem' (doctoral thesis, Yale University, 1991) and Cook, 'Ezekiel's God incarnate!: The God that the temple blueprint creates', 132-49.

information in order to deduce design features from products with little or no additional knowledge about the procedures involved in their original production. Given the nature of the given 'product' — the final form of the Masoretic Text and its English translations,[11] which is space in written form — I use a concept and make my assumptions based on the contemporary architect and design theorist Christopher Alexander's 'Pattern Language', a widely-recognised standard in landscape architecture. One of my main criteria for the recognition of the patterns is to avoid getting into complex mystical and philosophical readings of Ezekiel. In so doing, my analysis is based on a comprehensive search of the key landscape patterns in the biblical Hebrew. NRSV is the default English translation of this study, however, due to the massive technical content in Ezekiel 40-48, this study uses KJV frequently because the literal translation of KJV is helpful for landscape analysis (as in Chapter 3). Some translations are based on the scholars' own translations. Some translations are mine. Various sources will be noted.

The diversity of terminology is apparent in the vocabulary for the landscape in Ezekiel 40-48. Fractal patterns are found across vast scales in the landscape of Ezekiel 40-48 in small objects such as tables, as well as large landscapes such as planned, squared regional districts, yet the fully integrated landscape is not yet well understood. It is therefore an important task of my research to pull together disparate sets of landscape and architectural terms that can be viewed together within a coherent framework or linked ideas of 'landscaping' or 'envisioning' in the ancient Near Eastern biblical world. In order to answer my research question on an assumed planning concept, there is still a gap between the individual spatial units and an overarching idea that can be used to make these individual units cohere into a meaningful landscape.

My strategy here is to use Alexander's concept of the archetypal 'patterns' that are deeply rooted in the nature of physical space, and the ways that humans relate to it

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[11] The traditional and standard text of the Hebrew text produced and safeguarded by the scholars known as Masoretes who lived in Tiberias and Babylonia between the seventh and tenth-centuries CE. This standard text has three main components: the letters, the vowel signs, and the accents. See 'Masoretic Text' in *The Anchor Yale Bible Dictionary*, vol. 4, ed. by David N. Freedman (New Haven and London: Yale University Press, 1992), pp. 597-99.

and utilise it.[12] The patterns are helpful for pulling together the individual landscape units into patterns that are believed to relate to each other to form a language for a space.

In fact, archaeological data provide direct evidence that indicate the use and patterns of landscape. Archaeologists, most notably Yigal Shiloh and Ze'ev Herzog, have discussed the 'four-room house' and 'casemate wall' as the basic patterns that shape Iron Age Israelite town planning.[13] Avraham Faust argues that many other cities are built according to a different planning pattern; nevertheless, various plans in the Iron Age 'share some basic rationale of accessibility and defence'.[14] The trajectory of the archaeologists' view from recognising the basic patterns to a deeper understanding of the common planning rationale supports my intention to explore the underlying planning concept by recognising the patterns of Ezekiel 40-48. The basic rationale of ancient plans reminds me of Alexander's 'abstract planning principle'. He states that contemporary designers fail to put new life into the city if they fail to 'search for the abstract ordering principle which the towns of the past happened to have, and which our modern conceptions of the city have not yet found'.[15] The attempt is also like an ancient Chinese philosophy, 格物致知 [gé wù zhì zhī]: 'to study the underlying principle to acquire knowledge and wisdom; pursuing knowledge to the end' — an approach for my studies of Ezekiel 40-48.

Recent publications reflect a rising interest in the in-depth study of 'the biblical space'. For instance, *Space and Place in Jewish Studies* discusses spatial key words such as *makom* (space), the Garden, Jerusalem, The Land, *bayit* (house), diasporas, and the City.[16] These are terms that scholars may agree have much to offer to a discussion of Ezekiel 40-48. However, Ezekiel 40-48's own distinctive spatial

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[12] Christopher Alexander, Sara Ishikawa, and Murray Silverstein, *A Pattern Language: Towns, Buildings, Construction* (New York: Oxford University Press, 1977)
[13] Yigal Shiloh, 'The Casemate Wall, the Four Room House, and Early Planning in the Israelite City', *Bulletin of the American Schools of Oriental Research*, 268 (1987), pp. 3-15.
[14] Avraham Faust, 'Accessibility, defence and town planning in Iron Age Israel', *Tel Aviv*, 29.2 (2002), pp. 297-317.
[15] Christopher Alexander, 'A CITY IS NOT A TREE', *Ekistics,* 23.139 (1967), pp. 344-48.
[16] Barbara E. Mann, *Space and Place in Jewish Studies,* Key Words in Jewish Studies, vol. 2 (New Brunswick, N.J.: Rutgers University Press, 2012)

characteristics have the potential to be investigated in their own right. 40.2 describes what Ezekiel sees as כְּמִבְנֵה־עִיר (kəmibnēh-ʿîr, a structure like a city, NRSV), which literally means 'like the structure of a city'. Accordingly, there must be recognisable characteristics of a city perceived in the visions of the temple and its surrounding structures. This area is often roughly referred as the 'temple complex' or 'temple compound'.[17] Since Ezekiel 40-48 starts with an impression that it is a temple like a city, to leave room for interpretation, this thesis understands the Ezekielian terms of space in the widest sense. In referring to a 'temple', the thesis takes the word *templum* in its original Latin meaning which defines a measured sacred space, either on earth or in heaven.[18] NRSV uses 'temple' to translate the 'house' of the Lord. Many archaeologists use 'temple' to define the ancient tripartite religious space for worship (Chapter 4). Although *Templum* is not confined to the Hebrew designations for the dwellings of God — a tabernacle, a house or the Holy of Holies — a conceptual temple includes these central sacred spaces and the expanded sacred areas. In this thesis, the usage of temple therefore ranges from a house of God to a wider sense of a measured sacred space. In referring to a 'city', this thesis understands 'city' based on the Hebrew word עִיר (ʿîr, city) and its root עוּר (ʿûr, awake) in the widest sense as a place of waking or a protected, guarded space.[19] The *Theological Wordbook of the Old Testament* notes that 'The importance of cities [in Israel] lay in the resistance they could offer to aggressors because of their fortifications, in the protection they could give to their inhabitants'.[20] Resistance is

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[17] For 'temple complex' see Kalinda Rose Stevenson, *The Vision of Transformation: The Territorial Rhetoric of Ezekiel 40-48* (Georgia: Scholars Press, 1996); and Michael A. Lyons, *An Introduction to the Study of Ezekiel*, T & T Clark Approaches to Biblical Studies, 2015. Common English Bible terms Chapter 40 as 'temple compound'.

[18] Helen Rosenau, *Vision of the Temple: The Image of the Temple of Jerusalem in Judaism and Christianity* (London, England: Oresko Books, 1979), p. 13.

[19] According to The Brown-Driver-Briggs Hebrew-English Lexicon with Strong's Code Numbering, the word origin of עִיר (ʿîr, city) (Strong's Number: 05892) is from (05782) עוּר (ʿûr, to rouse oneself, awake, awaken, incite). Based on this, a city is defined as a city (a place guarded by waking or a watch) in the widest sense (even of a mere encampment or post). See Francis Brown, S. R. Driver, and Charles A. Briggs, *The Brown-Driver-Briggs Hebrew and English Lexicon: With an Appendix Containing the Biblical Aramaic: Coded with the Numbering System from Strong's Exhaustive Concordance of the Bible* (Boston: Houghton Mifflin, 1906; repr. Peabody, Mass.: Hendrickson, 2004), pp. 735, 746. For the definition of a city in the widest sense, see R. Laird Harris, Gleason L. Archer Jr., and Bruce Waltke, *Theological Wordbook of the Old Testament* (Chicago: Moody Press, 1980; repr. 2003), 1587, 1587a, 1615.

[20] Harris, Archer, and Waltke, *TWOT*, p. 664.

essential for resilience (section 1.4; Chapter 5). Thus, this thesis holds a view that the space making in the Ezekielian 'temple' and 'city' (and other features) are like analogous structures that have similar form or function. This thesis also observes that the so-called temple compound is a temple planned in the form and function of a city — a protected place. It is similar to the much larger city described in Ezekiel 48. Both are guarded spaces planned with perimeter fields integrated in an even larger regional framework. As is usual for ancient cities, Jerusalem in the Amarna letters is referred to as 'the land of Jerusalem', which includes towns and its domain.[21] In the late Bronze Age II, capital cities were surrounded by tracts of agricultural fields cultivated by the city's inhabitants and the peripheral areas contained villages and hamlets with their own fields and pasture lands.[22] These make sense of a holistic landscape plan as is exhibited in Ezekiel 40-48, which links the temple, the city, water and river, and the land.

Ellen F. Davis, in *Scripture, Culture and Agriculture*, argues that the Israelite city and its immediate surrounding fields formed a tight economic and defensive unit. The proclamation of blessing, 'Blessed are you in the city, and blessed are you in the field' (Deut. 28.2), envisions the full integration of the city with its hinterland.[23] Davis further introduces Psalm 107 as a picture of the 'habitable city':

> He turned the wilderness into watered land…,
> And settled the hungry there,
> and they established a habitable city.
> And they sowed fields and planted vineyards,
> and they made a fruitful yield.
> And he blessed them, and they multiply greatly,
> and he did not let their cattle be few –
> though they had been few, and bowed down
> from oppression, misery, and grief. (vv. 35-39)

In this habitable city that is fully integrated with its hinterland, the health of crops, people and animals is 'an indivisible wholeness, the urban *shalom* [wellbeing] for

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[21] Jane M. Cahill, 'Jerusalem in David and Solomon's Time', *Biblical Archaeology Review,* 30.6 (2004), pp. 20-63.
[22] Ibid.
[23] Ellen F. Davis, *Scripture, Culture, and Agriculture: An Agrarian Reading of the Bible* (New York: Cambridge University Press, 2009), p. 158.

which Jeremiah tells the Judeans exiled in Babylon to pray'.[24] Indeed, according to the book of Numbers, 'The towns shall be theirs to live in, and their pasture lands shall be for their cattle, for their livestock, and for all their animals.' (Numbers 35.3) Adding to Davis, this thesis observes that Ezekiel 40-48 seems to manifest the ideals of the exiled to build up the urban *shalom* [wellbeing] in the form of a practical landscape; each city is integrated with its hinterland — round about 'suburb/pasture land' (Ezekiel 45.2; 48.17). Some land is even planned for resilient future development (Ezekiel 48.15). The region-city structure revealed in Ezekiel 40-48 is similar to the 'Valley Section', a regional planning model developed by the Scottish biologist and pioneer urban planner Patrick Geddes. This model illustrates the complex interactions among biogeography, geomorphology and human systems and attempts to demonstrate how natural occupations such as hunting, mining, or fishing are supported by physical geographies that in turn determine patterns of human settlement.[25] Scholars often argue that Ezekiel 40-48 lacks three-dimensional information. From the city-region and valley section perspective, however, Ezekiel 40-48 clearly demonstrates an ideal section including the highland city (40.2), the farm for cultivation (48.18-19), salt and the marshes (47.11), fruit, medicinal plant harvesting (47.12), and a fishery in the river basin (47.10). Perhaps what matters for Ezekiel 40-48 is not only how to build a temple, but also how to construct the *Biopolis*, and 'City of Life', in which 'human life in its highest evolutionary development could and should take'.[26] Fig. 1.1 is my attempt to demonstrate a conjectural cross-section of Ezekiel 40-48 drawn based on the 'valley section' and Geddes's valley section described in 'The Valley Section from Hills to Sea'.[27] The highland temple-city (Ezekiel 40-46) and lowland city (Ezekiel 48) can be understood as a merged 'conurbation', Geddes' idea of a region comprising two great cities that unite into one vast bi-regional capital, a bi-polar city-region.[28]

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[24] Ibid., p. 159.

[25] Catharine W. Thompson, 'Geddes, Zoos and the Valley Section', *Landscape Review*, 10.12 (2004), pp. 115-19.

[26] Volker Welter, *Biopolis: Patrick Geddes and the City of Life* (Cambridge: MIT Press; 2002), p. 3.

[27] Transcription of one of the lectures given by the author at the *New School of Social Research*, as published in Patrick Geddes, *Cities in evolution* (New and Revised Edition; London: Barnes and Nobles; 1959). See Patrick Geddes, 'The Valley Section from Hills to Sea', <http://habitat.aq.upm.es/boletin/n45/apged.en.html>#fntext-1.> [Accessed 15 September 2017]

[28] Patrick Geddes, *Cities in Evolution: An Introduction to the Town Planning Movement and to the Study of Civics* (London: Williams & Norgate, 1915), p. 40.

(a)

highland
city

fruit trees,
trees for medicine

lowland city

farm

salt land   marshes

(b)

MINER   WOODMAN   HUNTER   SHEPHERD   PEASANT   FISHER
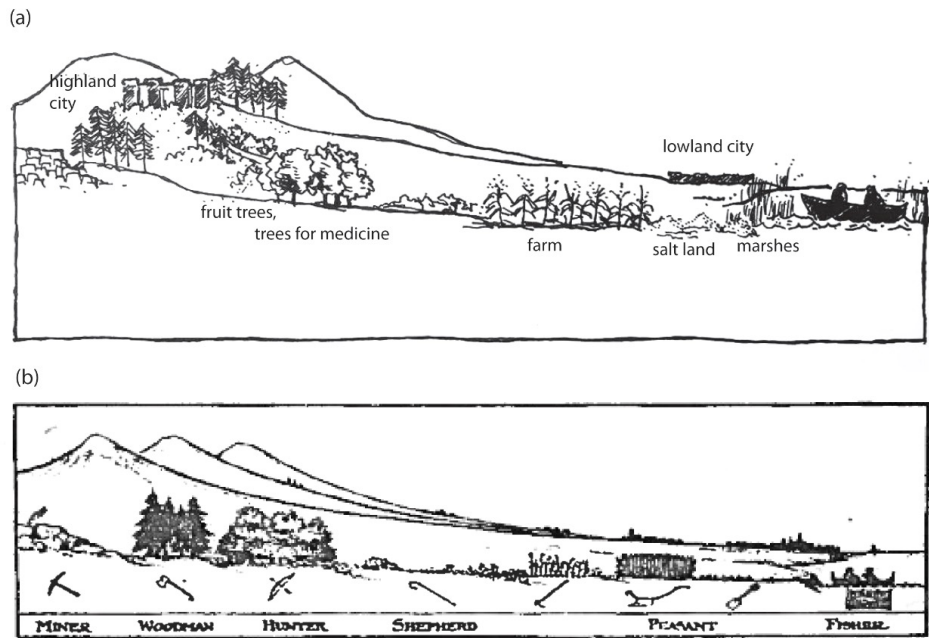
Fig. 1.1. Valley Sections (a) My drawing combining the description of the landscape in
Ezekiel 40-48 and (b) Geddes' 'Valley Section'. Source (b): Patrick Geddes, 1909.

According to Thompson, Geddes envisioned the city regions in which 'all cities are
derivations from an *ur*-city, an abstract notion comparable to Platonic ideas and the
Greek *polis*',[29] implying a view of the city as a cultural and spiritual phenomenon.
Geddes' 'region-city', 'valley-section' and Davis' view of the 'habitable city'
support this thesis to draw upon Alexander's concept of the hierarchy of the patterns,
the universal archetypes firmly grounded in the local and regional scale. The pattern
can be named as an overarching A RESILIENT CITY, which connects with the bigger
regional and smaller local patterns in the landscape of Ezekiel 40-48. From regions,
communities, neighbourhoods and sites, down to buildings, rooms, windows and
tables, Alexander's concept of the patterns proposes a hierarchical, structured way of
designing. This thesis is an experimental study to demonstrate how Alexander's tool
of thought and design could be possibly an effective analytical tool for understanding
the textual landscape.

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[29] Thompson, 'Geddes, Zoos and the Valley Section', p. 117. See Welter, *Biopolis*, p.3.

1.3 The timely and timeless way: a study concerning history

Even though this thesis reads Ezekiel 40-48 synchronically, and uses Alexander's
Pattern Language to explore the possible universal patterns, the patterns unique to
Ezekiel 40-48 indicate the need to investigate the historical context. This thesis,
therefore, adopts a historically sensitive final form methodology which is sensitive to
both synchronic and diachronic methodology. German biblical scholar Michael
Konkel does something very similar when he studies Ezekiel. He reads Ezekiel 40-
48 synchronically, but he is sensitive to the historical questions of the final form.[30]
Taking the historical context into consideration, the aim of the thesis is to discuss
this issue in a systematic fashion and to explore its implications in terms of the way
the ancient Israelites conceived and planned landscapes during the time of Ezekiel
40-48.

Historical background to the authorship of Ezekiel 40-48 is projected in the exilic
period after the historical Babylonian conquest of Jerusalem. It is in Neo-Babylonian
Mesopotamia that the vision is given and where its audience is said to have lived. As
an embodiment of Babylonian presence, landscape is the form in which Babylonian
ambitions and identities are made physically apparent. If we look for the possible
cultural influence, Babylonian landscape in Mesopotamia should be the most direct
reference. However, according to Thilo Alexander Rudnig,[31] there are three probable
periods for the composition of Ezekiel 40-48, which are: (1) pre-exilic Judaean
material redacted during the Exile, (2) material during the Exile in Mesopotamia
concerned with an utopian future restoration, and (3) additions and adaptations from
the post-exilic Jewish diaspora late in the fifth-century BCE.

For landscape architecture, the time of composition provides important information
about natural and cultural factors behind the written landscape in Ezekiel 40-48. Pre-
exilic Judean material suggests the need to look at Ancient Israel's own landscaping.
Exile in Mesopotamia directly points to the possible shared cultural influence
between ancient Israel and Babylonia. The post-exilic Jewish diaspora existed under

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[30] Michael Konkel, *Architectonik des Heiligen: Studien zur zweiten Tempelvision Ezechiels (Ez 40-48)*
(Berlin: Philo, 2001)
[31] Rudnig, *Heilig und Profan,* pp. 58-64.

the umbrella of Persian control. Given the nomadic history of ancient Israel, as well as the fact that the ancient Near East cultures have always influenced one another through trade, travel, immigration and war, interaction with strong ancient civilisations such as Assyrian, Babylonian, and Persian cultures should be considered.[32] The comparison between different categories of material could be problematic given the difference between the biblical text, archaeological remains, iconography and the real landscape. Given this limitation, however, general patterns and motifs can still be identified for effective comparison and discussion responding to the existing scholarship. For instance, Milgrom acknowledges Ezekiel 40-48 as having proximate similarities to the Mesopotamian ziggurat.[33] In *Ezekiel's Hope: A Commentary on Ezekiel 38-48,* he argues for parallels between Ezekiel's temple and the Greek Temple of Apollo at Delphi.[34] Regarding this, Bodi argues:

> Yet, instead of the torrent flowing from the podium in the new temple in 47.1-11 with the spring at the Delphi temple, since Mount Zion too has the nearby Gihôn spring, it is far more probable that the dual *nahalayîm* in Ezek 47.9 reflects the double current from the iconography representations of the façade of Mesopotamian temples, which the prophet might have seen in his land of exile.[35]

Bodi's argument points to a possible historical parallel with the pattern of 'the double current' that reflects what the prophet might have seen in the land of exile in Mesopotamia. Indeed, the experience of Mesopotamian landscapes, including the palace gardens and monumental buildings, might have influenced Ezekiel's landscape writing and his envisioning of Ezekiel 40-48. Stephanie Dally, who is known for her proposal that the Hanging Gardens of Babylon were situated

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[32] Since the order of chapters in the Book Ezekiel cannot alone elucidate the historical development of the conception of landscape in the biblical world, by comparing the spatial pattern and their qualities explored from the text with historical landscape documents it is possible to clarify the dominant cultural perspective and use of the landscape. For instance, among the four directions, east is highlighted in Ezekiel 40-48, such as 'gateway facing east' 40.6; 42.16; 43.1, 4, 5, 17; 43.17; 46.12; 47.1, 3. Based on this character, '(something) facing east' then can be coded as a pattern. After the codification of 'something facing east' pattern in the text, its function is further investigated as the starting point of the overall measurement (40.6), the direction where Yahweh's glory comes from (43.1) and the phenomenon of the glory of the Lord filling the temple (43.4-5).

[33] Jacob Milgrom, 'The Unique Features of Ezekiel's Sanctuary', in *Mishneh Torah: Studies in Deuteronomy and Its Cultural Environment in Honor of Jeffrey H. Tigay*, ed. by N. S. Fox, D. A. Glatt-Gilad, and M. J. Williams; Winona Lake, IN: Eisenbrauns, 2009), pp. 300-301.

[34] Jacob Milgrom and Daniel I. Block, *Ezekiel's Hope: A commentary on Ezekiel 38-48* (Eugene, OR: Cascade, 2012), pp. 44-53.

[35] Daniel Bodi, review of J. Milgrom and D. Block, *Ezekiel's Hope: A Commentary on Ezekiel 38-48*, *The Catholic Biblical Quarterly,* 75.4 (2013), pp. 775-77.

in Nineveh and constructed during Sennacherib's rule, states that since Ezekiel began to prophesy nineteen years after the fall of Nineveh, 'Ezekiel must have had Sennacherib's palace garden in mind when he described Assyria as a cedar of Lebanon, with rivers made to flow around the planting and canals sent forth to all the other trees of the field'.[36] Here, Dalley seems to recognize the landscape patterns — 'rivers around the planting' and 'canals sent forth to the field' — from Ezekiel. Ganzel and Holtz observe the heavily described 'walls, gates and courtyards' and the 'hierarchy of personnel' in Ezekiel's temple and its Babylonian counterparts, concluding that Ezekiel's visionary temple and Neo-Babylonian temples reveal a shared concern with maintaining standards of sanctity.[37] These examples exhibit possible historical parallels as well as the historical significance of the spatial patterns, which may indicate underlying concepts such as sanctity that characterise Ezekiel 40-48.

Nissinen states that Judean communities in Babylonia, attested in both Neo-Babylonian and Achaemenid cuneiform records, did not live in isolation but, 'while maintaining their Judean identity, were integrated in their Babylonian social and economical, and probably also cultural environment'.[38] Regarding how Ezekiel 40-48 might incorporate the exilic surrounding context with its own landscape expertise, scholars have paid much attention to the external influence. Apart from ancient traditions, such as Mount Zion, the Garden of Eden, Sinai and Abarim,[39] and the possibility that Ezekiel 40-48 might preserve memories of the Jerusalem temple,[40] not much is discussed from the perspective of Israel's own historical city planning, such as the standardised, typical pattern of the Israelite provincial city that starts to appear in the twelfth to eleventh centuries BCE and reappears in eighth century site

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[36] Stephanie Dalley, *The Mystery of the Hanging Garden of Babylon: an elusive world wonder traced* (Oxford: Oxford University Press, 2013), p. 158.
[37] Tova Ganzel, and Shalom E. Holtz, 'Ezekiel's Temple in Babylonian Context 1', *Vetus Testamentum,* 64.2 (2014), pp. 211-26.
[38] Martti Nissinen, '(How) does the book of Ezekiel reveal its Babylonian context?' *Die Welt des Orients,* 45.1 (2015), pp. 85-98.
[39] Jon D. Levenson, *Theology of the program of restoration of Ezekiel 40-48*, Harvard Semitic monographs (Missoula, Mont.: Scholars Press for Harvard Semitic Museum, 1976), pp. 25-53.
[40] Ganzel and Holtz, 'Ezekiel's Temple', p. 214.

plans.[41] The city planning in the eighth century, when Judah experiences city expansion and reconstruction under King Uzziah (Azariah, II Kings 14.21-22),[42] or the later period of Hezekiah, when 'he made a pool, and a conduit, and brought water into the city' (II Kings 20.20) to prepare against siege (Sennacherib's campaigns) or strategies associated with earlier campaigns (e.g. Tiglath Pileser III),[43] are very likely to be involved in the conceptualizing of Ezekiel 40-48.

1.4 Why do I choose resilience as a hypothetical concept of Ezekiel 40-48?

The shortest answer to this question is that 'resilience' is perceived in my own reading of Ezekiel 40-48, and I am obligated to test this hypothetical thinking. In mechanics, resilience is an innate quality of materials, e.g. a resilient steel beam that survives the application of a force with both rigidity and ductility.[44] By analogy, this dual characteristic resonates with the tensions and ambiguities that Ezekiel 40-48 seems to embrace. Resilience in ecological systems is about how they encompass the two separate processes: resistance and recovery,[45] which seem to create a framework explaining the function of the landscape that involves a fortified temple-city (Ezekiel 40.5) and a healing river running out from it (Ezekiel 47.1-2). Building upon present day interdisciplinary landscape architecture, my task is therefore to understand the possible practicality of Ezekiel 40-48 as if it were an ancient resilient landscape plan to cope with hazards. According to the United Nations International Strategy for Disaster Reduction, 'resilience' is defined as 'The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management'.[46] According to Berkes, resilience is important for the

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[41] Shiloh, 'The casemate wall', pp. 3-15.
[42] Steven M. Ortiz, 'Urban city planning in the Eighth Century: A case study of recent excavations at Tel Gezer (Reading between the lines: Uzziah's expansion and Tel Gezer)', *Review & Expositor,* 106. 3 (2009), pp. 361-81.
[43] Ibid., p. 366.
[44] D. E. Alexander, 'Resilience and disaster risk reduction: An etymological journey', *Natural Hazards and Earth System Sciences,* 13.11 (2013), pp. 2707-16.
[45] Isabelle M Côté and Emily S Darling, 'Rethinking Ecosystem Resilience in the Face of Climate Change', *PLoS Biology*, 8.7 (2010) <http://dx.doi.org/10.1371/journal.pbio.1000438>
[46] Terminology, (n.d.) <http://www.unisdr.org/we/inform/terminology> [Accessed 19 February 2018]

discussion of vulnerability for three reasons: (1) it helps evaluate hazards holistically in coupled human–environment systems, (2) it puts the emphasis on the ability of a system to deal with a hazard, absorbing the disturbance or adapting to it, and (3) it is forward-looking and helps explore policy options for dealing with uncertainty and future change.[47] Accordingly, resilience should be important for the discussion of the vulnerability behind the construction of Ezekiel 40-48 for it helps understand how Ezekiel 40-48 might manifest a system's ability to deal with hazard, and its 'forward-looking' nature as 'visions of God' (Ezekiel 40.2).

If one asks whether 'resilience' is anachronistic when studying Ezekiel 40-48, my answer is 'yes and no'. On the one hand, I have been careful to make full use of historical-critical scholarship of Ezekiel 40-48 and to avoid claiming that resilience was a well-known concept in ancient Israel. On the other hand, my development of landscape planning as a form of reading suggests that there is a place for using modern terms such as 'resilience' in our appreciation of the ancient text.[48] From this perspective, anachronism might be able to create a literary impact to draw the reader's attention to a particular idea and text, and to challenge both the text-based scholars and site-based present day landscape researchers and practitioners. I would argue that there should be a degree of freedom in the interpretation that does not rigidly rule out the possible continuity of certain concepts or practices based on ecosystem studies. Holling described his idea of ecological resilience in 1996: 'Resilience represents the property that sustains ecosystems'.[49] 'When it [resilience] is lost, or when its limits are exceeded, unpredictability becomes dramatically increased and decision frustrated'.[50] If we do not view an 'ecosystem' as an anachronism that only exists in a certain age, we should not view the property that sustains ecosystems, namely, resilience, as a concept that only exists in present thought but is absent in the ancient environment. The term itself might be new, as

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[47] Fikret Berkes, 'Understanding uncertainty and reducing vulnerability: lessons from resilience thinking', *Natural Hazards,* 41.2 (2007), pp. 283-95.

[48] Sir Walter Scott states: 'It is necessary, for exciting interest of any kind, that the subject assumed should be, as it were, translated into the manners as well as the language of the age we live in'. See Walter Scott*, The Novels of Walter Scott: With All Hid Intro. And Notes,* vol. 2 (Edinburgh: Robert Cadell, 1850), p. 339.

[49] C. S. Holling, 'Surprise for Science, Resilience for Ecosystems, and Incentives for People', *Ecological Applications,* 6.3 (1996), p. 735.

[50] Ibid.

this thesis will discuss, but the necessity of resilience could be universal since the hazards are common to life experience through the ages.

Nowadays we have extreme climate events, severe urban flooding, summer heat, ecological crises, food and clean water shortage, air pollution, wastewater flows, greenhouse gas emissions and storm water runoff; risks due to terrorists, wars and criminal activity; nuclear power plant accidents and uranium contamination; fire and collapse risks of urban structures; and new emerging risks such as cyber attacks, genetic engineering and nanotechnology… This list can grow longer, shorter and be presented in different ways. In my view, it can be understood in terms of *Listenwissenschaft* ('list science'), an ancient Babylonian scribal knowledge that depends upon catalogues and classification.[51] The book of Ezekiel might be viewed as *Listenwissenschaft* where the multiple hazards, or the judgement on Jerusalem, are categorised as swords, famine, evil creatures and pestilence in Ezekiel 5.17 and 14.21, from which the 'four wounds/plagues' are used by Jerome to conclude the Book of Ezekiel.[52]

In referring to the 'evil creatures', it is my translation of חַיָּה רָעָה (*ḥayyâ rāʿâ*), which literally means 'evil-life' that does not only refer to animals, as is translated as 'noisome beasts' in the King James Version or 'wild animals' in the New Revised Stand Version. Present day Ecosystem disservices (EDS) might be helpful for us to understand the 'evil creatures' from the perspective of which are functions or properties of living creatures in the ecosystems that cause effects that are perceived as harmful, unpleasant or unwanted.[53]

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[51] Jonathan Z. Smith, *Map Is Not Territory: studies in the history of religions*, Studies in Judaism in late antiquity, vol. 23 (Leiden: Brill, 1978), p. 70.

[52] In Jerome's letter to Eustochium concerning his books of exposition on Ezekiel, he concluded the book of Ezekiel with the four wounds/plagues that are paralleled in Lamentations: 'If through the mercy of God I bring this work to conclusion, I shall go on to Jeremiah, who in his Lamentations mourned the four wounds/plagues of the world in the figure of Jerusalem with a quadriplex alphabet'. A letter from Jerome (410-414). Prologus, *Commentarius in Hiezechielem*, CCSL75, 3-4, 54, 91, 136, 185, 224, 277-78, 333-34, 385, 434, 480, 549, 605-06, 676. See 'A Letter from Jerome (410-414)', *Epistolae: Medieval Women's Letters | Epistolae* <https://epistolae.ctl.columbia.edu/letter/274.html> [Accessed 10 March 2017]

[53] Biological hazards such as diseases, animal attacks, allergenic and poisonous organisms and geophysical hazards such as floods, heat waves and storms are called ecosystem disservices (EDS). See Peer von Döhren, and Dagmar Haase, 'Ecosystem Disservices Research: A Review of the State of

Paralleling the listed hazards in Ezekiel with present day disaster risk reduction, which suggests that hazards may be natural, anthropogenic or socionatural in origin,[54] we might find the listed hazards in Ezekiel prototypical if we view swords as anthropogenic, famine and pestilence as socionatural, and evil creatures as natural hazards. Furthermore, in the book of Ezekiel, the location where the hazards would happen is mentioned according to their spatial relationship with the city (6.12), or depending on whether a victim is in the field or in the city (7.15). This *Listenwissenschaft,* in the way of associating the problems with space, resonates with the contemporary science of landscape architecture, which endeavours to 'map' the problems and seek solutions through disaster management: the organization, planning and application of measures preparing for, responding to and recovering from disasters.[55] Following this, my thesis finds resonance with Davis's view:

> Ezekiel was the only biblical writer to reinterpret virtually the whole religious tradition up to his time; and significantly for us, he did it in a situation of unprecedented disaster, with the fall of Jerusalem and of the Davidic monarchy first a looming threat, and then a bitter reality. Ezekiel reread the theological tradition in order to make sense of events that were literally unthinkable, in terms of Israel's regnant theology. He charted those horrific events on the map of faith and thus opened a way forward.[56]

Adding to Davis, my research attempts to further explore how Ezekiel 40-48, as the final chapters of the book, could be a result of Ezekiel's reinterpretation of the whole tradition, including religious/theological and practical landscape envisioning. I push Davis's view that Ezekiel 'charted those horrific events on the map of faith and thus opened a way forward' to the map of landscape, locating hazard-space relationship in Ezekiel's writing. The theory that Ezekiel opens 'a way forward' supports my intention to draw upon the forward-looking concept of resilience for it helps explore policy options for dealing with uncertainty and future change.[57]

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the Art with a Focus on Cities', *Ecological Indicators,* 52(2015), pp. 490-97 <http://dx.doi.org/10.1016/j.ecolind.2014.12.027> Also, Lyytimäki and Sipilä, 'Hopping on one leg – The challenge of ecosystem disservices for urban green management', *Urban Forestry & Urban Greening,* 8.4 (2009), pp. 309-15.

[54] 'Hazard' in 'Terminology', UNISDR (United Nations International Strategy for Disaster Risk Reduction) <http://www.unisdr.org/we/inform/terminology> [Accessed 19 February 2017]

[55] For the definition of 'disaster management', see 2009 UNISDR terminology on disaster risk reduction; Ibid.

[56] Ellen Davis, *Scripture, Culture, and Agriculture: an agrarian reading of the Bible* (New York: Cambridge University Press, 2009), p. 5.

[57] Berkes, 'Lessons from resilience thinking', p. 283-95.

If we are aware of the combined hazard effects in the present time and obtain multi-hazard approaches by thinking of the role of landscape planning in strengthening resilience, it should be worthwhile, additionally, to look back to what approaches might have been considered from the time of Ezekiel 40-48 when the combined hazards shattered ancient Israel and eventually destroyed the temple, city, and the nation. To my knowledge, however, there is no connection yet linking Ezekiel 40-48 with resilience in the existing biblical scholarship. Modern scholarship of Ezekiel 40-48 has not paid attention to the possible function of the 'visions of God' as a landscape strategy aimed at minimising the risk of disaster, and improving wellbeing. Scholarship of present day resilience from the perspective of ecological and socio-ecological perspectives has not seen the potential within this ancient resilient planning model.

However, it is not without controversy to apply the concept of resilience in my thesis. Since building resilience has become a major component of climate adaptation, environmental management, regional economic development and strategic planning, a great deal of recent research into resilience has made its way from its original use in the physical sciences, engineering and ecology into a wide range of disciplines including psychology, disaster management, economics, geography and planning.[58] Over the past decade, its use in policy and practice has increased, where resilience is largely seen as a response to uncertainties and insecurities.[59] In recent years, however, it has been criticised as a fuzzy concept[60] 'in danger of becoming a vacuous buzzword' as a result of its 'overuse and ambiguity'.[61] The multitude of interpretations and usages to which it has been subjected has led to confusion.[62] Thus, this thesis wishes to contribute to the understanding of 'resilience' itself by investigating the potential use of an alternative framework of resilience in

[58] Simin Davoudi, 'Resilience: A Bridging Concept or a Dead End?', *Planning Theory & Practice,* 13.2 (2012), pp. 299-307.
[59] Ibid.
[60] Simin Davoudi, Elizabeth Brooks, and Abid Mehmood, 'Evolutionary Resilience and Strategies for Climate Adaptation', *Planning Practice & Research,* (2013), pp. 1-16.
[61] Adam Rose, 'Economic resilience to natural and man-made disasters: Multidisciplinary origins and contextual dimensions', *Environmental Hazards,* 7.4 (2007), pp. 383–98.
[62] Alexander, 'An etymological journey', p. 2707.

ancient times based on the conjectural, post-trauma landscape planning in Ezekiel 40-48.

1.5 Summary

To sum up, just as the beginning of Ezekiel 40-48 introduces the coming chapters, the introduction of my thesis explains my concern with the hazards in the historical background of Ezekiel 40-48 when 'the city was struck down' (40.1), and my attempt to understand the 'visions of God', where 'a structure like a city' (40.2) is described in the setting of the landscape. Just as Ezekiel is asked to set his heart upon all that is shown in the visions (40.4), this thesis attempts to explore the possible planning concept that covers the full scale of the landscape in Ezekiel 40-48. In so doing, this study co-opts the concept of a pattern (a solution to a problem in a context) and a pattern language (collections of patterns) with iconographic exegesis, archaeological data and textual analysis of the Hebrew bible. This thesis investigates and presents various contexts from the ancient Near East that could be integrated into the planning of Ezekiel 40-48. In the end, my studies aim to suggest a way to increase the landscape legibility of Ezekiel 40-48 by reading it from the perspective of landscape architecture. By making explicit the possible underlying planning concept testifying to human interaction with the landscape, Ezekiel 40-48 might be understood as a post-disaster reconstruction plan based on the lessons learned and accumulated knowledge on disaster risk prevention. A landscape hermeneutic of the Bible might help us understand how the plan of Ezekiel 40-48 might have been a collective wisdom of ancient landscaping that served as timely advice for ancient Israel: in a way, a timeless and meaningful message for us all.

CHAPTER 2: LITERATURE REVIEW

Section 2.1 is a general overview of the studies of Ezekiel focusing, specifically, on successive attempts to achieve a better understanding of chapters 40-48. It is not an easy task to draw a trajectory based only on chapters 40-48. The images we are going to see in this section are often products of merged multiple layers of information of the Jerusalem Temple(s). These layers include the First Temple built by King Solomon sometime between 965 and 928 BCE; the Second Temple by Zerubbabel around 500 BCE; the third by Herod I (73 BCE-4 CE) which was destroyed by the Romans in 70 CE; the temple envisioned by Ezekiel (Ezekiel 40-48); and further textual sources of the temple found in *Middoth*.[63]

The Second Temple, the reconstructed Temple of Zerubbabel, as reported in Ezra, mainly followed the original temple built by Solomon (cf. Ezra 5.11). Kings and Chronicles provided the primary blueprint for the second temple, whereas the visionary temple in Ezekiel was of less significance,[64] although certain suggestions from Ezekiel were not ruled out entirely. In a sense, Ezekiel 40-48 is like the 'metadata' — a set of data that describes and gives information about other data — of the Temple of Solomon. The description found in *Middoth*, a part of *Mishnah* (c. 150 CE) was also used as further textual sources for the reconstruction of the Temple by the scholars and architects.[65] Nevertheless, the visions in Ezekiel were theologically important for Christians who regard the church as a continuation and a substitute of the Jerusalem Temple.[66] Other than the temple, Ezekiel's description inspired practical mathematics and a vision of the New Jerusalem.

Within the limits of this Chapter a full analysis of the long tradition of writings and drawings of the Temple cannot be undertaken. For the purpose of the present study, it is crucial to understand various depictions of Ezekiel's landscape as described

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[63] The textual resources include sayings by Eliezer ben Jacob before Herod's Temple was destroyed, and the temple described in Josephus's *The Jewish War.* See Helen Rosenau, *Vision of the Temple: The Image of the Temple of Jerusalem in Judaism and Christianity* (London, England: Oresko Books, 1979), p. 19.
[64] Ibid., pp. 38-39.
[65] Ibid.
[66] Ibid.

throughout the history of scholarship. I have, consequently, chosen to focus on three particular themes relating to Ezekiel 40-48 in the pool of the Temple scholarship and will trace their development over the past centuries. These are: the images of the landscape of Ezekiel 40-48 (section 2.1), text-based biblical studies (2.2), and a thematic study of the scholarly engagement with the landscape of Ezekiel 40-48 (2.3). All provide particularly important and relevant backgrounds to this thesis.

2.1 The Images of the Landscape of Ezekiel 40-48

In early rabbinic interpretation, Ezekiel 40-48 provided one of the three major sources of controversy surrounding the book of Ezekiel.[67] The vision in chapters 40-48 is considered to contain laws contradicting laws in the Torah (e.g. cf. Ezek. 44.22; Lev. 21.14). Jerome, in his commentary on Ezekiel in 414 CE, describes Ezekiel 40-48 as 'the ocean of Holy Scriptures and labyrinth of God's mysteries' (*Scripturarum oceanum et mysteriorum Dei labyrinthus*). Jerome views Ezekiel 40-48 as a temple that has an essentially spiritual and mystical reality: the ascending journey on the mountain. He describes the route from the outer to the inner courtyards of the temple as a gradual unfolding illumination of 'the purposeful passage from the adumbrated to the clarity of true substance'. What remains shadowy to the carnal senses is revealed to the inner eye of the heart (*cordis oculis*).[68] Among early Christian interpretations, images in Revelation 11 and 21-22 were derived from the vision of the new temple in Ezekiel 40-48. They wanted to see Ezekiel 40-48 as figuratively pointing to the church, or some other reality. Early fathers believed that the function of Ezekiel 40-48 was to display a higher level of significance. Saint Gregory the Great (c. 540-604 CE), in his *Homilies on the book of the Prophet Ezekiel*,[69]

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[67] Along with chapters 1 and 16. Some considered chapter 1 as 'extremely dangerous' (according to *b. Hag 13a*, fire devours a child who is studying chapter 1). In chapter 16 Ezekiel intensely condemns Israel and Jerusalem. See John H. Hayes, *Dictionary of Biblical Interpretation* (Nashville: Abingdon, 1999), p. 372. Also, St. Jerome reports that the rabbis did not allow anyone under age 30 to read the book (Epistle 53. 7, To Paulina). See Wm. G. Most, 'Commentary on Ezekiel', *The Process of Beatification and Canonization* <https://www.ewtn.com/library/SCRIPTUR/EZEK.TXT> [accessed 31 May 2017]

[68] Ibid., p. 57.

[69] Saint Gregory the Great, *Homilies on the Book of the Prophet Ezekiel*, trans. by Theodosia Tomkinson, and intro. by Archbishop Chrysostomos of Etna (Etna, CA: Center for Traditionalist Orthodox Studies, 2008), pp. 259-459.

embraces the first chapter of the vision with a denial that 'Obviously it is by no means possible to accept the building of this city according to the letter'.[70] He finds the measurement of the vestibule of the door unreasonable 'for that which encloses to be smaller than that which is enclosed by it'. Commenting on 'a structure like a city' that the prophet was shown, he finds it significant to view the structure *spiritualiter* instead of reading it in the corporeal sense given the *quasi* being used. Following the same exegetical approach, the city-like edifice is understood as the church. The elevated location on the mountain is to be understood as the *Ecclesia* between Heaven and Earth. The 'man' who guides the temple tour is the Saviour whose countenance of bronze stands for durability in opposition to the fragility of mortal flesh.[71] Ancient Christian commentary on Scripture gives us examples of their perspectives:

> The vision is so mysterious that interpreters have to tread carefully (Jerome, Gregory the Great). The city is the church (Gregory the Great), in which there are different kinds of spiritual labors (Isaac) [...] the vision makes one aware of the difference between the active life and the contemplative (Gregory the Great).

> The waters flowing from the temple are the teaching of the church (Jerome), the waters of baptism (Epistle of Barnabas), waters that are made sweet by Christ's entry into them at his baptism, which grants forgiveness (Jerome, Theodoret) and overflowing spiritual nourishment (Pseudo-Dionysius). The prophet enters the water, a sign of our spiritual journey (Isaac) and the capacity of the apostolic teaching to irrigate the most arid soul (Jerome). Christ meets the fishermen by the sea, transforming their work (Ephrem); the abundance of fruit represents the proper interpretation of the Scriptures (Jerome).[72]

At the beginning of the eighth century, a Christian monk, The Venerable Bede (c. 672–735) declared that 'the temple of the Lord had once been placed upon the earth […] but now the Church, the temple of the living God, whose way of life is in heaven' had replaced it.[73] Bede's trilogy of major commentaries on the temple image understands architectural details and descriptions of construction work as symbolic

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[70] Ibid., p. 260.
[71] Walter Cahn, 'Architecture and Exegesis: Richard of St.-Victor's Ezekiel Commentary and its Illustrations', *Art Bulletin,* 76.1 (1994), p. 56.
[72] Overviews of Ezekiel 40.1-5; 47.1-12. See Kenneth Stevenson and Michael Glerup, *Ezekiel, Daniel,* Ancient Christian Commentary on Scripture, Old Testament, 13 (Downers Grove, Ill.: InterVarsity Press, 2008), pp. 125, 146.
[73] Conor O'Brien, 'Studying Bede's Temple', In *Bede's Temple: An Image and its Interpretation*, Chapter 8 (Oxford: Oxford Scholarship Online, 2015), p. 1.

of the Church. *On the Tabernacle* deals with the relevant texts from Exodus 24.12–30.21; *On the Temple* draws on I Kings 5–7, with additional material from II Paralipomenon 2–4, but not from Ezekiel 40-48. *On Ezra and Nehemiah* provides a traditional line-by-line commentary including the book of Esdras.[74]

During the Middle Ages, although most of the commentaries expand on the allegorical interpretations, there was a movement within Christian exegesis towards a literal reading. Richard of St. Victor in the twelfth century explicitly interpreted Ezekiel 40-48 according to its 'plain' sense and gave diagrams of Ezekiel's temple and the land. Among his illustrations, the ground plan was the predominant feature (Fig. 2.1-1). Richard was primarily concerned with making sense of the

Fig. 2.1-1. Plan of the eastern section of the temple from Richard of St.-Victor, *In Ezechielem*. Source: Cahn 1994: fig. 3

configuration of the whole and of its different parts in relation to one another.[75] Believing that the structures must have been constituted in identical fashion, Richard

Fig. 2.1-2. Richard of St. Victor, *In Visionem Ezekielis*, left: temple elevation with water issuing from underneath the temple (Oxford, Bodleian Library, Bodley 494, 156r); right: ground plan of the temple (Oxford, Bodleian Library, Bodley 494, 158v)

found explanations for difficult passages and architectural terms by reasoning what kind of space would be suitable. For instance, to make sense of the structural layout, he identified the mysterious spaces or structures along the walls in Ezekiel 41.5-7 as 'passageways'. Inspired by contemporary military architecture,[76] he made sense of how the temporary outer

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[74] Modern Bibles tend to treat Ezra and Nehemiah as two books, but in the Vulgate they form a single book: Esdras; Ibid.
[75] Cahn, 'Architecture and Exegesis', p. 59.
[76] Known in Old French as *hourds*

galleries could be equipped in the time of war.[77] Richard was also interested in the temple's landscape, in particular, the waters issuing from under the temple (Fig. 2.1-2) which was a motif that seemed to be overlooked in later medieval interpretations but revived during the baroque period.[78]

Nicolaus de Lyra (1270-1349), a French monk known for the depth of his biblical knowledge and meticulous illustrations, compiled and interpreted the Temple and city in his *Postillae* in light of Jewish Messianic hope and Christian theological thought of the spiritual temple-church. Lyra's *Postillae* illustrations 'displayed great ingenuity in making the mysterious

Fig. 2.2-1. Nicolaus de Lyra, *Postillae,* the ground plan of the Temple.

visible and easily understood', and were popular 'because they were steeped in biblical text and gave aesthetic satisfaction'.[79]Fig. 2.2-1 is Lyra's ground plan of the Temple precincts. The flowing water from the temple depicts his inclusion of Ezekiel 47. Fig. 2.2-2 is his depiction of the city of Jerusalem. According to Rosenau, 'During the sixteenth century the

Fig. 2.2-2. Nicolaus de Lyra, *Postillae,* the representation of the city of Jerusalem.

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[77] Cahn, 'Architecture and Exegesis', p. 63.
[78] See Helen Rosenau, *Vision of the Temple: The Image of the Temple of Jerusalem in Judaism and Christianity* (London, England: Oresko Books, 1979), p. 36.
[79] Cahn, 'Architecture and Exegesis', p. 63.

Reformation consciously returned to biblical sources and therefore Christian Hebraists rediscovered the biblical tradition in a scientific endeavour to absorb historical truth'.[80] However, the book of Ezekiel was not especially important for the reformers during the time of the Reformation and Enlightenment. Luther briefly commented on Ezekiel's visions as prophecies of the reign of Christ. John Calvin (1509-1564) shortened his series of sermons on Ezekiel by devoting an entire sermon to Ezekiel 40-48. He said, '[T]herefore let us observe that to possess what Moses taught the Jews on the Physical Temple in Jerusalem, on the sacrifices, ceremonies and such things, is a very useful doctrine for us today.'[81] From Calvin's viewpoint, God did not give details to torment his people with things that have no real
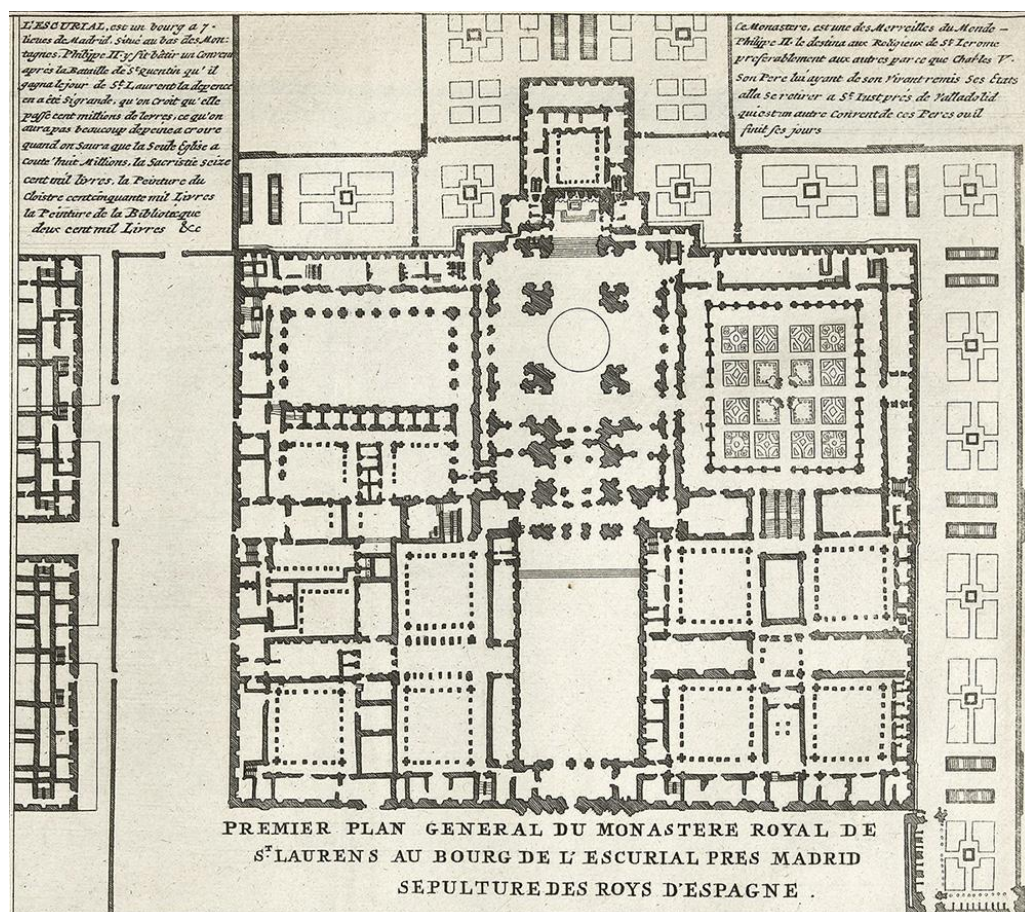

Fig. 2.3. Ground plan of El Escorial, 1726 (Rijksmuseum)

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[80] Rosenau, *Vision of the Temple*, p. 91.
[81] E. A. de Boer, *John Calvin on the Visions of Ezekiel: Historical and Hermeneutical Studies in John Calvin's 'Sermons Inédits', Especially on Ezek. 36-48*, Kerkhistorische Bijdragen, D. 21 (Leiden: Brill, 2004), p. 228.

significance; instead, the details described in Ezekiel 40-48 were significant in the way that they were interchangeable with Moses' Law in Leviticus.[82]

On the other hand, the Temple was recognised not only as the archetype of the Christian church building, but was also a model for civic planning and a means of 'articulating the symbiotic relationship between church and state'.[83] King Philip II of Spain's self-identification with King Solomon shaped the design of his monastery/palace El Escorial in accordance with the Temple (1563-1584) (Fig. 2.3). In addition, the Spanish Law of the Indies of 1573 designated a model of city planning based on the vision of Ezekiel as interpreted by Nicolaus de Lyra.[84]
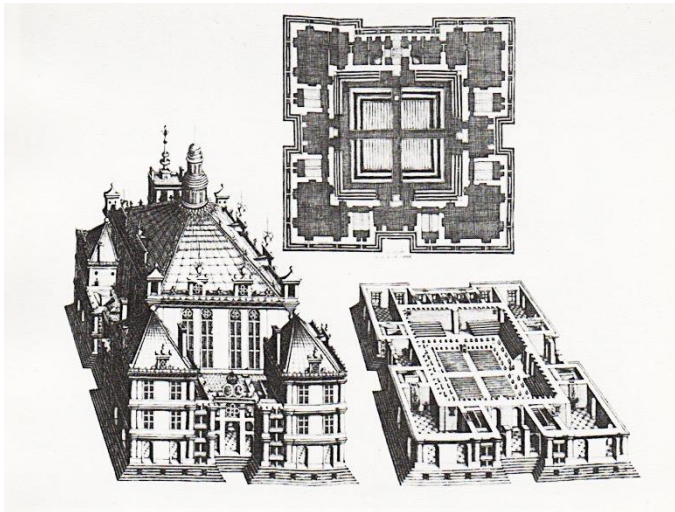

Fig. 2.4. Jacques Perret, *Des Fortifications* [...], large Protestant temple, possibly designed for multifunctional use and defence (London, British Library)

The fertile soil for temple scholarship in seventeenth-century Europe attracted professional theologians as well as lay outsiders, the latter often combining technical knowledge with spiritual aspirations.[85] For builders, architects, and planners, Ezekiel 40-48 serves as the key source of technical information. Jacques Perret designed three different types of Protestant temples in his *Des fortifications et*

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[82] Ibid.

[83] Peter M. Doll, 'In Search of a Liturgical Patrimony: Anglicanism, Gallicanism & Tridentinism', *Revue LISA/LISA e-Journal. Littératures, Histoire Des Idées, Images, Sociétés Du Monde Anglophone – Literature, History of Ideas, Images and Societies of the English-Speaking World* (Presses Universitaires de Rennes) <https://journals.openedition.org/rfcb/1236#bodyftn10> [accessed 24 May 2018]

[84] Ibid. The Spanish Law of the Indies of 1573 is characterised with the grid, which is considered the most practical layout for the new cities of Hispanic America. Important considerations include: a complete new city to be built; the city planned as a unity according to preconceived specifications and pattern; centralized control; the desire of measured apportionment of property; and knowledge of the grid. Some scholars note these as the Roman and classical planning ideas. See Axel Mundigo and Dora P. Crouch, 'The City Planning Ordinances of the Laws of the Indies Revisited. Part I: Their Philosophy and Implications', *The Town Planning Review*, 48.3 (1977), pp. 247–68.

[85] Jetze Touber, 'Applying the Right Measure: Architecture and Philology in Biblical Scholarship in the Dutch Enlightenment', *The Historical Journal,* 58.4 (2015), pp. 959-85.

artifices published in Frankfurt in 1602 (Fig. 2.4). His design suggested a resilient use of the temple space that 'could be easily adapted to some secular use, such as town hall'.[86] He also designed a high-raised palace to facilitate defence in troubled times.[87]

Architect and Jesuit priest Juan Battista Villalpando and his fellow Jesuit Hieronymo Prado presented an impressively massive three-volume commentary on Ezekiel (1596-1605): *Hieronymi Pradi et Ioannis Baptistae Villalpandi e Societate Iesu In Ezechielem explanationes et Apparatus vrbis ac Templi Hierosolymitani commentarijs et imaginibus illustratus: opus tribus tomis distinctum. Quid vero singulis contineatur, quarta pagina indicabit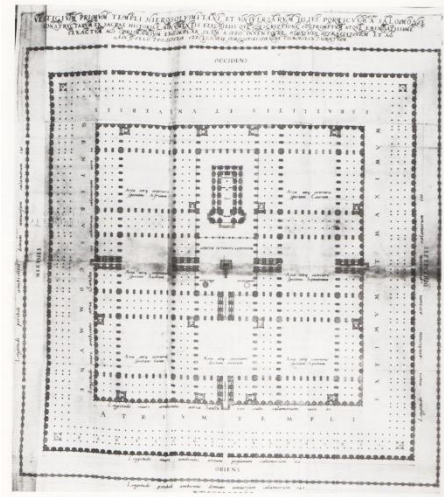* (Ezekiel's explanation and the preparation of the city and of the temple of Jerusalem), a study of architecture marked by philological excellence and its detailed

Fig. 2.5-1. Juan Bautista Villalpando, *In Ezechielem Explanationes,* ground plan of Temple Precincts (London, British Library)

illustration of the temple. A lavish temple and a gridded nine-bay ground plan were presented (Fig. 2.5-1, 2.5-2) in the commentary.[88] The account was derived from Ezekiel's vision, 'but for Villalpando this was a guide also to Solomon's Temple, since both were designed by God. With God as architect, the design of the Temple

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[86] Rosenau, *Vision of the Temple*, p. 93.
[87] Ibid.
[88] Villalpando's reconstruction ensued from a concerted enterprise at the court of King Philip II of Spain (1527-1598) to project the palace-monastery of the Escorial as a renewal of Solomon's construction. Villalpando's reconstruction would also have a strong impact on subsequent representations of Solomon's Temple, both in graphic art, in three-dimensional models, and in religious architecture. See Touber, 'Applying the Right Measure', Jetze Touber, 'Applying the Right measure: Architecture and Philology in Biblical Scholarship in Dutch Early Enlightenment', *The Historical Journal*, 58.4 (2015), p. 963. Moreover, the treatise by Juan Bautista Villalpando and Hierónimo Prado presenting a graphic reconstruction of the Temple of Jerusalem not only enjoyed great popularity in both Protestant and Catholic countries in the seventeenth century, but recognizable elements such as the Solomonic order, curved buttresses, and nine-bay planning were copied in Catholic, Protestant, and Jewish sacred buildings. See Sergey R. Kravtsov, 'Juan Bautista Villalpando and Sacred Architecture in the Seventeenth Century', *Journal of the Society of Architectural Historians,* 64.3 (2005), p. 312-39.

will reflect his other creations: the macrocosm of the world and the microcosm of man.'[89] As a Jesuit priest, Villalpando's main aim was spiritual: 'by visualizing the Temple and by meditating on that visualization, the reality of the truths within would be revealed.'[90] As a result of the scientific approach as he applied the principle of architecture to biblical buildings, the 'architecture of theology' was created.[91] *In Ezechielem Explanationes* was not only considered a biblical and spiritual event, but it was also 'the origin of architecture', 'a blend of science and religion'.[92]

Fig. 2.5-2. Juan Bautista Villalpando, *In Ezechielem Explanationes,* section of the Temple. Source: Bennett 1988
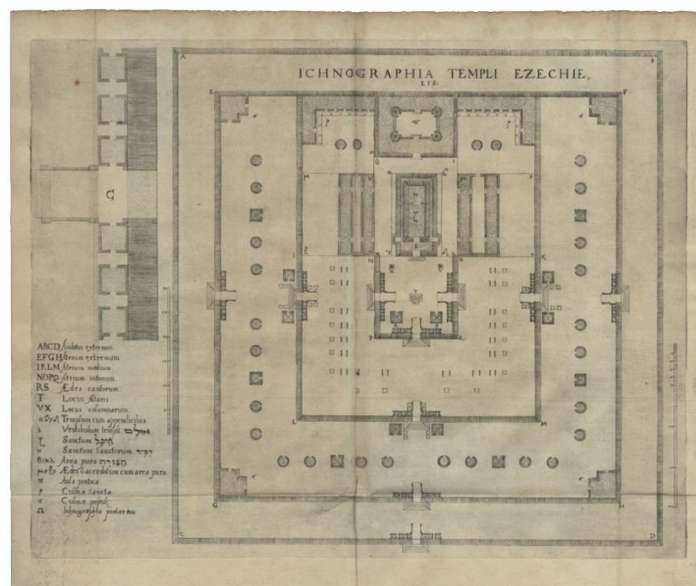

Fig. 2.6-1. Matthias Hafenreffer, *Templum Ezechielis.* Source: Deutsche Fotothek

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[89] James A. Bennett, and Scott Mandelbrote, 'The Temple Catalogue Number 51', *Museum of the History of Science* <https://www.mhs.ox.ac.uk/gatt/catalog.php?num=51> [accessed 24 May 2018]
[90] Tessa Morrison, *Isaac Newton and the Temple of Solomon: An Analysis of the Description and Drawings and a Reconstructed Model* (North Carolina: McFarland & Company, 2016), p. 84.
[91] Ibid., p. 84.
[92] Ibid., p. 83.

Matthias Hafenreffer, a professor of Theology and Chancellor of the University of Tübingen, published *Hafenreffer, Matthias: Templum Ezechielis sive in IX. postrema prophetae capita. commentarius: non tantum genuniam textus...Tubingae: sumptibus Iohannis Berneri, 1613. Dresden: SLUB Exeg.B.245...*in 1613. Similar to Villalpando, he was interested in the Temple's position, fabric, design, ornament and proportions, and mixed geometry with spiritual commentary. He worked with Protestant mathematicians and astronomers to discover the geometrical principles in the design of the temple.[93] Fig. 2.6-1 and Fig. 2.6-2 are his reconstructions of the temple.
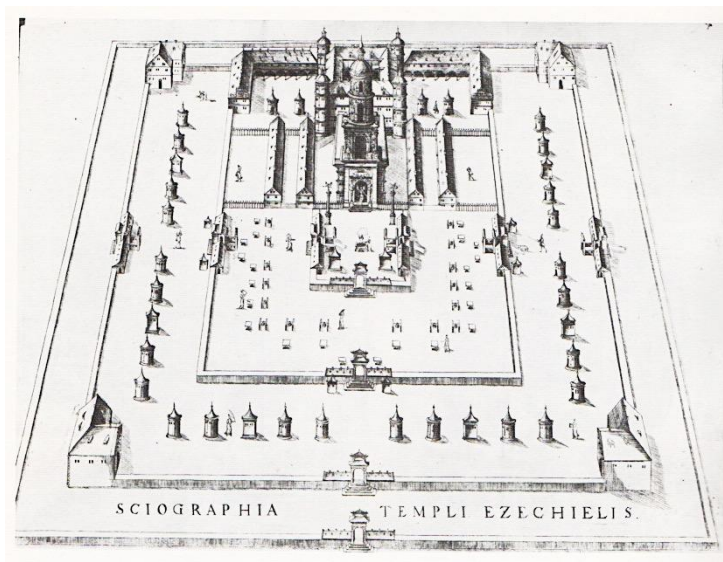

Fig. 2.6-2. Matthias Hafenreffer, Templum Ezechielis, Precincts of the Temple (London, British Library) Source: Rosenau 1979, Fig. 90

In 1659 Puritan divine Samuel Lee's *Orbis miraculum, or, The temple of Solomon, pourtrayed by Scripture-light microform: wherein all its famous buildings, the pompous worship of the Jewes, with its attending rites and ceremonies: the several officers employed in that work, with their ample revenues, and the spiritual mysteries of the Gospel vailed under all, are treated at large*. Lee argued that the elaborate Temple design as envisioned by Ezekiel and interpreted by earlier authors such as

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[93] James A. Bennett, and Scott Mandelbrote, 'The Temple Catalogue Number 52', *Museum of the History of Science* <https://www.mhs.ox.ac.uk/gatt/catalog.php?num=52> [accessed 24 May 2018]

Villalpando was too large and was never intended to be built on earth.[94] Lee provided a practicable plan (Fig. 2.7-1, 2.7-2), a 'more secure and rational model of the actual Temple'.[95]
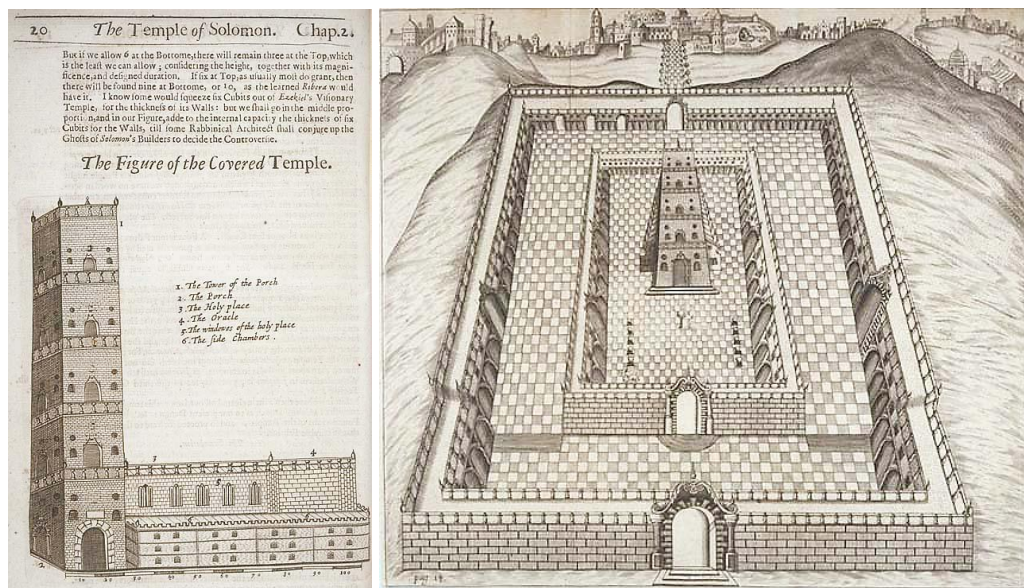

Fig. 2.7-1 (left) Samuel Lee, *Orbis miraculum*, the Temple. Source: Bennett 1998 Fig. 51
Fig. 2.7-2 (right) Samuel Lee, *Orbis miraculum*, the Temple precinct. Source: Bennett 1998 Fig. 52

In 1641, Jacob Judah Leon (1602-1675) — known as Jacob Judah Leon Templo — was a rabbi, a writer and a successful architectural expert who built a widely exhibited wooden three-dimensional model of the Temple. The model and images of the Temple were highly informative. According to Offenberg:

> Anyone living in mid-seventeenth century Amsterdam or even outside the city, reading his Bible or his 'Flavius Josephus' — and almost anyone with some education owned at least those two books — and reading something about Solomon's Temple or hearing people speak or preach about it was able to imagine in detail a real building. Rabbi Jacob Jehuda Leon had taken care of that.[96]

Fig. 2.8-1 is Leon's demonstration of the Temple and its nearby environment in the 1665 Latin translation *Jacobi Jehudae Leonis De templo Hierosolymitano tam priori,*

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[94] Ibid*.,* 'The Temple Catalogue Number 55', *Museum of the History of Science* <https://www.mhs.ox.ac.uk/gatt/catalog.php?num=55> [accessed 24 May 2018]
[95] Ibid.
[96] Adrian K. Offenberg, 'Jacob Jehuda Leon (1602-1675) and His Model of the Temple', In *Jewish-Christian Relations in the Seventeenth Century: Studies and Documents*, ed. by Jan van den Berg and Ernestine van der Wall (Dordrecht: 1988), pp. 95–115.

quod aedificavit Salomo rex, quam posteriori, quod devastavit Vespasianus: libri IV.
In this account, we can see the adjacent palace of Solomon and the Antonia Tower which were military barracks built by Herod the Great. Specifically, the *Ezekielian* forest and the waters were included for the biblical requirements of the landscape.
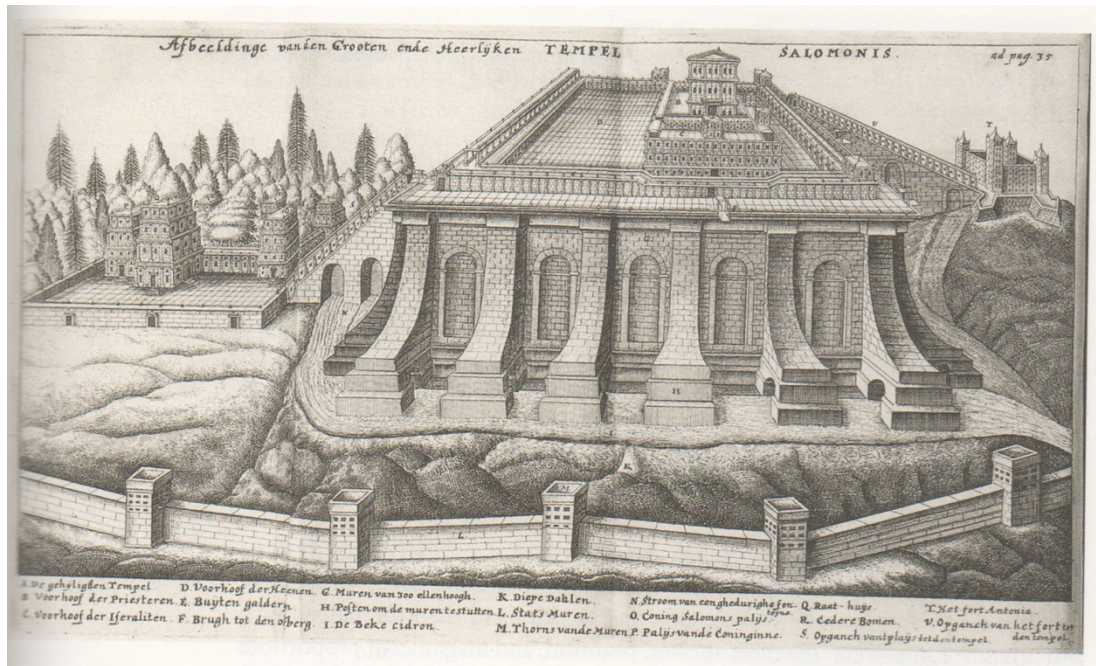

Fig. 2.8-1. Jacob Judah Leon, 'Afbeeldinge van den Grooten ende Heerlijken Tempel Salomonis' (Image of the Great and the Glorious Temple of Solomon). Source: Bennett 1998 Fig. 54

In *Retrato del tabernaculo de Moseh* (1654)*,* Leon viewed the tabernacle of Moses as a tented precursor to the Temple of Solomon. He provided a plan of the camp of the Israelites. Fig. 2.8-2 is an engraving of the Tabernacle positioned in a double square amidst the Israelites' tents. The squared spaces might be related to the visionary landscape planning in Ezekiel 40-48.
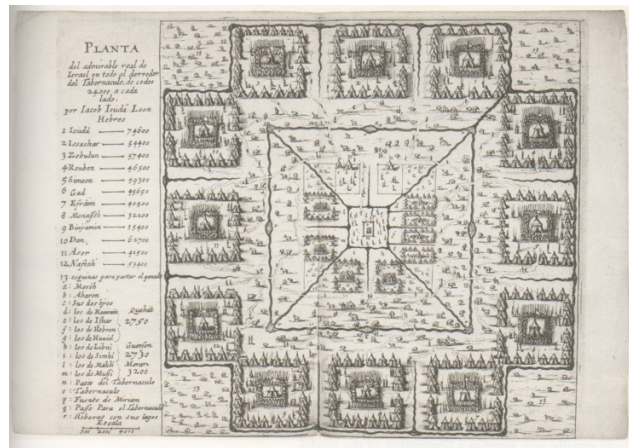
Fig. 2.8-2. Jacob Judah Leon, in *Retrato del tabernaculo de Moseh,* depicts a tabernacle-centred squared plan combining the concept of tabernacle, temple and city planning. Source: Bennett 1998, p. 149.

Leon's reconstruction of the Temple (Fig. 2.8-3) presents a habitable landscape, a town plan integrating the Temple and the Tabernacle. Multiple squared spaces are structured with carefully-planned watercourse. An outer square is made perfect with an encircling irrigation system.

Fig. 2.8-3. Jacob de Meurs' hand coloured engraving of Jacob Judah Leon Templo's reconstruction of Solomon's Temple shows an integration of the Tabernacle and the Temple. Source: Amsterdam, University Library, Bijzondere Collecties [ROS. A 7-1]

Isaac Newton, who formulated the laws of motion and universal gravitation, felt 'morally responsible' for the elucidation of the prophecies in Ezekiel. Newton had an interest in the temple that lasted more than fifty years.[97] He examined and reconstructed Solomon's temple through a scriptural commentary on the book of Ezekiel, together with the prophecies of Daniel and Revelation. His unpublished manuscript entitled 'A Treatise or Remarks on Solomon's Temple, Introduction to the Lexicon of the Prophets, Part Two: About the Appearance of the Jewish Temple', commonly known as Babson MS 434, provided information from which reconstructions could be based (Fig. 2.9-1).[98]
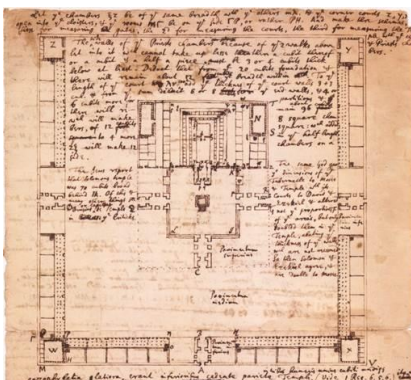

Fig. 2.9-1. The ground plan of the Temple drawn by Newton from *Babson MS 434*. Source: Morrison 2016 Fig. 7
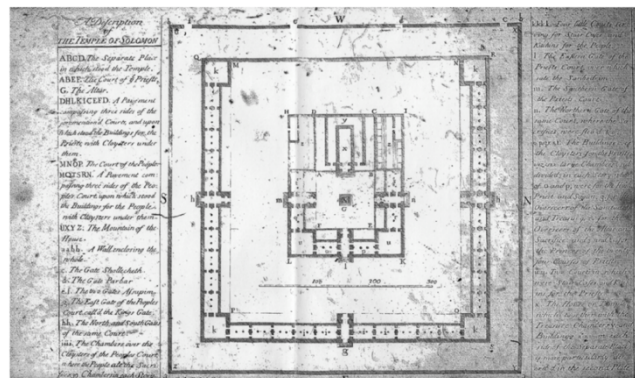
Fig. 2.9-2. Newton's published plan of Solomon's Temple based on Ezekiel 40-48, *Chronology of ancient kingdoms* (London, 1728), chap. V. The British Library, 685.i.20. Source: Moreira 2010 Fig. 1

The temple's divine symmetrical proportions fascinated Newton. He sketched the physical appearance of the temple, and discussed the structure and measuring standards. The explanation of the vision of Ezekiel 40-48 constituted the main focus of Newton's *Prolegomena*. He claimed that Ezekiel had been shown the same construction that God had revealed to Solomon. He integrated the measurements as inferred from Ezekiel 40-48 with what is described in the books of Chronicles and Kings. The plan published in *The Chronology of Ancient Kingdoms Amended: to*

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[97] Raquel D. Moreira, 'What Ezekiel says: Newton as a Temple Scholar', *History of Science,* 48.160 (2010), p. 153.
[98] Ibid. The original source of the image: Ms. 434, The Babson College Grace K. Babson Collection of the Works of Sir Isaac Newton, Huntington Library, San Marino, California, USA.

which is prefixed a short chronicle, from the first memory of things in Europe, to the conquest of Persia by Alexander the Great,[99] is a mixture of what is described in I Kings, I Chronicles and the book of Ezekiel (Fig. 2.9-2).[100] In 'Two Incomplete Treatises on Prophesy', Newton claimed,

> Temple the parts thereof have the same significance with the analogous parts of the World, for Temples were anciently contrived to represent the frame of the Universe as the true Temple of the great God. Heaven is represented by the Holy place or main body of the edifice, the highest heaven by the most Holy or Adytum [...] Temple have the same signification with the parts of the world which they represent. And in allusion to the River Siloam which ran by the Temple of Jerusalem & flowed thence eastward & by the Jewish Doctors accounted a type of the spirit, a River of life flowing eastward from the throne of God with trees of life growing on the banks thereof is put for the Law of God going out from the Throne of the kingdom to the nations, the fruit of the trees & the water of the River being that spiritual meat & drink which Christ has represented by his body & blood & by the bread & wine in the Eucharist; & which were also prefigured by the Manna & rock of water in the wilderness.[101]

For Newton, the plan of the temple was the plan of the universe. Newton recognized that Ezekiel was guided by an angel through the temple as he measured it. Since the temple was not completely measured, Newton assumed symmetry to complete the design, showing his interest in 'reconstructing an accurate and realistic recreation of the temple and not just a prophetic hieroglyph'.[102] Touber notes that Newton's study of the temple was 'part of an attempt to integrate biblical history and natural philosophy in an overarching eschatological scheme, informed by "clues" that God had hidden in both nature and history to instruct the well-informed observer about the final destiny of the World'.[103] Newton 'was interested in the Temple itself as an

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[99] Isaac Newton, *The chronology of ancient kingdoms amended: to which is prefixed a short chronicle, from the first memory of things in Europe, to the conquest of Persia by Alexander the Great* (London: Printed for T. Cadell, 1770); Raquel D. Moreira, 'What Ezekiel says': Newton as a Temple Scholar', *History of Science,* 48.160 (2010), pp. 153-80.

[100] Isaac Newton, 'Fair Copies of the "Short Chronicle" and "Chronology of Ancient Kingdoms Amended"', n.d., Additional MS 3988, Cambridge Library, Cambridge.

[101] Isaac Newton, 'Two Incomplete Treatises on Prophesy', n.d., Keynes MS 5, King's College Library, Cambridge, 6v.

[102] Tessa Morrison, *Isaac Newton's Temple of Solomon and His Reconstruction of Sacred Architecture* (Place of publication not identified: Birkhauser, 2011), p. 37.

[103] Touber, 'Applying the Right Measure', pp. 959-85; Also see Scott Mandelbrote, 'Isaac Newton and Thomas Burnet: biblical criticism and the crisis of late seventeenth-century England', in *The Books of Nature and Scripture: recent essays on natural philosophy, theology, and biblical criticism in the Netherlands of Spinoza's time and the British Isles of Newton's time*, ed. by James E. Force and Richard H. Popkin (Dordrecht: Kluwer, 1994), pp. 149-78, 158-59; James E. Force, 'Newton's God of Dominion: the unity of Newton's theological, scientific, and political thought', in *Essays on the context, nature, and influence of Isaac Newton's theology*. ed. by James E. Force and Richard H.

exemplar of what was to come and probably as a model of what he would have liked to be realized in the England of his time'.[104] With the emerging trend of applying a scientific approach to religion,[105] Newton and Villalpando both undertook to comment on the prophecy using a literal approach to recover the exact meaning of Scripture.

Willem Goeree (1635–1711), an expert in architectural theory, became involved in the temple debate in the Dutch Republic between 1669 and 1710.
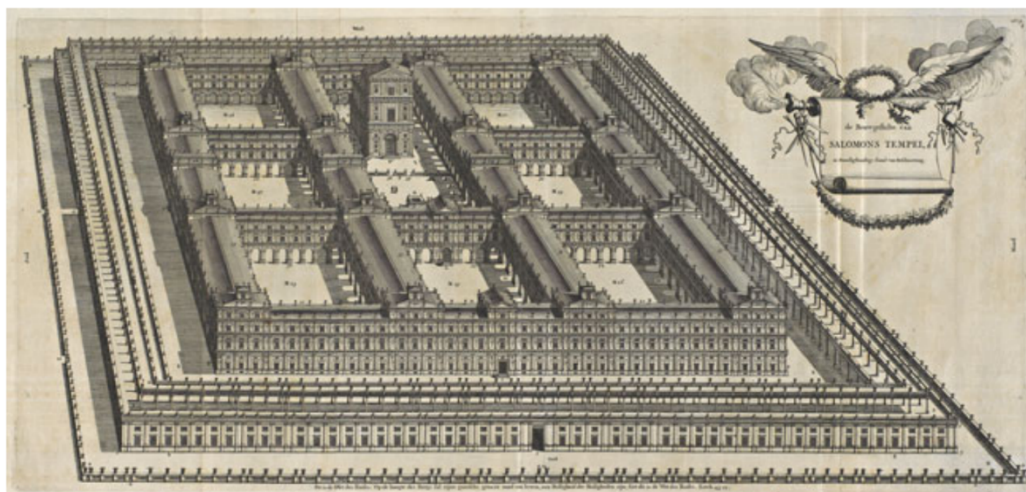

Fig. 2.10. Goeree's reconstruction of the Temple of Solomon. Source: Touber 2015: fig. 5

Goeree's reconstruction of the temple appeared in *Voor-bereidselen tot de bybelsche wysheid* ('Prolegomena to Biblical Wisdom', 1691) and drew extensively on the temple in Ezekiel's vision (Fig. 2.10). Inspired by Villalpando's temple, Goeree developed his architectural theory with the aim of constructing an architectural system which encompassed monumental, civic and private building practice.[106] Goeree appealed to Vitruvius and considered that mathematical regularities which

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(Popkin; Dordrecht, 1990), pp. 75-102; Scott Mandelbrote, 'A duty of the greatest moment: Isaac Newton and the writing of biblical criticism', *British Journal for the History of Science,* 26 (1993), pp. 281-302; Morrison, *Isaac Newton's Temple of Solomon*, pp. 13-40.
[104] Moreira, 'What Ezekiel says', p. 171.
[105] Morrison, *Isaac Newton's Temple of Solomon*, p. 85.
[106] For the original work see Willem Goeree, Wilhelmus Goeree and Universiteitsbibliotheek Utrecht, *D'algemeene Bouwkunde, Volgens D'antyke En Hedendaagse Manier: Door Een Beknopte Inleiding Afgeschetst, En Van Veel Onvoegsame Bewindselen En Verbasteringen Ontswagteld En Verbeterd* (Amsterdam: 1681); See Touber, Applying the Right Measure', pp. 959-85.

underlay nature ruled the Solomonic order of architecture, from which the classical orders known from antiquity were derived. In Goeree's religious history, the temple was the architectural expression of a primitive religion which was, similar to Newton's, a pious celebration of the regularities of nature.[107] Through the reconstruction of the temple of Solomon, Goeree meant to demonstrate how his architectural theory was essential to a proper understanding of a biblical reality. However, his work was not appreciated by philologically trained theologians and failed to find resonance in later eighteenth-century biblical scholarship.[108]

In the early eighteen century, French mathematician and theologian Bernard Lamy (1640-1715) presented a ziggurat-like Temple dominating the landscape in Jerusalem in *De Tabernaculo foederis, de sancta civitate Jerusalem et de Templo ejus libri septem* (Fig. 2.11-1).
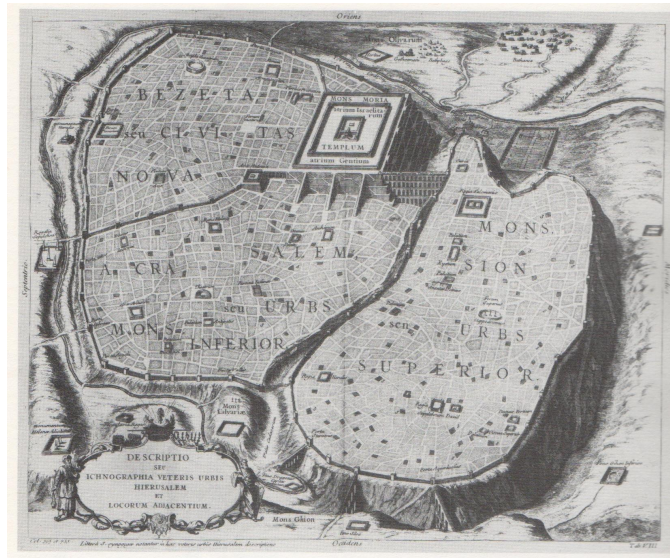

Fig. 2.11-1. Bernard Lamy, *De Tabernaculo*..., map of Jerusalem. Paris, 1720.

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[107] Touber, 'Applying the Right Measure', p. 981.
[108] Ibid., p. 985.

In the same book, Bernardo Lamy also presented a ziggurat structure of the Temple of Solomon (Fig. 2.11-2). According to Lamy, the south face of this magnificent structure had five ascending platforms holding multiple flights of stairs. In addition, a high bridge with multiple arches in the west side spanned over an assumed Kidron Valley.[109] Alan Balfour states that this overwhelming structure was inspired by Ezekiel 41.7 (KJV):

> And there was an enlarging, and a winding about still upward to the side chambers: for the winding about of the house went still upward round about the house: therefore the breadth of the house was still upward, and so increased from the lowest chamber to the highest by the midst.[110]
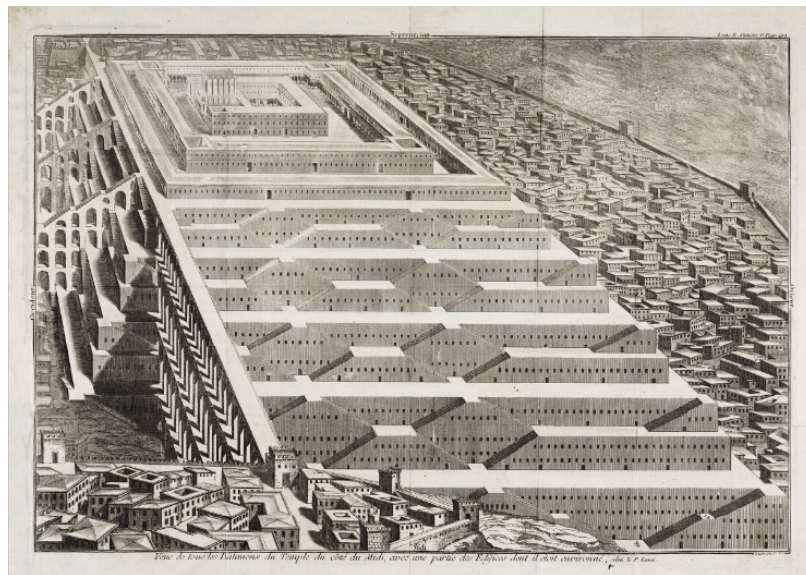
Fig. 2.11-2. Bernard Lamy, *De Tabernaculo* [...], the Temple. Paris, 1720.

Lamy's creative interpretation of the ziggurat reminds us of the context of the ancient Near East temples. Chapter 4 will explore Ezekiel 40-48 from this perspective. Even though an exhaustive review is not undertaken due to the limits of the thesis, this section demonstrates various historical attempts to visualise the temple (and the landscape). A preliminary observation reveals that these 'projects'

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[109] Alan Balfour, *Solomon's Temple: Myth, Conflict, and Faith*. Hoboken (N.J.: Wiley-Blackwell, 2012), p. 194.
[110] Ibid.

might be categorised into: 1. temple projects that were declared as the Temple of Solomon based on biblical accounts of Solomon's Temple, such as Bede's work; 2. declared as Solomon's Temple but the information was drawn from the book of Ezekiel, or an integration of both, such as Isaac Newton's interpretation; 3. declared clearly as Ezekiel's, such as images drawn by Richard of St. Victor, Hafenreffer and Juan Bautista Villalpando. While Ezekiel 40-48 was often under the umbrella of a grand idea of the Temple of Solomon, important contributions of Ezekiel's landscape could be recognised, these include: 1. the presence of the river (e.g. Lyra and Leon); 2. the regional planning (e.g. Villalpando); 3. the squared-spaces: grid system or courtyards (e.g. Villalpando); 4. resilient use of space (e.g. Perret). These findings reveal a regional view of the patterned landscape which characterise Ezekiel 40-48. The findings of this section as well resonate with our discussion in chapter 1 (section 1.2), which explains the reason of using Alexander's Pattern Language in light of Geddes' 'region-city'. Now it is likewise important for us to review the history of scholarship from a text-based point of view.

2.2 Text-based Biblical Studies of Ezekiel 40-48

In the early nineteenth century scholars focused on refining text-critical and historical analysis of Ezekiel. Although a few eighteenth-century scholars challenged the unity and authenticity of the book of Ezekiel,[111] these challenges had little impact. H. Ewald in 1841 claimed that the historical Ezekiel wrote the book. In 1880, R. Smend believed the book was written as a unity. By the turn of the twentieth-century, however, disunity was assumed (e.g. R. Kraetzschmar, 1900; J. Herrmann, 1908, 1924; Steuernagel, 1912; Rautenberg, 1913). In 1924 Hölscher argued that fewer than 144 of the book's 1,273 verses were the actual words of the prophet Ezekiel. The legal material in the book of Ezekiel was taken to be inauthentic.[112] The *Dictionary of Biblical Interpretation* reports that 'Hölscher's radical conclusions gave new impetus to redaction criticism of the book, and for the next twenty years research focused on the 'problem of Ezekiel' — namely, questions regarding the

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[111] In 1798, an anonymous critic claimed Daniel as the author of fourteen chapters in Ezekiel.
[112] Hayes, *Dictionary of Biblical Interpretation*, pp. 373-4.

date, unity and place of the book's composition'.[113]Apart from scribal additions and alterations, G. A. Cooke, in 1924, read a paper before the Society for Old Testament Study in London, declaring: 'We shall look out for the main ideas [...] We must be careful not to lose our sense of direction in a bewildering maze of details'. Cooke states what he considers to be 'the special interest of Ezekiel':

> It would seem that in the religious training of mankind God employs the method of prophecy and the method of law. Very often, human nature being what it is, the two methods are seen in rivalry or in open conflict, but both are essential to the progress of religion. Ezekiel represents prophecy and law in combination: this was the secret of his immense influence upon the religion of Israel, and it gives a sterling value to what he has to teach us even now.[114]

Considering the 'design' or 'ground plan' of the temple, Cooke had a keen observation of its spatial character and considered the possible historical context. He said it is 'based partly on the well-remembered lines of Solomon's temple, but also modelled on the pattern of the spacious sanctuaries, walled and guarded like a fortress, which the prophet had before his eyes in Babylonia'.[115] In 1950, Carl Gordon Howie proposed that Ezekiel 40-48 was a genuine reflection of the temple of Solomon. Under the direction of W. F. Albright, he compared Ezekiel's gates to the gates of Megiddo.[116] Concerning one piece of architectural data, the east gate in Ezekiel 40.5-16, Howie suggested the availability of archaeological evidence, which Newton and Goeree did not have at hand, to offer a fresh approach and reconsideration of the whole landscape in Ezekiel 40-48. Using space to argue about time, Howie concluded:

> An amazing resemblance exists between this [Ezekiel's] East Gate and the Solomonic Gate of Megiddo IV B. Both have the same number of piers and recessed chambers; both have two vestibules, and the over-all measurements are similar.[117]

> Since this type of gate was no longer built in the ancient Near East after the early eighth century B. C., and since the Megiddo plan belongs specifically to the tenth century, Ezekiel must have known the Solomonic gate of the temple in Jerusalem before the destruction of that city in 587 B. C. Thus the prophet lived at least a part of his life prior

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[113] Ibid., p. 374.
[114] G.A. Cooke, 'Some Considerations on the Text and Teaching of Ezekiel 40–48', a paper read before the Society for Old Testament Study, meeting in London, January 3rd, 1924, *Zeitschrift für die Alttestamentliche Wissenschaft,* 42.1 (1924), pp. 105-15.
[115] Ibid, p. 106
[116] Carl Howie, 'The East Gate of Ezekiel's Temple Enclosure and the Solomonic Gateway of Megiddo', *Bulletin of the American Schools of Oriental Research,* 117 (1950), pp. 13-19.
[117] Ibid., pp. 18-19.

to that date and is not a late fifth-century or third-century-B. C. figure, as some have proposed. The East Gate is another piece of important evidence, supported by archaeology, favoring the traditional date for the prophet Ezekiel, viz., the first half of the sixth century B. C. It is to be hoped that with the presentation of this and other material, some recent, fanciful theories about the late date of our prophet will be completely discarded by scholarship.[118]

Howie's observation points to the importance of the measurement and the layout of the space.[119] His comparative studies link Ezekiel 40-48 with possible historical parallels.[120] Regarding the method of research, in 1969 W. Zimmerli put forth a new theory — the hypothesis of *Fortschreibung* (elaboration) — on the redaction history of the book, arguing that an original 'core' of prophetic material from Ezekiel underwent a process of *Nachinterpretation* within an 'Ezekielian School'. The additions and revisions throughout the book 'point back' to the prophet.[121] In 1976, Jon Levenson offered a traditio-critical study of Ezekiel 40-48. He found strong links between Ezekiel 40-48 and the traditions of the Garden of Eden, Mount Zion, and Mount Sinai. These three traditions merge in Ezekiel 40-48 and develop the theology of the program of restoration — the divine grace is offered in the first two traditions, with the call for human effort in the last.[122]

In 1983, M. Greenberg proposed a 'holistic approach' for reading the book of Ezekiel. It emphasizes the structure, accentuates the literary qualities, and notes the signals of connection and composition, with the goal of explicating the inner logic and implications. Greenberg traced the whole book to Ezekiel as the author, arranger, redactor and editor of his texts without denying the presence of later editorial

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[118] Ibid., p. 19.

[119] Tuell, Joyce and Strong argue that Howie's observation compares favourably with the Iron Age Gate, but that the conclusion may be too simple and too quickly achieved. See J. T. Strong, 'Grounding Ezekiel's Heavenly Ascent: A Defense of Ezek 40-48 as a Program for Restoration', *Scandinavian Journal of the Old Testament,* 26.2 (2012), p. 197.

[120] Since then the six-chamber gates at Hazor, Gezer, and Lachish have all come to light. According to William G. Dever, the six-chamber gate, paralleling the gates of Ezekiel's vision, is tenth-century BCE; the four-chamber gate, following Shishak's raid in 920 BCE, is ninth-century BCE; the two-chamber gate, destroyed by Tiglath-Pileser III's Asiatic campaign, is eighth-century BCE. See Strong, 'Grounding Ezekiel's heavenly ascent', pp. 192-211.

[121] See Walther Zimmerli, Klaus Baltzer, Frank Moore Cross, R. E. Clements, Paul D. Hanson, James D. Martin, and Leonard J. Greenspoon, *Ezekiel: A Commentary on the Book of the Prophet Ezekiel,* Hermeneia — a Critical and Historical Commentary on the Bible (Philadelphia: Fortress Press, 1979)

[122] Levenson, *Theology*, pp. 25-53.

work.[123] Greenberg revealed concerns on Ezekiel 40-48 in 'The Design and Themes of Ezekiel's Program of Restoration' in 1984.[124] His commentary reopens the synchronic study of the book of Ezekiel based on its 'final forms' in its full complexity that focuses on the unity of the book and explores its literary technique. In 1997, D. Block undertook specialized research assuming the book's substantial unity and attributes much work to the historical Ezekiel.[125] By the end of the twentieth century, scholars 'have returned to the earlier consensus regarding Ezekiel's essential unity and set about to explicate its distinctive literary features'.[126]

On the other hand, a shift in the view of the authorship of the prophetic writing has taken place based on a research approach that focuses on the mind of the prophets. In the early twentieth century, with the emergence of Freud and Jung's psychoanalysis and analytical psychology, psychoanalytic interpretation has become a tool to understand the historical Ezekiel based on the bizarre persona, strange behaviour and states in the text.[127] Ezekiel 40-48, as a visionary journey, is among these strange behaviours. Entering the twenty-first century, within the field of psychology, newer emphases on the self, relational psychology, neuropsychology, and cognitive science have displaced older approaches. Numerous psychological theories and perspectives, including behavioural or cognitive therapies, and experimental and social psychology, contribute to the studies of the prophets, their books and traditions.[128]According to Strawn and Strawn in 2012, the main categories of the

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[123] See Hayes, *Dictionary of Biblical Interpretation*, 374; as well as Hans Dieter Betz, *Religion Past & Present: Encyclopedia of theology and religion* (Fourth edition, English ed.; Leiden: Brill, 2007), 782.
[124] Moshe Greenberg, 'The Design and Themes of Ezekiel's Program of Restoration', *Interpretation* 38 no 2 (1984), p. 181.
[125] Daniel I. Block, *The Book of Ezekiel* (New international commentary on the Old Testament; Grand Rapids, Mich.; Cambridge: W.B. Eerdmans, 1997)
[126] Hayes, *Dictionary of Biblical Interpretation*, p. 375. Also see P. P. Jenson, 'Temple', in *Dictionary of the Old Testament: Prophets*, ed. by M. J. Boda and J. G. McConville, IVP Bible dictionary series, 4 (Downers Grove, Ill.: IVP Academic, 2012), p. 771.
[127] These include muteness (3.26), visionary traveling (1; 8-11; 37; 40-48), emotional paralysis after his wife's death (24.15-27), pornographic language (16; 23) and sign acts (4.1-5:4). See L.-S. Tiemeyer, 'Ezekiel: Book of', in *Dictionary of the Old Testament: Prophets*, p. 227. Also see Brad E. Kelle, 'The Phenomenon of Israelite Prophecy in Contemporary Scholarship', *Currents in Biblical Research,* 12.3 (2014), pp. 275-320.
[128] Kelle, 'The Phenomenon', p. 301. Also see Paul Joyce, 'The Prophet and Psychological Interpretation', in *Prophecy and Prophets in Ancient Israel: Proceedings of the Oxford Old Testament Seminar*, ed. by J. Day, Library of Hebrew Bible/Old Testament studies, 531 (New York; London: T & T Clark, 2014), pp. 133-48.

prophets in contemporary research include the psychological *affect* of the prophets; the psychological *effect* of the prophets; and the psychology of God. The psychological *affect* of the prophets examines a book as an 'example of literature that reflects the traumatic experience of exile and is a way the exile community coped with that trauma';[129] The psychological *effect* of the prophets focuses on the function the literature had on the psychologies of particular audiences; The psychology of God explores divine traits portrayed in the prophets.[130] In my view, Ezekiel 40-48 fits well in the train of psychological interpretation. Ruth Poser, in her *Das Ezechielbuch als Trauma-Literatur*, builds up a conceptual model based on her exegesis, reading the whole book of Ezekiel as trauma literature. In her view, Ezekiel 40-48 is a literary representation of space and is a priestly imagination of a 'safe place'.[131] Published in 2015, *The God Ezekiel Creates* exhibits a series of understandings of God including 'the God Ezekiel envisions', 'The God that Ezekiel Inherited', 'The God that Gog Creates', 'The God Ezekiel Wants Us to Meet', and 'The God that the Scholarship on Ezekiel Creates'.[132] Stephen L. Cook, in 'Ezekiel's God Incarnate!', states that Ezekiel 40-48 presents an understanding of God's nature and presence that stands out within the Scripture. The highly planned presentation in the temple blueprint aims to train Israel in patterning its life to interconnect with the holiness of God and thus grow in sanctification.[133] In the twenty-first century Ezekiel 40-48 fully exhibits its potential as a resource for interdisciplinary and even interfaith studies. Jacob Milgrom, an esteemed rabbi in Conservative Judaism, is well known for his writings on Hebrew cultic matters and pentateuchal studies in tabernacle and temple.[134] His commentary *Ezekiel's Hope* published in 2012 on Ezekiel 38-48

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[129] Strawn and Strawn, 'Prophecy and Psychology', in *Dictionary of the Old Testament: Prophets*, ed. by Mark J. Boda and J. G. McConville, IVP Bible Dictionary Series, 4 (Downers Grove, Ill.: IVP Academic, 2012), p. 616.

[130] Kelle, '*The Phenomenon*', p. 301.

[131] Ruth Poser, *Das Ezechielbuch als Trauma-Literatur,* Supplements to Vetus Testamentum, 154 (Leiden: Brill, 2012), pp. 615-37.

[132] Paul M. Joyce and Dalit Rom-Shiloni, ed., *The God Ezekiel creates*, Library of Hebrew Bible/Old Testament studies, 607, ed. by P. M. Joyce and Dalit Rom-Shiloni (London: Bloomsbury, 2015)

[133] Cook, 'The God that the Temple Blueprint Creates', pp. 132-49.

[134] E.g., Jacob Milgrom, *Leviticus: A New Translation with Introduction and Commentary*, 3 vols, Numbers במדבר: AB 3, 3A, 3B (New York: Doubleday, 1991-2001); *The Traditional Hebrew Text with the New JPS Translation*, JPS Torah Commentary (Philadelphia: Jewish Publication Society, 1990)

completes the work begun by Moshe Greenberg[135] with frequent references to Daniel Block's commentary.[136] It engages in an insightful written discussion between a Jewish and an evangelical scholar on Ezekiel's oracle against Gog in chapters 38-39 and the vision of Israel's physical and spiritual restoration in chapters 40-48.[137]

Since earliest times many methods have played a part within studies of Ezekiel. Ezekiel 40-48, being contradictory, unreasonable, mystical, and problematic on the one hand, is the counterpart of Mosaic Law — regular, reasonable and correlated with the natural law — on the other. It challenged Isaac Newton for five decades,[138] human intelligence in sum for over two thousand years, and will still be open to flexible reinterpretation in later, different circumstances.

What has been described is a general overview of the studies of Ezekiel, which attempts, specifically, a better understanding of chapter 40-48 over time. Many studies have focused on the redactional history of composition — the dating — of the texts. Given the arrangement and the diversity of the content, the question of the authorship of Ezekiel 40-48 covers a spectrum, in Joyce's words, 'from the stratifying to the holistic'.[139] Some believe that Ezekiel 40-48 should be seen as a product of the prophet himself.[140] Other scholars feel that Ezekiel 40-48 is best accounted for by sequential editorial activity.[141] Recent studies, especially in German

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[135] Moshe Greenberg, *Ezekiel 1-20: A New Translation with Introduction and Commentary* (AB 22; Garden City, NY: Doubleday, 1983; *Ezekiel 21-37: A New Translation with Introduction and Commentary* (AB 22A; Garden City, NY: Doubleday, 1997)

[136] Daniel I. Block, *The Book of Ezekiel*, 2 vols (Grand Rapids: Eerdmans, 1997, 1998)

[137] Jacob Milgrom and Daniel Block, *Ezekiel's Hope: A Commentary on Ezekiel 38-48* (Eugene, OR: Cascade, 2012). For the review see Daniel Bodi, review of J. Milgrom and D. Block, *Ezekiels Hope: A Commentary on Ezekiel 38-48*, *The Catholic Biblical Quarterly,* 75.4 (2013), pp. 775-77.

[138] Newton's note-taking and drafting on the Temple spanned five decades, from the rudimentary sketches of Yahuda MS 14 to the sophisticated plate of the *Chronology of ancient kingdoms,* especially in his Latin manuscript now in the Babson Collection: *Prolegomena ad lexici prophetici partem secundam in quibus agitur de forma sanctuarij judaici.* See Moreira, 'What Ezekiel says', pp. 153-80.

[139] Gese, 1957; Tuell 1996; Rudnig, 2000; Greenberg, 1984. See Paul Joyce, 'Temple and Worship *in Ezekiel 40-48*', in *Temple and Worship in Biblical Israel,* ed. by J. Day (London: T & T Clark, 2005), pp. 145-63.

[140] See Menahem Haran, 'The Law Code of Ezekiel XL-XLVIII and its Relation to the Priestly School', *Hebrew Union College Annual,* 50 (1979), pp. 45-71, and Greenberg, 'Design', p. 181.

[141] See Hartmut Gese, *Der Verfassungsentwurf des Ezechiel (Kap. 40-48) traditionsgeschichtlich untersucht* (Tübingen: J. C. B. Mohr, 1957), p. 66; Levenson, *Theology,* pp. 129-32, 153; Steven Tuell, *The Law of the Temple in Ezekiel 40-48* (Atlanta, GA: Scholars Press, 1992), pp. 3, 31-33; and

scholarship, painstakingly endeavour to examine the compositional history of Ezekiel 40-48, delicately arguing for a core of Ezekiel material with different settings of later redactional layers.[142] A synthesis of the views of Ezekiel 40-48 is: seeing signs of redactional layers and, at the same time, agreeing that the vision can be regarded as a 'complex unity'.[143]

The history of research on Ezekiel 40-48 in section 2.1-2.2 shows us trends and possibilities for Ezekiel 40-48. Section 2.3 further explores the themes of Ezekiel 40-48 by asking: 'What is being described?' The detailed measurements and laws might indicate a realistic program of restoration, and yet there is a river flowing from the temple, which seems to indicate ideal or utopian features.[144] This is, however, just one of the many ways to interpret it. Given such puzzles, interpretation about *what* it is — the spectrum with regard to the question of the overall purpose of Ezekiel 40-48 — covers the range from the realistic through to the eschatological and the utopian.[145] Different views include seeing Ezekiel 40-48 as the memory of Solomon's temple, understanding it as the temple built after the return, a blueprint for the returning exiles, a figure of the redeemed worshipping community, viewing it allegorically, reading it as a prophetic parable, and interpreting it as a literal temple.

The next section will review and discuss themes and topics that relate directly to my research.

Joyce, 'Temple and Worship *in Ezekiel 40-48*', in *Temple and Worship in Biblical Israel*, ed. by J. Day (London: T & T Clark, 2005), p. 146.
[142] Thilo Rudnig, *Heilig und Profan: Redaktionskritische Studien zu Ez 40-48* (Berlin: W. de Gruyter, 2000), and Michael Konkel, *Architektonik des Heiligen: Studien zur zweiten Tempelvision Ezechiels (Ez 40-48)* (Berlin: Philo, 2001)
[143] P. P. Jenson, 'Temple', in Boda and McConville, *Dictionary of the Old Testament: Prophets*, p. 771.
[144] Ibid., p. 772.
[145] Joyce, 'Temple and Worship in Ezekiel 40-48', p. 147.

2.3 Thematic Analysis of the Scholarship of Ezekiel 40-48

2.3.1 The Genre — Ezekiel 40-48 as an Innovative Vision Report

Ezekiel 40-48 displays the formal features of a literary genre that is classified as a vision report.[146] Ezekiel 40.2 explicitly introduces the coming description as 'in the visions of God'. In 43.3 the prophet described what he saw — the visions *were* like the vision that he saw by the river Chebar. In 1960, F. Horst modelled a three-fold typology of reports of visions.[147] For Horst, reports of visions 'announced the inner workings of God's will as this was conceived by the prophet'.[148] Long, in 'Reports of Visions', classed Ezekiel 40-48, along with Amos 7.1-6 and Zech. 1.8-17, as 'Dramatic Word Vision'. According to Long, a dramatic word vision is 'a report which depicts a heavenly scene, or a dramatic action, a situation altogether supramundane taken as a portent presaging a future event in the mundane realm'.[149]

Understanding the genre of Ezekiel 40-48 is informative for the development of the big ideas/essential understanding of the literature. Michael A. Lyons demonstrates that the vision report in Ezekiel 40-48 moreover presents an innovative use of the vision report genre.[150] Lyons identifies four areas in which Ezekiel has renewed the vision report genre, setting it apart from others: (1) the appearance of an interpreter/guide figure with the measuring motif, along with the tour motif, that only occur in Ezekiel 40-48 and later visionary literature; (2) its cosmic-mythic imagery that merges Zion and Eden; (3) the description of sacred space, where the measurements are made; the nature of the sacred space and its arrangement is the central issue; and (4) its use of legal material. Lyons states that Ezekiel was the first to use the vision report genre to depict God's restoration of his people. Other than

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[146] For the definition of the genre and its features, see Michael H. Floyd, *Minor Prophets*, Part 2 (Grand Rapids, MI: Eerdmans, 2000), pp. 644-45.

[147] Horst's three categories of classication were 'Anwesenheitsvision' ('Presence'visions), 'Wort-symbolvision' (Word-symbol vision), and 'Geschehnisvision' (Event-vision). Horst regarded Ezekiel 40-48 as 'reine literarische Visionen', 'pure literary visions' distinct from other vision reports.

[148] Friedrich Horst, 'Die Visionsschilderungen der alttestamentlichen Propheten', *Evangelische Theologie,* 20.5 (1960), pp.193-205.

[149] Burke O. Long, 'Reports of Visions among the Prophets', *Journal of Biblical Literature,* 95.3 (1976), pp. 353-65.

[150] M.A. Lyons, 'Envisioning Restoration: Innovations in Ezekiel 40-48', in '*I Lifted My Eyes and Saw': Reading Dream and Vision Reports in the Hebrew Bible*, ed. by E.R. Hayes and L. Tiemeyer (London: Bloomsbury T & T Clark, 2014), pp. 71–83.

these innovative qualities of Ezekiel 40-48, Lyons also points out that visionary literature in the Jewish and Christian traditions displays both the characteristics of an altered state of consciousness and deliberately planned literary features. But what do the literary features embedded in the creative Ezekiel 40-48 look like? What are the big ideas behind this renewed vision report?

2.3.2 Utopian Future Restoration

Jon Douglas Levenson, in his *Theology of the Program of Restoration of Ezekiel 40-48*, develops conceptual models for Ezekiel's vision of the program for the restored Israel. He divides his research into three parts. In Part I, he identifies Mount Zion, the Garden of Eden, Mount Sinai and Mount Abarim as the traditions behind the 'mountain' in Ezekiel 40-48. Part II investigates the messianic expectation of Ezekiel in the exile. In Part III, he focuses on the social and political organization of the restored society described in Ezekiel 40-48.[151] Levenson pays special attention to the land form — the mountain — in the landscape of Ezekiel 40-48, and how it displays a cultural overlay of ancient Israelite tradition. He looks back to the cultural foundation of Ezekiel 40-48, and looks forward to the future restoration. By merging the Zion and the Eden imagery, the disastrous political reality of the exile could be reformed to the 'pre-political' state. For Eden, according to Levenson, is 'an ideal of pre-political existence, and [hence] redemption, which ends in the Garden of Eden, is deliverance from tensions of political life'.[152]

The concept of restoration in Levenson's analysis focuses on social and political aspects. What about environmental aspects?

Moshe Greenberg, at the very beginning of his 'The Design and Themes of Ezekiel's Program of Restoration', makes this comment on Ezekiel 40-48:

> Although Ezekiel's vision of the return and resettlement of Israel in postexilic
> times had no effect on subsequent events, his prescriptions for those events

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[151] Jon Douglas Levenson, *Theology of the Program of Restoration of Ezekiel 40-48,* Harvard Semitic Monographs (Missoula, Mont.: Scholars Press, 1976)
[152] Ibid., p. 30.

display his lofty conception of a prophet's responsibility in an age of ruin.[153]

Thus, Greenberg identifies Ezekiel 40-48 as Ezekiel's 'vision of return and resettlement of Israel in postexilic times'; as well as his 'prescriptions [...] in an age of ruin'.

> They shall follow my rules and carefully obey my laws, and [so] dwell in the land that I gave to my servant Jacob. They shall dwell in it forever, with my servant David their chief forever. I will make for them a covenant of well-being, it shall be a covenant forever with them and I will set my sanctuary in their midst forever. My tabernacle shall be over them. I will be their God and they shall be my people. And the nations shall know that I, YHWH, sanctify Israel, when my sanctuary is in their midst forever. (37.24b-28, Greenberg's translation)

> Thus the prophet sums up his prophecies of restoration in chapters 34-37. The hearts of the people will be bent to observe God's laws, as a result they will possess their patrimony forever under God's pious chief. The five-fold repetition of 'forever' stresses the irreversibility of the new dispensation. Unlike God's past experiment with Israel, the future restoration will have a guarantee of success, its capstone will be God's sanctifying presence dwelling forever in his sanctuary amidst his people. The vision of the restored Temple (and God's return to it) in chapters 40-48 follows as a proleptic[154] corroboration of these promises'.[155]

Greenberg highlights Ezekiel 34-37 as the summary of the prophecy of promises to fulfil the covenant of wellbeing [*shalom*] in 37.24b-28, and views Ezekiel 40-48 as the 'proleptic corroboration' of these promises. This view sheds light on my research as I am looking for the underlying concept of Ezekiel 40-48. The five-fold repetition of 'forever' in 37.24b-8, which Greenberg stresses especially, catches my attention. In his words, these five instances of 'forever' stress the 'irreversibility of the new dispensation'.[156] What stands out from these five forevers is the 'covenant forever' in verse 26, which is 'the covenant of wellbeing (בְּרִית שָׁלוֹם, *bərît šālôm*)' (translated

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[153] Moshe Greenberg, 'The Design and Themes of Ezekiel's Program of Restoration', *Interpretation* 38.2 (1984), pp. 181-208. Greenberg states that chapters 40-42 comprise 'a vision of an already built complex', and that 43-48 are particularly close to the priestly materials in Leviticus.

[154] According to Merriam-Webster Dictionary, the definition of 'prolepsis' is: a. the representation or assumption of a future act or development as if presently existing or accomplished; b: the application of an adjective to a noun in anticipation of the result of the action of the verb. Following definition a, and applying modern day techniques, Ezekiel 40-48 can be seen as a model home for a construction project or VR (Virtual Reality). Following definition b, Ezekiel 40-48 is an anticipation of the result of the action. The action is to corroborate, to support or help prove by providing information or evidence of the promise. The action can also be understood as 'to promise': to tell someone that you will definitely do something or that something will definitely happen in the future.

[155] Greenberg, 'Design', p. 182.

[156] Ibid.

as 'Covenant of Peace' in NIV, NRSV).[157] According to Brown-Driver-Briggs's definition,[158] שָׁלוֹם (*shalom*) means completeness, soundness, welfare and peace:

1. completeness (in number)
2. safety, soundness (in body)
3. welfare, health, prosperity
4. peace, quiet, tranquillity, contentment
5. peace, friendship

   - human relations
   - peace with God, especially in covenant relation

6. peace (from war)
7. peace (as adjective)

Other similar interpretations regarding the 'restoration' include an earlier statement made by Ronald E. Clements who states that Ezekiel 40-48 is '[...] a practical "renewal program" for national reorganisation'.[159] Recent research includes that of Richard Nelson. In *Raising Up a Faithful Priest*, he presents a discussion based on the theology of priesthood. In his mind, Ezekiel 40-48 concerns the setting of boundaries for the wellbeing of the community in a restored, utopian future.[160]

Although it is not my intention to determine the dating of the restoration visions, Thilo Alexander Rudnig's analysis of Ezekiel 40-48 as a vision of the renewed temple and greater Israel based on 'golah-oriented' (*golaorientierten*) redaction that concerns the relationship of the content to the Babylonian exile, draws out a possible framework of historical context for my research.[161] Commenting on Rudnig's work, Lowell K. Handy states that 'Rudnig approaches the whole of the section as a

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[157] Also see Num. 25.12 'Wherefore say, Behold, I give unto him my covenant of peace'; and Ezekiel 34.25 'And I will make with them a covenant of peace, and will cause the evil creatures חיה־רעה to cease out of the land: and they shall dwell safely in the wilderness, and sleep in the woods'.; Isaiah 54.10 'For the mountains may depart and the hills be removed, but my steadfast love shall not depart from you, and my covenant of peace shall not be removed, says the LORD, who has compassion on you'.; Malachi 2.5 'My covenant with him was a covenant of life and wellbeing, which I gave him; this called for reverence, and he revered me and stood in awe of my name'.

[158] BDB, pp. 1022-23.

[159] Ronald E. Clements, *God and Temple* (Philadelphia: Fortress, 1965), p. 106; and idem, *Ezekiel*, Westminster Bible Companion (Louisville: Westminster John Knox, 1996), pp. 176-81.

[160] Richard D. Nelson, *Raising Up a Faithful Priest: Community and Priesthood in Biblical Theology* (Louisville, Kentucky: Westminster/John Knox, 1993), pp. 17-38.

[161] Rudnig, *Heilig und Profan,* pp. 58-64.

document of the postexilic Judean community seeing itself in light of a former utopian hope as well as a contemporary problematic reality'.[162] For the exilic text, the three major concerns were the temple, ruler, and land, all of which were nonfunctioning at the time of the exilic author.[163] Handy's comments echoes Greenberg's view, which reads Ezekiel 40-48 as 'prescriptions [...] in an age of ruin',[164] as well as my view, which reads Ezekiel 40-48 as offering the solutions to their problems.

Published a year later, Michael Konkel developed his own redactional theory. In *Architectonik des Heiligen*, Konkel uses a pragmatic approach to bring the synchronic and diachronic approach into conversation with each other for a more sophisticated understanding of the final composition. In each section of his textual analysis, a synchronic analysis is always followed by a diachronic analysis. The whole book is structured with the same idea, which begins with a synchronic observation of the text to provide a basis for the construction of a redaction-historical model.[165]

Rather than referring to his diachronic analysis, for the purpose of my research I pay more attention to the synthesis of his book that is published as 'Die zweite Tempelvision Ezechiels (Ez 40-48): Dimensione eines Entwurfs', which begins with his synchronic reading of the text — 'Die synchrone Makrostruktur von Ez 40-48'.[166] He reads the overall composition of Ezekiel 40-48 not as a utopian design of exile but as a critique of the cult practices of the second temple.[167] He identifies three

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[162] Lowell K. Handy, Review of T. A. Rudnig, *Heilig und Profan: Redaktionskritische Studien zu Ez 40-48, Journal of Near Eastern Studies*, 62.4 (2003), pp. 299-301.
[163] Ibid.
[164] Greenberg, 'Design', pp. 181-208.
[165] For his argument to justify a method combining the synchronic and the diachronic analysis, see Michael Konkel, *Architectonik des Heiligen: Studien zur zweiten Tempelvision Ezechiels (Ez 40-48)* (Berlin: Philo, 2001), pp. 3-7.
[166] Michael Konkel, 'Die zweite Tempelvision Ezechiels (Ez 40-48): Dimensione eines Entwurfs', in *Gottesstadt und Gottesgarten: Zu Geschichte und Theologie des Jerusalemer Tempels,* ed. by Otmar Keel and Erich Zenger (Freiburg: Herder, 2002), pp. 154-79.
[167] Michael Konkel, *Architectonik des Heiligen: Studien zur zweiten Tempelvision Ezechiels (Ez 40-48)* (Berlin: Philo, 2001). A synthesis of his book is published as Michael Konkel, 'Die zweite Tempelvision Ezechiels (Ez 40-48): Dimensione eines Entwurfs', in *Gottesstadt und Gottesgarten: Zu*

main parts from an observed chiastic structure of Ezekiel 40-48: The temple
(Tempelbeschreibung) (Ezek. 40-42), the cult (Kultsatzungen) (Ezek. 44-46) and the
land distributed to the tribes (Ezek. 47-48). In between are Ezekiel 43.1-12 with the
description of the return of Glory (*Kabod*) and Ezekiel 47.1-12 with the description
of the temple river (Tempelquelle) that connect the three main parts of the vision.
Overall, Konkel reads Ezekiel 40-48 as a linear description moving from the temple
to the land, inside to the outside.

Table 2.1. The second temple-vision can be divided into five sections, according to Konkel.[168]

A		40.1-42.20	The new temple	Inside
	B	43.1-12	The return of the glory	
		C	43.13-46.24	The statements and instructions of the temple	↓
	B'	47.1-12	The temple-river	
A'		47.13-48.35	The new land	Outside

Like Greenberg and Rudnig,[169] Konkel supports the idea that the second temple
vision is in many ways linked to the announcements in Ezekiel 37.25-28,
descriptions of the covenant of wellbeing. Konkel specifically points out that the
healing motif contributes to the overall coherence of the book. Particularly, the
healing motif satisfies the announcement of 37.25-28. However, chapter 38-39 sets a
new benchmark of time that deflects Ezekiel 40-48 from a real-time restoration to an
end-time achievement. All of the disaster and healing announcements of the book are
situated within a time frame that ranges from the exile to the new exodus from exile
and return home in safety. The underlying message could be put in a nutshell:
everything remains as it was ('Alles bleibt, wie es war').[170] The horror scenario and
violent fantasy in chapters 38-39 assert the final defeat of the nations: no more
destruction of Israel. The thematic connection between Ezekiel 40-48 and Ezekiel
38-39 meets the healing announcements ('Heilsansagen') of the book, and confirms
the final state of healing and salvation ('Heilszustand') of Israel — that they can live

Geschichte und Theologie des Jerusalemer Tempels, ed. by Otmar Keel and Erich Zenger,
Quaestiones Disputatae,191 (Freiburg: Herder, 2002), pp. 154-79.
[168] Konkel, 'Die zweite Tempelvision Ezechiels (Ez 40-48)', p. 155.
[169] Rudnig, '*Heilig und Profan',* pp. 58-64.
[170] Konkel, 'Die zweite Tempelvision Ezechiels (Ez 40-48)*',* p. 174.

in the land in safety ('in Sicherheit im Lande leben können'),[171] an ultimate state of wellbeing.

Regardless of whether the temple description in Ezekiel 40-42 serves as a utopian design or is to be applied in concrete implementation, Konkel states, a reader in the post-exilic time could have understood this text as instructions of construction ('Bauanweisung') for the second temple. But the second temple was not fully completed following the command of Ezekiel 40-48. This would cause a theological problem that would create the suspicion that Ezekiel 40-48 was a false prophecy. Based on his understanding of the foregoing chapters 38-39, Konkel argues that Ezekiel 40-48 was presented as a necessary critique of the cult practices as soon as the second temple was built, referring to a dissatisfying reality. What Ezekiel 40-48 described was not to be built after the return from exile, but was the ideal one to be constructed in the 'end of years' — i.e. in a distant future.

The trajectory Konkel takes in understanding Ezekiel 40-48 is a great example for my study because he combines the synchronic and the diachronic analysis in one research project. Konkel starts with synchronic observation of the text by developing a structure from Ezekiel 40-48, from which he highlights the rules, specifically the cultic practices of the temple. He emphasizes disaster, healing and salvation as important motifs that run through the whole book and shows how the connection with chapter 38-39 could transfer Ezekiel 40-48 to an eschatological space, guaranteeing the vital function of the temple vision permanently.

Konkel's work also inspires me to question two things. First, the critique which Ezekiel 40-48 serves could include significant issues other than the cultic practices that Konkel highlights. If we construe different structures from the text, or choose different themes from the same structure, we would interpret the text differently. There might be other possibilities. Second, from the perspective of reading Ezekiel 40-48 as an ancient landscape plan, the way in which Konkel assumes Ezekiel 40-48 to be an instruction of design ('Anweisung für die Gestaltung') or instruction of

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[171] Ibid.

construction ('Bauanweisung') indicates how he is speculating about the practicality of Ezekiel 40-48. These two terms, seemingly similar, would in fact lead to different expectations about how precise Ezekiel 40-48 *should be* and thus influence the credibility of this temple vision. Instruction of design ('Anweisung für die Gestaltung') is closer to the concept of planning or design guidelines, which provides design strategies for a common good, e.g. safety and wellbeing. On the other hand, instruction of construction ('Bauanweisung') is like an assembly instruction that is expected to provide precise construction details. Konkel's conjectural views of Ezekiel 40-48 convinces me that various landscape-related issues could be clarified by investigating the texts from the perspective of landscape planning, design and construction.

2.3.3 A Mindscape — Cities of the Mind, Memory of the Temple

Carla Sulzbach, a Biblical scholar who pays special attention to biblical cities and memory, proposes in her 'From Urban Nightmares to Dream Cities' five categories of cities that 'can be encountered at every level of society and thought'. These categories are: (1) Cities of the Mind; (2) Real Cities; (3) Literary Cities; (4) Memory Cities; and (5) Apocalyptic Cities. According to Sulzbach, Ezekiel 40-48 falls into category (1) Cities of the Mind, and is 'one of the most glorious and detailed biblical examples of a building account for a permanent edifice, even if never realized [...] [It] was mostly the exemplar for the architectural accounts in the Qumran temple scroll and New Jerusalem text (4Q232), as well as the book of Revelation'.[172]

The Mishnah, the first major written redaction of the Jewish oral traditions known as the 'Oral Torah' in the post-destruction society, in one of its tractates, the *Middot* (literally, 'measurements'), describes the gates, chambers, and furniture of the temple. Naftali S. Cohn, in *The Memory of the Temple and the Making of the Rabbis*, states that 'the Mishnah's tour mirrors the pattern of movement in Ezekiel'.[173]

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[172] Carla Sulzbach, 'From Urban Nightmares to Dream Cities: Revealing the Apocalyptic Cityscape', in *Constructions of Space V: Place, Space and Identity in the Ancient Mediterranean World,* ed. by Gert T. M. Prinsloo and Christl M. Maier (New York: Bloomsbury T&T Clark, 2013), p. 230.
[173] Naftali S. Cohn, *The Memory of the Temple and the Making of the Rabbis* (Philadelphia: University of Pennsylvania Press, 2013), p. 84.

According to Cohn, the textual world of the temple and its memory in the *Mishnah* is a construction based on Ezekiel 40-43. The rabbis imagined a temple, perhaps a revised version, based on Ezekiel to lay claim to the temple as well as forming an idealized social reality in their own time.[174] In my view, the continuous attempts to re-imagine a landscape reveals the rabbis' intellectual capacity for reviewing and revising the existing plan/vision. This is very similar to the mindset of present day landscape architects.

2.3.4 The Blueprint, Ground Plan (and Temple Tour)

Scholars seem to find the term 'blueprint' useful to define Ezekiel 40-48 given the nature of the presentation of the textual landscape. A blueprint is a two-dimensional technical drawing that includes three-dimensional information. It seems to serve as a catchy term to summarize the great amount of spatial information in Ezekiel 40-48. For example, Corrine L. Patton's *Ezekiel's Blueprint for the Temple of Jerusalem* explicitly defines Ezekiel's description of the temple as a 'blueprint'.[175] Milgrom, as he analyses the Levitical town in Num. 35.1-8 as a realistic example of town planning, categorizes architectural (e.g. Exod. 26; 27) and geographical blueprints including Ezekiel's landscape (Josh. 18; Ezek. 48).[176]

Viewing it as an actual temple, questions are raised such as: What kind of temple was it? What is the difference between Ezekiel's temple and Solomon's temple? What is the difference between Ezekiel's temple and the second temple, which replaced Solomon's temple (the first temple) that had been destroyed by the Neo-Babylonian Empire in 586 BCE?

Questions surrounding Ezekiel 40-48, and which puzzle scholars, arise from debates over whether the passage presents a practical building proposal — a 'blueprint' in the modern sense:

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[174] Ibid., pp. 73-89.
[175] Corrine Patton and Robert R. Wilson, *Ezekiel's Blueprint for the Temple of Jerusalem* (ProQuest Dissertations and Theses, 1991)
[176] Jacob Milgrom, 'The Levitic town', *Journal of Jewish Studies,* 33.1-2 (1982), pp. 185-88.

(1) Its lack of vertical dimensions. Paul Joyce summarizes Tuell's argument:

> In Ezekiel's temple vision most vertical dimensions are omitted. The various structures of the Temple are generally measured in two-dimensional outline, and little is said about the elevation of the building. Whilst three-dimensional descriptions are found occasionally (for example, 40.5, 42; 41.16-17, 22), they are untypical. Ezekiel's Temple seems to lack proper Temple walls; particularly striking is the fact that no height is given for the inner room in 41.4 or for the Temple as a whole in 41.13-14.[177]

(2) Its lack of furniture design. Greenberg states:

> Many furnishings of the Solomonic temple and the desert tabernacle are missing: the ark and its cherubs and the lamp; the only interior furniture mentioned is the ambiguous 'altar of wood'. Very strange is the absence of a wall around the inner court, to which its three massive gates might stand in relation. No equivalent to the lavers or to the bronze sea appears in the outer court [...] The implications of these omissions must remain obscure.[178]

(3) Its lack of a command to build. Daniel Block argues:

> Ezekiel's account should not be interpreted as a blueprint to follow in an actual construction project. Although the analytic tone has a ring of realism, with numerous reminiscences of earlier plans, explicit instructions to build the described structure are missing.[179]

These 'flaws' draw us back to the discussion of Konkel's view of Ezekiel 40-48 as an instruction of design ('Anweisung für die Gestaltung') and/or an instruction of construction ('Bauanweisung'). In my view, the practicality of Ezekiel 40-48 (in the sense that it involves the actual design/planning rather than theories or ideas) should not be simplified as a yes-no question, but be studied thoroughly. In doing so we can have understandings of how this 'Anweisung' — the instruction of the landscape — could be applied. This will be one of the tasks of this thesis.

Hurowitz, in his book entitled *I Have Built You an Exalted House: Temple Building in the Bible in the Light of Mesopotamian and North-West Semitic Writings,* views Ezekiel 40-48 as a 'building project' which consists of 'an explicit and detailed

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[177] See Steven S. Tuell, 'Ezekiel 40-42 as verbal icon (the metaphorical temple plan)', *The Catholic Biblical Quarterly,* 58.4 (1996), p. 649; and Paul M. Joyce, 'Ezekiel 40-42: The Earliest "Heavenly Ascent" Narrative?' in *The Book of Ezekiel and Its Influence*, ed. by Henk Jan De Jonge and Johannes Tromp (Hampshire: Ashgate Publishing Limited, 2007), pp. 17-41.
[178] Greenberg, 'Design', pp. 225-26.
[179] Block, *The Book of Ezekiel*, p. 510; also in p. 597 Block states 'The texts contains no orders to build; it assumes an existing structure in the middle of sacred space, which provides the key to correct intercourse with Yahweh'.

command to build a temple at some unspecified date in the future'.[180] The divine command concerns the rebuilding of the temple and restoration of the cult at the time in the future when the children of Israel will be ashamed of their sins. Paul Joyce states that Ezekiel 43.10-11 provides a command to build by quoting: 'Describe the temple to the house of Israel, and let them measure the pattern' (43.10) and 'Make known to them the plan of the temple [...] and write it down in their sight, so that they may observe and follow the entire plan' (Ezekiel 43.11).[181] Interestingly, some scholars do not find the command to build from the same text. Block considers Hurowitz's view as a mistake.[182] Tuell also argues that 'the text itself contains no such command, but simply presents the dimensions of the visionary temple'.[183] Likewise, Lyons strongly states that, 'unlike Joyce, "Heavenly Ascent", p. 27, I do not take Ezek. 43.11 as a "command to build"'.[184]

Disagreements about whether Ezekiel 40-48 was a building project are developed from different interpretations of Ezekiel 43.10-11, and the assumption that the 'vertical distance' and 'command to build' were necessities for any building project.[185] Scholars who insist that 'vertical distance' and 'command to build' are essential for a building project tend to be intolerant of the absence of these necessities in Ezekiel 40-48 and, therefore, tend to deny that Ezekiel 40-48 could be a real construction project. This leads to the ignorance of a large number of

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[180] Hurowitz gives two examples of 'command to build' in which there are commands given to erect an altar: the stories about David's altar at Araunah's threshing floor (2 Sam. 24.18-25) and Jacob's altar in Bethel (Gen. 35.1-7). See V. Hurowitz, *I Have Built You an Exalted House: Temple building in the Bible in the light of Mesopotamian and North-West Semitic writings,* Journal for the Study of the Old Testament/American Schools of Oriental Research monograph, series 5 (Sheffield: JSOT Press, 1992), p. 25, 138.

[181] Joyce, 'Heavenly Ascent', p. 27.

[182] Block, *Ezekiel 25-48*, p. 510.

[183] Tuell, 'Verbal Icon', p. 649.

[184] Lyons states 'I do not take [...]' without explaining the argument that leads to his judgement. See Notes 36 in M.A. Lyons, 'Envisioning Restoration: Innovations in Ezekiel 40-48', in *'I Lifted My Eyes and Saw': Reading Dream and Vision Reports in the Hebrew Bible*, ed. by E.R. Hayes and L. Tiemeyer (London: Bloomsbury T & T Clark, 2014), pp. 71-83.

[185] Block states: 'the dimensions recorded are exclusively horizontal measurements, apparently without regard for the vertical distances required by architectural plans'. See Block, *The Book of Ezekiel*, p. 511; and Stevenson insists that if Ezekiel 40-48 is supposed to be a blueprint, 'it is not a very good one. An architectural blueprint is a two dimensional drawing but it always includes vertical dimensions. This blueprint omits the necessary detail'. See Kalinda Rose Stevenson, *The Vision of Transformation: The Territorial Rhetoric of Ezekiel 40-48* (Georgia: Scholars Press, 1996), p. 5.

landscape elements and its ability to offer a model to rebuild a space. In fact, ancient Mesopotamian landscape projects produce different types of document. Some may include, and some are presented without, vertical dimension (see 2.4.2.2 Landscape Hermeneutics in the Historical Context). In my view, it is possible that the formation of Ezekiel 40-48 involves plurality of approach, and may make it harder to categorise.

2.3.5 A Heavenly Temple

Some scholars argue that what Ezekiel 40-48 describes is a heavenly temple that was never meant to be built on earth. Tuell takes Ezekiel 40-42 as a 'Heavenly Ascent' narrative. Adding to his argument about the omitted vertical dimensions in Ezekiel's temple vision,[186] Tuell views Ezekiel 40-42 as a metaphorical temple.

> By means of Ezekiel's report of his vision the exiles could share in this extraordinary experience, seeing in their mind's eye the heavenly temple that Ezekiel saw. Though the earthly temple was no more, the heavenly temple would stand forever. Through Ezekiel's words the community of exiles was given access to this eternal, cosmic reality.[187]

Building on Tuell's research, Paul Joyce argues that Ezekiel 40-42 is the earliest Heavenly Ascent account. He views chapter 40-42 as a coherent section with a complete *inclusio* feature that marks this section distinctly.[188]

These arguments focus mainly on the temple. The detailed measurement of the temple is earnestly debated while the measurement of the river and its role in relation to the whole landscape are less studied. Since the earliest interpretation, the river in Ezekiel 47 has been presumed to be supernatural. It is not a known river, and is not considered as part of the temple complex or the city. The scale of the imagined 'blueprint' cuts Ezekiel 40-48 into fragmentary pieces and constrains the capacity of Ezekiel 40-48 to be understood as a vast landscape. The consequence is that we fail to understand the last chapters of Ezekiel as a unity.

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[186] Tuell, 'Verbal Icon', pp. 650-52.
[187] Tuell, 'Verbal Icon', p. 664.
[188] Paul M. Joyce, 'Ezekiel 40-42: The Earliest "Heavenly Ascent" Narrative?' in *The Book of Ezekiel and Its Influence*, ed. by H. J. de Jonge and J. Tromp (Aldershot: Ashgate, 2007), p. 22.

2.3.6 A Created New Human Geography

In 1996, Stevenson published her research reading Ezekiel 40-48 as territorial rhetoric rather than an architectural blueprint. If Ezekiel 40-48 is supposed to be a blueprint, she states, 'it is not a very good one. An architectural blueprint is a two-dimensional drawing but it always includes vertical dimensions. This blueprint omits the necessary detail'.[189] Going away from the blueprint argument, Stevenson shifts her focus from the three-dimensional structure to the two-dimensional space. She states: 'The concern here is not the arrangement and construction of structures, but the spaces defined by the structures'.[190] She argues that the building plan genre has obscured the rhetorical purpose of Ezekiel 40-48. The issue addressed should not be the correct building of structures but the creation of spaces and, 'more importantly, keeping the spaces separate'.[191] Her assumption was that the arrangement of the text, 'its selection of some topics, its omission of other topics, its detailed discussion of some details, and its silence about other details, are all part of the rhetorical strategy'.[192] In order to find out the redactional purpose of Ezekiel 40-48, the territorial rhetoric,[193] she uses the language of human geography to show that the fundamental intention of Ezekiel 40-48 is to create a new human geography — a transformed city with YHWH in the centre — by changing and controlling access to space. For Stevenson, Ezekiel 40-48 is a creative response to the experience of exile.

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[189] Stevenson's understanding of what a blueprint should be is based on a modern blueprint. Assuming that there are elements to a blueprint as a combined construction documentation, some containing a ground plan and some containing vertical dimensions, my question is: If part of the document is lost or corrupted, can we say that what remains are NOT blueprints? There seems to be a logical problem and, in fact, Stevenson does not state Ezekiel 40-48 is NOT a blueprint, but says 'IF it is a blueprint [...] it is not a very good one' (my own emphasis). Stevenson's statement has been misinterpreted as 'the detailed measurements and laws might indicate a realistic program of restoration aimed at avoiding abuses found in the Solomonic temple. Yet it is not a blueprint for builders (Stevenson)' by P. P. Jenson, 'Temple', p. 772. See Stevenson, *Vision of Transformation,* p. 5.
[190] Ibid., p. 19.
[191] Ibid.
[192] Ibid., p. 7
[193] Ibid., p. 149.

2.3.7 A Temple-City with Design Guidelines: to be Pure, Holy, and Safe

In *Jerusalem in the Book of Ezekiel*, Julie Galambush declares a removal of the impure Jerusalem and a reconstruction of it with a new temple in Ezekiel 40-48.[194] In *Graded Holiness*, Philip Peter Jenson notes that Ezekiel 40-48 is built upon 'the principle of graded holiness'.[195] According to Levenson, Ezekiel attempts to convince the exiles of a reality deeper than their current one: 'What [Ezekiel] sees is the security of Zion, whose historical end he saw and narrated in chs. 8-11, but whose supra-historical foundation can never be razed'.[196]

Ruth Poser builds up a conceptual model based on her exegesis of the whole book of Ezekiel as trauma literature as well as a traumatic response to the historical reference points of the book: the siege, conquest and destruction of Jerusalem by the Babylonians in the years 589/88 to 587/86 BCE. Poser's work is considered to be the most extensive and comprehensive example of recent work on Ezekiel through the lens of trauma theory.[197] The Babylonian exile from 598/97 BCE is identified as a highly traumatogenic reality. Therefore she reads Ezekiel 40-48 as a literary representation of space out of depression and a safe place (eines sicheren ortes).[198] Set against the background reality, the alternative scenario displays a final new Jerusalem. The literary representation of space in Ezekiel 40-48 designs a safe utopia, aiming to protect God from the encroachments of the people and people from the encroachments of God (!) Therefore, the survival of both the people and God is assured.

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[194] Julie Galambush, *Jerusalem in the Book of Ezekiel: The City as Yahweh's Wife* (Atlanta: Scholars Press, 1992)

[195] Philip Peter Jenson, *Graded Holiness: A Key to the Priestly Conception of the World*, Journal for the Study of the Old Testament Supplement Series, 106 (Sheffield: JSOT, 1992)

[196] Levenson, *Program of Restoration*, p. 18.

[197] Brad E. Kelle, 'Das Ezechielbuch als Trauma-Literatur - By Ruth Poser', *Religious Studies Review,* 40.2 (2014), p. 98. Cf. Ronald Granofsky, *The Trauma Novel: Contemporary symbolic depictions of collective disaster*, American University Studies, Series III, Comparative literature, vol. 55 (New York: Peter Lang, 1995). According to Granofsky, the stages of trauma response include: regression, fragmentation, and reunification. Poser describes the book's structure based on these three stages.

[198] Ruth Poser, 'Vertiefung: Ez 40-48 als literarische Raumdarstellung und als priesterlich geprägte Imagination eines sicheren ortes', in *Das Ezechielbuch als Trauma-Literatur, Supplements to Vetus Testamentum,* 154 (Leiden: Brill, 2012), pp. 615-37.

According to Poser, Ezekiel 40-48 is a narrative space in the theological trauma literature. It is where human and divine violence and its consequences meet, discuss, and resolve. The guilt and debt of the 'house of Israel' allow the impotent Israel new self-activity and self-efficacy. The future is oriented towards the divine direction ensuring that similar disasters will never happen again.[199] The work of Ruth Poser has shown a great example of how to read the book of Ezekiel 40-48 on the basis of a multi-faceted trauma hermeneutics in the context of Israel's experiences of siege warfare and mass deportation in the early sixth century BCE.

2.3.8 Conclusion

This section demonstrates that Ezekiel 40-48 can be interpreted in many ways. As a vision report of a tour, Ezekiel 40-48 is both experiential and literal. Regardless of the variety of interpretation, and debates around the validity and practicality of the document, there is one line of thought that is instructive for pursuing the planning concept of the landscape. Scholars have well recognised the siege, conquest and destruction of Jerusalem as the historical background of Ezekiel 40-48. Ezekiel 40-48 is a creative response to the experience of exile. It is a document written in light of a utopian hope and problematic reality. By giving the prescriptions in an age of ruin, Ezekiel 40-48 confirms the final state of healing and salvation. The aim is to build a pure, holy and safe landscape: disaster will never happen again, and they can live in the land in safety. Greenberg's idea that Ezekiel 40-48 serves as the confirmation of the covenant of *shalom* is of special importance for my thesis. His translation of בְּרִית שָׁלוֹם (*bərît šālôm*) as 'the covenant of wellbeing' opens a way for our modern day interpretation of Ezekiel 40-48 as an archetypal wellbeing-minded and ecologically sound landscape planning project. The next section will explore other possibilities for understanding Ezekiel 40-48.

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[199] Ibid.

2.4 Potential Ways to Understand Ezekiel 40-48

2.4.1 Ecological Hermeneutics

The history of literature has accumulated a rich knowledge of Ezekiel 40-48, extracting themes such as the temple, the city, and the land as the essence of this particular text. In my view, given the detailed description of the environment, the full breadth of Ezekiel 40-48 has potential for further exploration. Besides the religious aspects of the temple, the city and the land, Ezekiel 40-48 describes physical land forms such as mountains; water bodies such as springs, rivers, salty wetlands and the sea; living elements of the land cover including riparian trees; human elements including different forms of land use, buildings and structures; and transitory elements such as lighting. These 'things' or, in other words, 'everything that exists in a particular environment', constitute an 'ecosystem' based on the definition by Merriam-Webster.[200] In order to understand the patterns and relationships in the ecosystem, ecological concepts are essential. Ecology is defined by Merriam-Webster as 'the pattern of relationships between living things and their environment'.[201] For the purpose of my study concerning the patterns and underlying concept behind the written landscape of Ezekiel 40-48, it is crucial to draw on research in ecological hermeneutics.

Modern ecologists recognize that humans and nature must be studied as an integrated whole.

> Ecological systems have intrinsic temporal rhythms driven by factors such as generation time, age of reproduction, and disturbance frequencies. They also exhibit patterns on characteristic spatial scales driven by, e.g., dispersal distance, topography, and interaction lengths. However, these ecological systems also bear the signature of human institutions that act, either directly or indirectly, to alter the dominant spatial and temporal modes. At the same time, human institutions are shaped and influenced by the environmental

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[200] The simple definition of 'ecosystem'. See Merriam-Webster Dictionary < https://www.merriam-webster.com/dictionary/ecosystem> [Accessed 25 December 2015]

[201] There are several definitions of 'ecology' in Merriam-Webster Dictionary (www.merriam-webster.com. Other definitions include simple definitions: 'a science that deals with the relationships between groups of living things and their environments' and 'the relationships between a group of living things and their environment'; and the full definitions: 'a branch of science concerned with the interrelationship of organisms and their environments', 'the totality or pattern of relations between organisms and their environment'.

rhythms and ecological arrangement of the biogeographic region in which they emerged.[202]

This view points to the dynamic relationship between human institutions, the environmental rhythms and the ecological arrangement of the biogeographic region. These are interrelated factors that play important roles in answering my research questions. The landscape described in Ezekiel 40-48 reflects a living synthesis of the people and the place that is vital to wellbeing. Characteristics of the landscape in Ezekiel 40-48 are capable of interpretation from the perspective of ecology that has been little explored. Kalinda Rose Stevenson's perspective based on human geography covers the widest range of scale among other researches; however, this is still limited to the temple, and certainly does not view Ezekiel 40-48 as a whole, for example as a biogeographic region, which, in my view, might be capable of covering the full scope of Ezekiel 40-48.

According to Hilary Marlow, there is no Hebrew word for the concept of 'nature'[203] which refers to the 'non-human' living world. With the emergence of ecological hermeneutics,[204] attempts have been made to show how an ecologically valuable message can be derived from the Scripture.[205] Marlow emphasizes the importance of 'ecologically sensitive exegesis' dealing with humans' relationships with non-human creation and God.[206] On ecological hermeneutics, Marlow recognizes the potential

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[202] Charles L. Redman and Ann P. Kinzig, 'Resilience of Past Landscapes: Resilience Theory, Society, and the Longue Duree', *Conservation Ecology,* 7.1 (2003), p. 14.

[203] Hilary Marlow, *Biblical Prophets and Contemporary Environmental Ethics: Re-reading Amos, Hosea and First Isaiah* (Oxford: Oxford University Press, 2009), p. 7.

[204] There are actually similar terms dealing with issues similar to *ecological hermeneutics*, such as *environmental hermeneutics*, which aims to uncover interpretation that takes place in the human relationship with the environment. See *Interpreting Nature: The Emerging Field of Environmental Hermeneutics,* ed. by Forrest Clingerman, Brian Treanor, Martin Drenthen, and David Utsler (NY: Fordham University Press, 2014); and even *landscape hermeneutics*, see Martin Drenthen, 'New Nature Narratives: Landscape Hermeneutics and Environmental Ethics', in *Interpreting Nature*, pp. 225-42. The landscape hermeneutics Drenthen proposes is an attempt to address environmental issues based on his research field of philosophy.

[205] See *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*, ed. by David G. Horrell, Cherry Hunt, Christopher Southgate, and Francesca Stavrakopoulou (NY: T&T Clark, 2010), p. 3.

[206] Before bringing up any issue she insists that we should 'let the texts speak for themselves, and in so doing to discover the differences in emphasis between books and indeed the tensions inherent within individual texts'. In my view, her exegetical method in the prophetic books is an example for my study.

for the Old Testament to reflect contemporary ecology by investigating how the biblical material portrays the ancient Israelites' understanding of the world and its world view. She begins her study by searching for 'a coherent sense of the way the world is, or ought to be, in the prophetic messages which could form the basis of an ecologically sensitive exegesis'.[207]

Marlow looks into the concept of 'wisdom' in the Old Testament and realizes that the scope of wisdom is not broad enough for it is predominantly anthropocentric.[208] She then proposes alternatives from other important themes in the Old Testament for a worldview with a sense of order, which are land as inheritance,[209] cosmic perspective,[210] justice and righteousness,[211] and natural law.[212] Seeing that none of the above provides an adequate ecological framework, Marlow addresses 'the relation between human and non-human creation' from a wider perspective.[213]

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[207] Marlow, *Biblical Prophets*, p. 97.

[208] Ibid., p. 100.

[209] Ibid, p. 102. On land as inheritance, Marlow introduces Walter Brueggemann who organizes the biblical texts as a story of God's people with God's land and suggests that Israel's faith is essentially 'a journeying in and out of the land'. Marlow argues that even land is an important framing concept: it functions differently with a range of meanings based on different social and theological perspectives that cannot be harmonized.

[210] Ibid., p. 104. Concerned about the worldview conceptualized from a cosmic perspective that sees heaven and earth in parallelism, Marlow suggests, according to Robert Murray, that the relationship between the cosmic order and land is a notion of cosmic covenant between YHWH and his world. The link between covenant, human transgression and disorder in society and earth is clear. However, whether the cosmic covenant represents a singular worldview of the Old Testament is unclear given scattered and fragmentary references.

[211] Ibid., p. 105. Social justice represented by 'justice and righteousness' is another approach Marlow uses for its correlation with wellbeing of agriculture, nature and human world. Marlow introduces H. H. Schmid, who studied the use of the Semitic root of 'just, justice, judge' and concludes that the term denotes a comprehensive world order centred on the creator who maintains the order, with the king as his earthly representative. Marlow argues, however, that the root is infrequent in Hosea, and the word alone is insufficient for articulating the worldview. She notes that it primarily appears in the form of a word pair, 'justice and righteousness'.

[212] Ibid., p. 106. John Barton, in his *Natural Law*, defines natural law as 'certain precepts or norms of right conduct', an ethical order. He suggests that excessive luxury, political allegiances and pride exemplify some kind of 'cosmic nonsense', which is against the prophets' belief in the cosmic order. However, in Marlow's view, the textual evidence is insufficient to conclude that natural law is the overarching ancient Israelite worldview.

[213] She introduces Simkin's study that uses a sociological model to identify attitudes towards nature that might indicate an ancient Israelite worldview. The result shows that the Bible presents a worldview that recognizes both the intrinsic worth of the natural world and the special place of humans within it. However, it is insufficient for a comprehensive worldview given the ethnocentric constraints of the sociological model.

Marlow identifies common ecological themes from prophetic books that could help explore relationships between God, humans and non-human creation as guidance for the exegetical process. These include:[214]

1. The use of figurative language.
2. The appeal to natural order/poetic justice.
3. The presence of other wisdom-type material.
4. The extent to which cosmic themes are found.
5. The language of judgement/blessing.

Marlow points out that much of the core material of Amos, Hosea and First Isaiah can 'reasonably be said to have originated as a response to situations or events in the world of the eighth century — whether cultural (religious, political, social) or natural (such as earthquake or drought). The written form of this material has been subject to a process of revision and editing before reaching its present shape'.[215]

Likewise, Ezekiel 40-48 might be a response to the situations or events in the world of Babylonian captivity. Specific ecological themes unique to Ezekiel might stand out from Marlow's common ecological themes from prophetic books that could help explore relationships between God, humans and non-human creation in the form of landscape planning, which is clearly ecologically relevant. Before taking historical considerations into account, I should first investigate the extent to which landscape themes are apparent in the final form of the text. This will be the major task of Chapter 3.

2.4.2 The Need for Landscape Hermeneutics

Due to the nature of Ezekiel 40-48 there are two reasons for landscape hermeneutics. First, the striking interweaving of the richly visionary and the precisely mathematical measurement in Ezekiel 40-48 leads us from ecology to landscape architecture.

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[214] Ibid., p. 114. Identifying the common themes is again not an easy task realizing that extensive usage of figurative language is found in all texts. Isaiah is particularly rich in parabolic material and cosmic themes present in Amos and Isaiah but absent from Hosea.
[215] Ibid., p. 115.

Second, the problems of existing blueprint hermeneutics make this insufficient to fully cover the scale of Ezekiel 40-48.

2.4.2.1 The Problems of the Blueprint Hermeneutics

When Ezekiel 40-48 is described as a 'Utopia', and or 'Blueprint', I have three reactions. The first is an intellectual agreement with these terms. They seem to imply some sort of practical planning that has been applied in the ancient world, or ideas that have been created to make a new or better environment. My second reaction is a strange feeling about the fuzziness of the term 'Utopia', and the rigidity of the term 'blueprint'. 'Utopia' has been a catchword that can mean both the fictional and the desired perfect environment. 'Blueprint' was a specific technical drawing developed in the nineteenth century documenting architecture or engineering design. As a metaphor, it implies the paper work documenting a construction project ready to be built.

From the perspective of present day architecture, Christopher Alexander considers blueprints a great weakness of a world-system in which the production process is thought of as mechanical.[216] This is his argument:

> We do not know exactly when blueprints were first invented – perhaps about 200 years ago. Today they still exist in what we now call CAD drawings – a computer version of the old blue ammonia prints, where the information existed as white lines on the blue. In any case, I am referring to the kinds of machine drawings that were used for engineering. They were easy to reproduce, so that prints could be made, with the technical details which gave exact dimensions and the details. This allowed a master craftsman – working in wood, or brass, or steel, or tile or brick, or cast bronze – to pay attention *only* to the dimensions and connections of the part he was making.
>
> The oddest thing about the blueprints, though, was that the drawings did *only* convey the size, shape, length, angles, etc. It was possible for a machinist to replicate the geometry that was laid out on the blueprint. But the blueprints had a deficiency: there was really no information on the blueprint that would explain how the things worked, nor even what its purpose was.[217]

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[216] Christopher Alexander, *The Battle for the Life and Beauty of the Earth: A Struggle between Two World-Systems* (NY: Oxford University Press, 2012), p. 49.
[217] The emphases are Alexander's own. See Ibid., pp. 51, 52.

According to Alexander, the blueprints stand for a world system that is rigidly regulated by tightly controlled mechanical processes without explaining the purpose and how things work. If we follow his argument, one may ask: Should we imagine Ezekiel 40-48 based on our present day operational assumptions of a 'blueprint' that Ezekiel 40-48 is planned just to convey the size, shape, length, and angles, or should we understand Ezekiel 40-48 as a plan made to test some great ideas, such as wholeness, harmony, wholesomeness, and wellbeing, in a new creation process?

Brent A. Strawn argues that 'an adequate understanding and interpretation of the tenor of a metaphor depends at least to some extent on an adequate knowledge of the metaphor's principle and subsidiary subject'.[218] Without adequate knowledge of 'Utopia' and 'blueprint', the meaning of Ezekiel 40-48 we get from these metaphors becomes obscure. A Utopia can suggest a practical, better world in the future for one person, and implies merely a fiction for another. Arguments concerning the practicality of Ezekiel 40-48 by using these metaphors reveal the fuzzy zone of knowledge and implicit assumptions of the users.[219] Either metaphorical representation helps us to visualise or conceptualise Ezekiel 40-48, but we have to go back to the original text to see what is there.

My third response is to build up a bigger picture combining a blueprint and a Utopia together. Scholars are right to view Ezekiel 40-48 as a temple, a city, or a vast piece of land from different perspectives. The landscape Ezekiel 40-48 covers is indeed vast. It extends from a wooden table/altar in the temple to a whole watershed along the Mediterranean. We need to view the work as a whole from the perspective of a landscape plan in which the scale is large enough to cover the details of a blueprint as well as a Utopia.

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[218] Brent A. Strawn, *What is stronger than a lion?: Leonine image and metaphor in the Hebrew Bible and the ancient Near East*, Orbis biblicus et orientalis, 212 (Fribourg: Academic Press; Göttingen: Vandenhoeck & Ruprecht, 2005), p. 27.
[219] For instance, 'Is Ezekiel a dreamer, and is his picture a Utopia? No, it is a prophecy, but one which remains unfulfilled[...]' In this statement Delitzsch equates Utopia with a dreamer's dream which is apart from the reality; while what Ezekiel pictures is a prophecy waiting to be fulfilled, *unlike* a fictional Utopia. Konkel states that 'regardless of whether the temple description Ezekiel 40-42 serves as a utopian design or be applied on concrete implementation, [...]'. In this way Konkel implies that utopian designs are not to be implemented.

2.4.2.2 Landscape Hermeneutics in the Historical Context

As previously mentioned, Konkel's suggestion of Ezekiel 40-48 as an instruction of design ('Anweisung für die Gestaltung') or instruction of construction ('Bauanweisung') would in fact lead to different expectations of how precise the information provided in Ezekiel 40-48 should be. These terms seem to be interchangeable. However, they can also lead to a biased theological judgement regarding the credibility of this temple vision. In John Gelder's 'Building Project Documentation in Ancient Mesopotamia', ancient Mesopotamia is represented with examples of building specific documentation across a broad spectrum of types. These include existing plans, plans and elevations, models, quantities, contracts for supply, reports of work-in-progress, workshop records, metrological texts, dedicatory inscriptions and contracts for sale of buildings.[220] Judging the practicality of Ezekiel 40-48 based on its numerical precision and whether vertical information is provided will not be convincing since a 'Pre-Construction Design' (without dimensions) is considered a type of ancient Mesopotamian construction project.[221] In present day terms, Ezekiel 40-48 can be referred to as the product of the planning or design phase, where the requirement for details of measures and dimensions varies. Ezekiel 40-48 would make more sense if we read it based on the perspective of landscape architecture.

2.4.2.3 Landscape Hermeneutics of the Book

The creativity Ezekiel conveys on subjects of the landscape is striking. It is not restricted to chapters 40-48 but also can be found in previous chapters. The way that YHWH teaches Ezekiel to draw a city on a brick in chapter 4, to build *the model of the city* and act out the scenes of siege warfare; and how disaster/judgements are categorized and spatially distributed throughout the land in chapters 6, 7 and 14 are highly correlated subjects as we consider the landscape hermeneutics of the book.

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[220]John Gelder, 'Building project documentation in ancient Mesopotamia', *FORUM Ejournal,* Research.ncl.ac.uk (Newcastle University, 2002), pp. 36-45 <https://research.ncl.ac.uk/forum/>
[221] Ibid., p. 42.

Modern landscape architecture encompasses the analysis, planning, design, management, and stewardship of the natural and built environments. What puzzles the commentators of Ezekiel 40-48, however, is relatively understandable in the eyes of landscape architects. Landscape architecture, in the modern sense, is specialized in realising visions and is good at making the dreamed environment real. It bridges buildings with the landscape, and practically connects reality with the dreamland. What can be learned if we take a tour of the temple landscape with the angel and Ezekiel from the perspective of landscape architecture?

2.5 Conclusion

Ezekiel 40-48 has stimulated discussion and raised questions such as 'What did the temple look like?' and 'What is being described?' From time to time the plan of the temple was of interest in various academic disciplines. This chapter has attempted to show the spectrum of rich and diverse views of Ezekiel 40-48. Given the uncertain characteristics of 'a structure "like" a city', Gregory the Great finds it significant to read Ezekiel 40-48 in the spiritual sense. Interestingly, for my thesis, it is exactly the reason 'why' and the process 'how' to make a temple 'a structure like a city' that is important. Richard of St. Victor attempts to make sense of Ezekiel 40-48 based on what is literally described, and is aware that the unspecified outer galleries could be equipped in a time of war. Villalpando visualizes Ezekiel 40-48 in order to reveal the reality of truth and it turns out that an architecture of theology is created. In my view, it is also the theology of architecture that is developed. Newton lived in an era when studying prophecy was promoted in the universities of Cambridge and Oxford; 'it was considered just as much a science as a natural philosophy, and given the same rational and scientific methodology'.[222] For Newton, the plan of the temple is the plan of the universe. From Richard of St. Victor and Villalpando to Newton, the trajectory of the scientific exegesis (with their best science) based on what is described in Ezekiel 40-48, is clear. Dutch architect Goeree encompasses monumental, civic and private building practice in his study of Ezekiel 40-48 and further builds up the interdisciplinary capacity of Ezekiel 40-48 from what is divine

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[222] Morrison, *Isaac Newton and the Temple of Solomon*, p. 10.

and abstract towards the realm of civic space planning and design. In my view, 'What did the temple look like?' is already answered well in different ways throughout history. What might be missing and can be further explored would be instructive for my studies. First, as Howie already suggested (and what Newton and Goeree did not have to hand), it is possible to use archaeological evidence to reconsider the measurement and layout of the space. This thesis will consider the history based on archaeology in Chapter 4. Secondly, what can be further explored is the planning concept answering the 'why' and 'how' questions of a given vision of landscape. Greenberg reads Ezekiel 40-48 as a vision for restoration and prescriptions in an age of ruin. Ruth Poser views Ezekiel 40-48 as a safe place within the context of the book of Ezekiel as trauma literature. Rudnig documents the post-exilic community's response to their contemporary problematic reality. Konkel suggests that disaster, healing, and salvation are important motifs running through the whole book. The hope of Ezekiel 40-48 is: no more destruction of Israel. This risk and disaster reduction oriented mentality strengthens my hypothesis to use our contemporary understanding of 'resilience' to discuss the envisioning of a new landscape in Chapter 5. Section 2.3 demonstrates that Ezekiel 40-48 can be understood as a vision report; a utopian future restoration, instruction of design/instruction of construction; a city of the mind; a blueprint lacking vertical dimension, furniture, and command to build; a heavenly temple; a new human geography; and a pure, holy, safe city. Regardless of the differences, most interpreters begin with varied assumptions based upon a particular religious view of the temple, understandings of the prophetic vision, how the construction document should be, and so on. Because of the constraints inevitably created by these assumptions, certain distinctive content features in Ezekiel 40-48 have not received attention. Present-day landscape architecture and ecological studies provide potential ways to understand the full breadth of Ezekiel 40-48 concerning not only the buildings, but the philosophy and process of place making for the wellbeing of the whole landscape. What are considered as the weaknesses of Ezekiel 40-48 as a practical restoration document could be strengths for the planning and design to be constructed, if we read it from the perspective of modern day good design practices. The next chapter (Chapter 3) will introduce the principal theory of the thesis — the

Pattern Language — a structured design approach for understanding the landscape of Ezekiel 40-48.

CHAPTER 3: IDENTIFY THE LANDSCAPE PATTERNS IN EZEKIEL 40-48

> *'The most beautiful thing we can experience is the mysterious. It is the source of all true art and science. He to whom the emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead: his eyes are closed. The insight into the mystery of life, coupled though it be with fear, has also given rise to religion. To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty which our dull faculties can comprehend only in their most primitive forms — this knowledge, this feeling, is at the center of true religiousness.'*
>
> — Albert Einstein, *Living Philosophies*[223]

Forces generate forms.[224] In some natural environments, when a constant strong wind blows over a mountain, a grassy landscape is formed where the trees cannot grow. The shade-tolerant plant species grow in darker areas. Some aquarian plants grow in riparian lowland where the soil is rich with iodine. These plants demonstrate repeating patterns. Forces that cause the forms can be understood by analysing the patterns, shapes, colours, patches and corridors of the landscape. Without understanding the forces, the vegetation is just perceived as patches of greenery. In the case of man-made environments, take the use of cul-de-sacs for instance: they are planned in a township development as the attempt to minimise danger by excluding traffic from residential streets.[225] Without understanding their function, however, they are just streets shaped as dead end loops.

Jerome uses the language of landscape to describe Ezekiel 40-48 as 'the labyrinth of God's mysteries'.[226] Indeed, synchronically, the vision in Ezekiel 40-48, which involves different spatial and temporal dimensions at play in its relation to landscape, gives an impression of a planning project when seen through the contemporary lens

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[223] Albert Einstein, *Living Philosophies* (New York: Forum Publishing Company, 1930; repr. New York: Simon and Schuster, 1933), p. 6.

[224] Christopher Alexander, 'From a set of Forces to a Form', *Interior Design* (October 1967), p. 36.

[225] Rudolf Eberstadt, 'The Problems of Town Development', *Contemporary Review* 96 (1909), pp. 660–667. Alexander, in 1977, suggests that 'cul-de-sacs are very bad from a social standpoint–they force interaction and they feel claustrophobic, because there is only one entrance'. See Alexander, Ishikawa, and Silverstein, *A pattern language,* p. 262.

[226] Saint Jerome, *S. Hieronymi Presbyteri Opera. Pars I, Opera Exegetica. 4, Commentariorum in Hiezechielem Libri XIV* (PL 448).

of landscape architecture. However, being identified as 'visions of God' in 40.2 directly connects it with other visions of God in the book of Ezekiel (1.1; 8.3) and, given textual difficulties encountered in transcription and transmission,[227] much effort has been made to resolve the textual problems. In my view, it would be helpful if we read the text from a different perspective, i.e. reading it as a landscape plan for the built environment of neighbourhoods, towns and cities and management of the natural environment.[228]

To understand how 'the labyrinth of God's mysteries' might be constructed, this chapter constructs a pool of themes and motifs relating to the landscape in the book of Ezekiel. Christopher Alexander's concept of 'patterns' developed in 1977 will be used to codify and explore knowledge related to landscape architecture from the final form perspective of Ezekiel 40-48. Along with constructing a pool of landscape themes and patterns, patterns that are unique to Ezekiel are observed. With respect to understanding the layout of the patterns and their relationships, special attention is paid to the narrative art of Ezekiel 40-48. My aim in this chapter is to develop Ezekiel's own pattern language through landscape analysis.

3.1 Does Ezekiel 40-48 involve the concept or practice of a construction document?

Is it possible to demonstrate how the landscape that features in Ezekiel 40-48 is conceptualised or constructed when it is written? In order to answer this research question, it is important to first recognise the nature of the text. Chapter 2 introduced Gelder's conjectural contemporary use of 'documentation' regarding the building project in Ancient Mesopotamia. This includes pre-construction building plans without dimensions, construction building plans with dimensions, city plans for military and ritual use, and building models.[229] We know that in Ezekiel 4, Ezekiel is asked to use a brick to represent the city of Jerusalem, and to build models for demonstrating the siege (Ezekiel 4.1-4). If Ezekiel is capable of construction

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[227] Block, *The Book of Ezekiel Chapters 25-48*, p. 494.
[228] Definition of landscape architecture by American Society of Landscape Architects (ASLA) 'This is Landscape Architecture', American Society of Landscape Architects <http://asla.org/.> [Accessed 26 April 2017]
[229] Gelder, 'Building project documentation', pp. 36-45.

documentation, it is likely that Ezekiel 40-48 can be viewed as a construction document, and it might help us understand the content, which is full of measurement and construction details. Further, according to Gelder, 'the Sumerians and Akkadians had words for many relatively complex geometric shapes, which may mean that artisans familiar with these terms did not also need drawings of them. Written descriptions would suffice'.[230] This might explain the great wealth of information in Ezekiel 40-48 regarding the temple using unique technical and architectural terms, such as 'pilasters' (אֵילָו, ʾêlāw), 'recess(es)' (תָּא, tāʾ), and 'windows' (חַלּוֹנוֹת, ḥallônôt). Considering Ezekiel 40-48 as a functional landscape plan we can assume that there are practical goals or problems to solve through the improvement of the physical environment.

Scriptural descriptions of physical landscapes use several spatial terms which are often translated into English simply as 'pattern'. Unfortunately, the concept behind this 'pattern' in the Hebrew bible is not clear. תַּבְנִית (tabnît) and תָּכְנִית (toknît) are two landscape planning-related Hebrew words that are translated as 'pattern' by several English versions. תַּבְנִית (tabnît) is used for both the tabernacle and Solomon's temple. In Exodus 25.9:

> In accordance with all that I show you concerning the pattern (תַּבְנִית) of the tabernacle and of all its furniture, so you shall make it. (Exodus 25.9 NRSV)

NRSV, KJV, RSV, NASB, NIV translate תַּבְנִית (tabnît) as 'pattern'. In I Chronicles 28.11 the 'pattern' is the 'plan', which seems to be something like a transferable document that can be delivered to others so they can apply it:

> Then David gave his son Solomon the plan תַּבְנִית (tabnît) of the vestibule of the temple, and of its houses, its treasuries, its upper rooms, and its inner chambers, and of the room for the mercy seat. (I Chronicles 28.11, NRSV)

Here, the pattern תַּבְנִית (tabnît) is translated as 'plan' in NASB, NIV, RSV, and NRSV, implying a detailed proposal for doing or achieving something. Intriguingly,

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[230] Gelder, 'Building Project', p. 37.

the book of Ezekiel uses a similar word representing the 'pattern'. However, this 'pattern' is spelled in a slightly different way as תׇּכְנִית (*toknît*).

> Thou son of man, shew the house to the house of Israel, that they may be ashamed of their iniquities: and let them measure the pattern (תׇּכְנִית) (*toknît*). (Ezekiel 43.10 KJV)

How Ezekiel's 'pattern' is differentiated from the 'pattern' of the tabernacle and Solomon's temple is a question I have in mind. The etymology of the words might provide some information on how the meanings develop if we follow the path the Brown-Driver-Briggs Hebrew and English Lexicon provides. Compared with Ezekiel's תׇּכְנִית (*toknît*), the תַּבְנִית (*tabnît*) for tabernacle and Solomonic temple is a much more common word[231] whose word origin is בנה,[232] which means *to build, rebuild, establish, cause to continue*, that originated from a primitive root.

Ezekiel's תׇּכְנִית (*toknît*) seems to address a different idea. BDB[233] translates the תׇּכְנִית (*toknît*) in Ezekiel 43.10 as *measurement, pattern, proportion*, whose word origin תכן means *to regulate, measure, estimate, ponder, balance, make even, level, weigh, be equal, be weighed out, test, prove*, which is a word emphasised in the book of Ezekiel by quoting the complaint in the society that 'The way of the Lord is not equal [unfair]' (לֹא יִתָּכֵן דֶּרֶךְ אֲדֹנָי, *lōʾ yittākēn derek ʾădōnāy*) (Ezekiel 18.25, 29; 33.17, 20). In 43.10, God commands, 'Let them measure the pattern (וּמָדְדוּ אֶת־תׇּכְנִית, *ûmādədû ʾet-toknît*)'. The trajectory of development of תׇּכְנִית (*toknît*) illustrated in BDB indicates that measurement might be significant in the construction of Ezekiel 40-48.[234]

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[231] I found seventeen incidences in the Hebrew Bible.
[232] There are 345 incidences in the Hebrew Bible.
[233] 'Tokniyth — Old Testament Hebrew Lexicon, King James Version,' *Bible Study Tools*, <http://www.biblestudytools.com/lexicons/hebrew/kjv/tokniyth.html> [Accessed 26 April 2017]
[234] Holladay translates תׇּכְנִית as '(perfect) example'. NAB translates it as 'layout'. It is 'plan' in RSV, NASB; 'perfection' in NIV (cf. 28.12 on King of Tyre); and 'διάταξις' in LXX which indicates a formal arrangement of things or matters. These spatial terms give a general idea of what the 'pattern' could be. However, the form and function of this 'pattern' is not explicit.

To sum up, Ezekiel's usage of תָּכְנִית (*toknît*) is very similar to תַּבְנִית (*tabnît*), which seems to mean a 'plan' as NRSV translates 1Ch 28.11. It could be understood as transferable material, a document such as existing plans (without elevations), plans and elevations, models, quantities, or reports of work-in-progress.[235] This sub-section shows that, regardless of the similarity of the two words, through the usage of the word תָּכְנִית (*toknît*), the 'plan' of Ezekiel 40-48 might be more measurement-minded than is sometimes thought. This matches with the genre of Ezekiel 40-48 as a vision report, in which the sacred space and its measurement is the central issue.[236]

3.2 Seeking Ways to Understand an Ancient Vision as a Plan

Read literally, Ezekiel 40-48 is divinely inspired, consisting of top-down 'visions of God' (מַרְאוֹת אֱלֹהִים, *marʾôt ʾĕlōhîm* 40.2). To demonstrate how the featured landscape in Ezekiel 40-48 is conceptualized, however, it seems that it is necessary to understand this from another direction. Given the nature of the research data base — the final form of the Masoretic Text of Ezekiel 40-48, which is space in written form with details and specifics — a method that engages with principles and archetypes is needed, as these seem to be what Ezekiel is engaging with. This thesis therefore looks for a bottom-up approach, that is a method to engage with the details described in Ezekiel, which helps to make a coherent whole of the disparate parts in different scales.

To make sense of the repetition of different parts that make up the whole, I use Christopher Alexander's pattern language as a principal approach for my analysis. This is a method which seems particularly well-suited to addressing the needs of a bottom-up approach in a way that allows for fruitful analysis. *A Pattern Language* is a book published in 1977 based on years of building and planning efforts by Alexander and his colleagues at the University of California, Berkeley. The book consists of 253 spatial patterns: 'All 253 patterns together form a language'.[237] In *A Pattern Language*, each pattern has the same format, designed to offer convenient

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[235] Gelder, 'Building project', pp. 36-45.
[236] Lyons, 'Envisioning Restoration', pp. 71–83.
[237] Alexander, Ishikawa, and Silverstein, *A Pattern Language*, xxxiv.

guidance for practical environmental construction. The format for each pattern is as follows: a picture, the context, the problem, a description of the pattern of space that functions as the solution of the stated problem, a diagram and, finally, correlated patterns.[238] The pattern language expresses the relationship between the context, a problem, and a solution, documenting attributes and usage guidance.[239] Fig. 3.1 is an overview of one of the 253 patterns.

(a) A pattern with its index number, and an archetypal picture of that pattern.

66 HOLY GROUND*
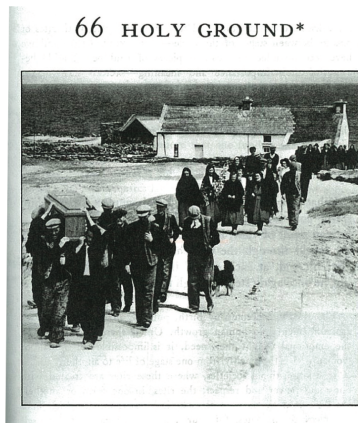
(b) The essence of the problem

What is a church or temple? It is a place of worship, spirit, contemplation, of course. But above all, from a human point of view, it is a gateway. A person comes into the world through the church. He leaves it through the church. And, at each of the important thresholds of his life, he once again steps through the church.

(d) The solution

Therefore:

In each community and neighborhood, identify some sacred site as consecrated ground, and form a series of nested precincts, each marked by a gateway, each one progressively more private, and more sacred than the last, the innermost a final sanctum that can only be reached by passing through all of the outer ones.

(c) The context and fundamental characteristics of the pattern.

Layers of access.

innermost sanctum
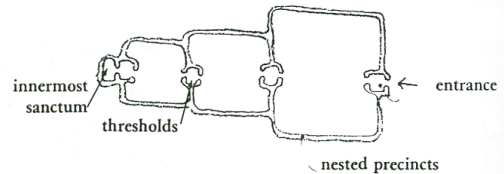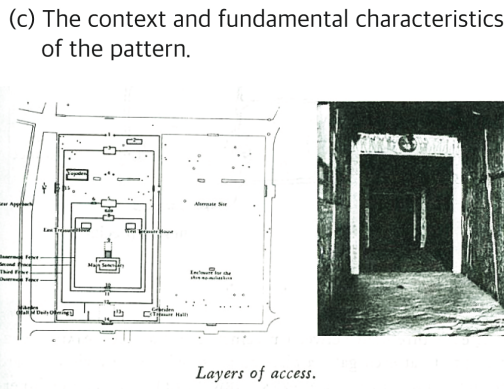
thresholds

← entrance

nested precincts

❖ ❖ ❖

Fig. 3.1. Overview of Christopher Alexander's patterns in *A Pattern Language*: 66 HOLY GROUND. Source: Alexander et. al., 1977.

As one of the best-selling books on architecture, the concept of pattern language is not only influential in the field of architecture. It is applied to many complex

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[238] Alexander, *Pattern Language,* xvii.
[239] R. J. Cloutier, 'Applicability of Patterns to Architecting Complex Systems' (Ph.D. diss., Stevens Institute of Technology, 2006)

engineering tasks, and has been especially influential in software engineering where design patterns have been used to document collective knowledge in the field.[240] Alexander's work has spawned a revolution in technology, including the development of Wikipedia.[241] Wikis were developed in 1995 as a tool to support the development of pattern languages in software. Bearing a relationship to the structure of patterns and pattern languages, it allows collaboration for better collective solutions to shared problems. Like Alexander's Pattern Language, Wikis are constructed with many unique and specific features that are inter-linked to provide universal approaches and organizing frameworks.[242]

The concept of patterns is also applied to the field of human – computer interaction (HCI).[243] Fig. 3.2 is an example of a human-computer interaction design pattern presenting solutions to a problem in a context.[244] The 'Tag Cloud' is much like 'pattern language'. Each 'tag' word is a link to a page where all objects having that tag are listed. Just as some patterns are used more than others and some tags are more popular than others, so the font size of the tag word is changed accordingly to

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[240] Berna L., Massingill, Timothy G. Mattson, and Beverly A. Sanders, 'Parallel Programming with a Pattern Language', *International Journal on Software Tools for Technology Transfer,* 3.2 (2001), pp. 217-34.

[241] 'The Radical Technology of Christopher Alexander', *Metropolis*, 6 September 2011. <http://www.metropolismag.com/ideas/technology/the-radical-technology-of-christopher-alexander/.> [Accessed 7 September 2017].

[242] According to Cunningham and Mehaffy's research, 'a number of influential programmers of the 1970s were already aware of and influenced by Alexander's "Notes on the Synthesis of Form", including Ed Yourdon, Tom DeMarco and Larry Constantine. But beginning in the 1980s, *A Pattern Language* formed the basis for what is now known as "pattern languages of programming", or "design patterns" – general reusable solutions to commonly occurring problems within given contexts.' Cunningham and Mehaffy terms the original Wikis as 'elementary pattern languages' for they share the following characteristics: 1. Both are open-ended sets of information, consisting of unitary subsets (pages or patterns); 2. Both are topical essays with a characteristic structure: overview (with links), definition, discussion, evidence, conclusion, further links; 3. Both are structured to be easily creatable, shareable and editable by many people; 4. Both are (in principle) evolutionary, falsifiable and refinable; 5. Both aim to create useful ontological models of a portion of the world, as a more formalized subset of language. See Ward Cunningham and Michael W. Mehaffy, 'Wiki as Pattern Language - The Hillside Group' <http://www.hillside.net/plop/2013/papers/Group6/plop13_preprint_51.pdf> [accessed 14 May 2018]

[243] Pauwels, Hübscher, Bargas-Avila, and Opwis, 'Building an Interaction Design Pattern Language: A Case Study', *Computers in Human Behavior,* 26.3 (2010), pp. 452-63.

[244] Martijn van Welie, 'Pattern Library', *Interaction Design Pattern Library - Welie.com* <http://welie.com/patterns> [accessed 25 May 2018]

visualise the frequency and popularity. The internal structure of the Tag Cloud has mostly stayed true to Alexander's pattern form.

Fig. 3.2. Example of an interaction design pattern. Source:
Van Welie 2008; Pauwels 2010, Fig. 2.

One of the reasons that pattern language became popular and widely applied is that it essentially explores the fundamental relationship between parts and wholes, and their genesis and transformations. This is of course not restricted to planning and architecture, but is a shared concern by many other disciplines. Alexander, who was a physics student from Cambridge (England) became the first architecture PhD student at Harvard with his thesis *Notes on the Synthesis of Form*, which became his first book.[245] His analytical language was often mathematics, a universal language,

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[245] Christopher Alexander, *Notes on the Synthesis of Form* (Cambridge: Harvard University Press, 1964)

and his intellectual development revealed his observational capacity which easily extends beyond our everyday living spaces.

In 'A CITY IS NOT A TREE', Alexander makes the structural observation that parts tend to relate to wholes in hierarchies. However, a city is not a neat mathematical tree, which is without overlap and ambiguity. Alexander criticises modern planning which exhibited an easily-managed, tree-like structure and argues that the plans should embrace a 'more subtle and complex view of structure'.[246] His article, together with other critical texts,[247] shaped that era's seminal criticism of modernist planning in that 'it helped to put a brake on the rush of the new towns and "urban renewal", and set the stage for a more circumspect, asset-based approach to planning'.[248]

Alexander further pursued the hierarchies in a complex system and found that the structure of natural language was useful. In a complex system, smaller units such as tables and windows create patterns that become part of a larger whole which is also a pattern, such as a kitchen or dining room. This process is similar to how words and phrases can be meaningfully connected with grammatical/hierarchical rules. This language is akin to poetry, which permits ambiguity and interrelations. If recurring patterns can be abstracted, then they could be re-combined and assembled. Furthermore, Alexander recognised that human beings have been using a form of 'pattern language' in the way of creating spaces for hundreds of years.[249] Alexander observed that traditional buildings and vernacular places were created with universal patterns that seemed to be rooted in the nature of the interactions between humans and their environment. For over 18 years, Alexander developed his new approach based on the concept of patterns through *The Timeless Way of Building*, *A Pattern Language*, *The Oregon Experiment*, and *The Linz Café*.[250] *A Pattern Language* was

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[246] Christopher Alexander, 'A CITY IS NOT A TREE', *Ekistics,* 23.139 (1967), pp. 344-48.
[247] See Jane Jacobs, *The Death and Life of Great American Cities* (London: Jonathan Cape, 1962)
[248] Michael W. Mehaffy, 'Notes on the Genesis of Wholes: Christopher Alexander and His Continuing Influence', *URBAN DESIGN International*, 12.1 (2007), pp. 41–49. <http://dx.doi.org/10.1057/palgrave.udi.9000182>
[249] In the introduction of *A Pattern Language*, Alexander gives an estimation of the archetypal patterns that will be valid for another five hundred years. See Alexander, *Pattern Language*, xvii.
[250] Christopher Alexander and Center for Environmental Structure, *The Oregon Experiment*, Center for Environmental Structure Series, vol. 3 (New York: Oxford University Press, 1975); *The Timeless*

embraced by the public because it encouraged everyone — with or without proper training in planning or architecture — to naturally create their own spaces with patterns. However, Alexander's proposal to replace the existing way of design received critiques. Regarding the fundamental concept of the place-making in human nature, Architectural historian Mark Gelernter states:

> The people in traditional cultures most probably learned their design language by living among and attempting to copy, specific examples of building already created by the language, not by studying universalised descriptions of the building's constituent parts. Yet Alexander turns this completely upside down and has us studying abstract patterns of form instead of specific examples of those patterns in use. This deprives the designer, I would suggest, of the essential guiding image which ensures that the parts make up a coherent whole.[251]

In addition, '[O]ne might immediately object that he wants artificially to impose upon a language which is no longer a natural part of our modern culture'.[252] In some cases, the timeless quality of the individual parts failed to create a harmonic overall appearance that would be expected.[253] Alexander was not unaware of this. According to Mehaffy, 'Alexander and his colleagues were disturbed to find that many of the designers inspired by the book produced crude work that lacked the simple dignity of older vernacular buildings.'[254] This led Alexander to realize that he had not adequately dealt with the problem of geometry. This in turn led him to question 'what is it about the particular geometries of the built environment that we find beautiful and satisfying? What characteristics do they have, and what detailed processes actually create them? And why is this so?'[255] Returning to the relation of parts to wholes, Alexander spent the next 25 years documenting his ideas in *The Nature of Order* subtitled 'An Essay on the Art of Building and the Nature of

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Way of Building, Center for Environmental Structure Series, vol. 1 (New York: Oxford University Press, 1979); and Christopher Alexander, Center for Environmental Structure, and Forum Design, *The Linz Café = Das Linz Café*, Center for Environmental Structure Series, vol 5 (New York: Oxford University Press; Vienna: Löcker Verlag, 1981)

[251] Mark Gelernter, 'Towards an Architecture: Christopher Alexander and Pattern Language', *The Architects' Journal, Archive: 1929-2005,* 177.1 (1983), p. 21.

[252] Ibid.*,* p. 19.

[253] Ibid., p. 21.

[254] Mehaffy, 'Notes on the Genesis of Wholes', p. 45.

[255] Ibid.

Universe'.[256] It explored the morphogenesis of nature that transcended any particular era of human history, and that was always available for us to incorporate in human creations.[257]

In the 1982 debate between Christopher Alexander and Peter Eisenman entitled *Contrasting Concepts of Harmony in Architecture*, Alexander's idea clashed with the then already well-organised deconstructionist thoughts in architecture. For Alexander, the argument was on the level of cosmology. Alexander's concern about 'order' was 'fundamentally an order produced by centers or wholes which are reinforcing each other and creating each other'.[258] Following this, certain structures would be applied as a natural consequence to produce harmony. Alexander stated that 'We as architects are entrusted with the creation of that harmony in the world'. He further added that the intentional effect of disharmony in architecture was incomprehensible and irresponsible. On the contrary, Eisenman felt the need for incongruity and disharmony because 'disharmony might be part of the cosmology that we exist in'. The cosmology that evoked the truest feelings was 'the presence of absence, that is, the nonwhole, the fragment which might produce a condition that would more closely approximate our innate feelings today'. For Eisenman, architecture is 'a way to deal with that anxiety' so a person can 'react against anxiety or see it pictured in his life'. The debate manifested the tension, perhaps a constant one, between the pursuit of timeless nature of order and the reality-based timely statement of human's innate feelings in the form of architecture. Alexander views architecture from the standpoint of a physicist-architect who trusts 'order' as a fundamental property of matter which is essentially generative. From this perspective, architecture should be responsible for reacting to the nature of order. Ancient prophets might have shared the same concern, as Marlow states (section 2.4.1), cosmic themes with a sense of order are common in the old Testament

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[256] Christopher Alexander and Center for Environmental Structure, *The Nature of Order: An Essay on the Art of Building and the Nature of the Universe*, Center for Environmental Structure Series, vol. 9-12 (Berkeley, Calif.: Center for Environmental Structure, 2002)
[257] Mehaffy, 'Notes on the Genesis of Wholes', p. 45.
[258] This legendary debate took place at the Graduate School of Design, Harvard University, on the 17th November 1982. For details of the debate and sources of the quotes, see 'Contrasting Concepts of Harmony in Architecture', <http://www.katarxis3.com/Alexander_Eisenman_Debate.htm> [Accessed 3 April 2018]

prophetic books.[259] Lyons views Ezekiel 40-48 as a cosmic image that merges Zion and Eden (section 2.3.2).[260] Alexander's cosmic view of architecture might be helpful for the interpretation of Ezekiel 40-48 for he understands the grandiose cosmic and everyday living spaces with the same principle. Imagine a conversation on the concept of order between Alexander and the historical Ezekiel, what would they say? Let us further explore how Alexander thinks about the 'order', and how his concepts might be relevant to the studies of Ezekiel.

The Nature of Order,[261] Alexander's *magnum opus* of architectural philosophy, draws on all forms of life and patterns across the scale of the universe, building, and even on the differentiation of a cell, for 'objects and buildings which have life all have certain identifiable structural characteristics'.[262] Alexander's hypothesis is:

> What we call 'life' is a general condition which exists, to some degree or other, in every part of space: brick, stone, grass, river, painting, building, daffodil, human being, forest, city. And further: The key to this idea is that every part of space — every connected region of space, small or large — has some degree of life, and that this degree of life is well-defined, objectively existing, and measurable.[263]

Book 1 of *The Nature of Order: The Phenomenon of Life* describes how any configuration in the world including a building, a street, a room, a forest, and a crowd of people are a huge number of entities formed in the same way. Alexander calls these entities at different scales 'centres'. The concept of centre highlights relatedness as each local centre exists within a larger whole. Fifteen properties which identify the zones of space that stand out as centres of a living structure are observed: LEVELS OF SCALE, STRONG CENTERS, BOUNDARIES, ALTERNATING REPETITION, POSITIVE SPACE, GOOD SHAPE, LOCAL SYMMETRIES,[264] DEEP INTERLOCK AND

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[259] Marlow, *Biblical Prophets*, pp. 99-107; 114-16.
[260] Lyons, 'Envisioning Restoration', pp. 71-83.
[261] Christopher Alexander, *The Nature of Order: An Essay on the Art of Building and the Nature of the Universe*, Center for Environmental Structure Series, vol. 9-12 (Berkeley: Center for Environmental Structure, 2002)
[262] See Alexander, *The Nature of Order, Book 1: The Phenomenon of Life,* p. 144.
[263] Ibid*.,* p. 77.
[264] Alexander notes that 'LEVELS OF SCALE is the way that a strong center is made stronger partly by smaller strong centers contained in it, and partly by its larger strong centers which contain it; STRONG CENTERS defines the way that a strong centre requires a special field-like effect, created by other centers, as the primary source of its strength; BOUNDARIES is the way in which the field-like effect of a center is strengthened by the creation of a ring-like center, made of smaller centers which surround and intensify the first. The boundary also unites the center with the centers beyond it, thus strengthening it further; ALTERNATING REPETITION is the way in which centers are

AMBIGUITY, CONTRAST, GRADIENT, ROUGHNESS, ECHOES, THE VOID, SIMPLICITY AND INNER CALM, and NOT SEPARATENESS.[265]

Alexander believes that these properties arise because they are the principal ways to understand a field in which centres can be strengthened by other centres; centres create wholeness and wholeness intensifies centres. Through the intensity of centres, space becomes coherent and alive.[266] Alexander explained this concept with a diagram (Fig. 3.3). Examples in nature can also be found in a cell structure, a clump of coral, muscle fibre, crystal growth, a spider's web, and so on. These fifteen properties contribute to the acts of creation in the natural forms and human's place-making, which do not create new structures from scratch, but instead preserve some aspects of the existing structure.
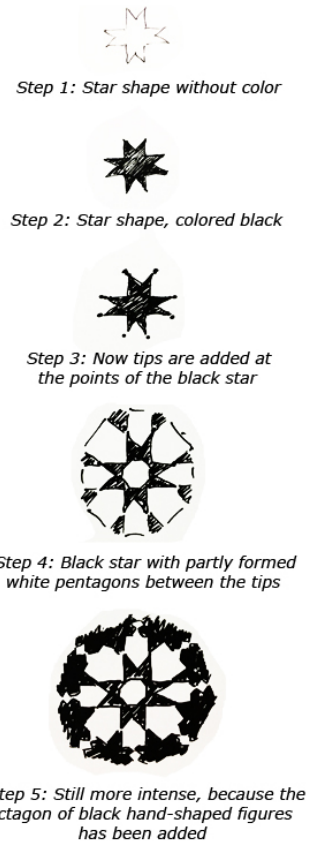

Step 1: Star shape without color

Step 2: Star shape, colored black

Step 3: Now tips are added at the points of the black star

Step 4: Black star with partly formed white pentagons between the tips

Step 5: Still more intense, because the octagon of black hand-shaped figures has been added

Fig. 3.3. Centres are intensified to become more vivid to form a pattern. Source: Alexander 2002, p. 124

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strengthened when they repeat, by the insertion of other centers between the repeating ones; POSITIVE SPACE is the way that a given center must draw its strength, in part, from the strength of other centers immediately adjacent to it in space; GOOD SHAPE is the way that the strength of a given center depends on its actual shape, and the way this effect requires that even the shape, its boundary, and the shape around it are made up of strong centers; LOCAL SYMMETRIES is the way that the intensity of a given center is increased by the extent to which other smaller centers which it contains are themselves arranged in locally symmetrical groups.

[265] DEEP INTERLOCK AND AMBIGUITY is the way in which the intensity of a given center can be increased when it is attached to nearby strong centers, through a third set of strong centers that ambiguously belong to both; CONTRAST is the way that a center is strengthened by the sharpness of the distinction between its character and the character of surrounding centers; GRADIENTS is the way in which a center is strengthened by a graded series of different-sized centers which then "point" to the new center and intensify its field effect; ROUGHNESS is the way that the field effect of a given center draws its strength, necessarily, from irregularities in the sizes, shapes and arrangements of other nearby centers; ECHOES is the way that the strength of a given center depends on similarities of angle and orientation and systems of centers forming characteristics angles thus forming larger centers, among the centers it contains; THE VOID is the way that the intensity of every center depends on the existence of a still place — an empty center — somewhere in its field; SIMPLICITY AND INNER CALM is the way the strength of a center depends on its simplicity — on the process of reducing the *number* of different centers which exist in it, while increasing the *strength* of these centers to make them weigh more; NOT-SEPARATENESS is the way the life and strength of a center depends on the extent to which that center is merged smoothly — sometimes even indistinguishably – – with the centers that form its surroundings.' See Alexander, *The Phenomenon of Life*, pp. 239-41.

[266] Ibid.; Alexander's own emphasis.

Alexander hence refers to these properties as 'structure-preserving transformations'. He uses a simple milk drop as an example of such 'structure-preserving transformations' which demonstrate many of the 15 properties (Fig. 3.4-1).

In Book 2 of *The Nature of Order: The Process of Creating Life*, Alexander examines the 'process of unfolding' by which living structures grow in stepwise fashion. I suggest that this seems to be what Ezekiel is engaging with in the planning of Ezekiel 40-48. As we are going to discuss in section 3.3, four-fold measurement is observed in Ezekiel's planning. According to Alexander, step-by-step adaptation is a gradual progress towards a living structure. The fifteen properties emerge directly from the unfolding of the whole. Alexander demonstrates this concept with the development of a mouse foot from an embryo (Fig. 3.4-2). From the phenomenon of life to the process of creation, static to dynamic, *The Nature of Order* can be understood as the fundamental aspects (15 centre-creating properties) of the formation of space and matter (including the initial 253 patterns in *A Pattern language*). By repeated application of this centre-making living process, a vision is generated. This is discussed in Book 3 *A Vision of a Living World*.

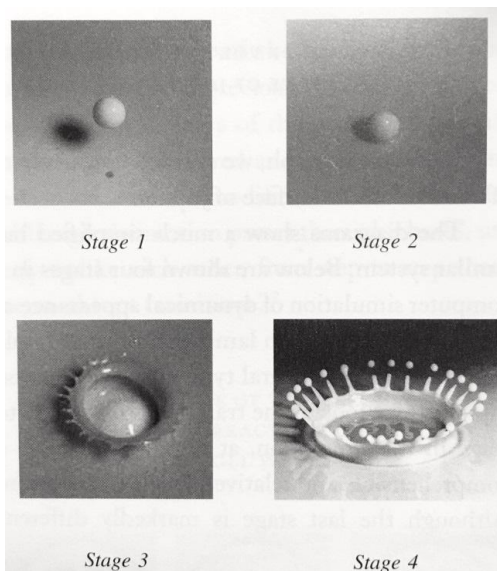Fig. 3.4-1. A simple milk drop goes through a "structure-preserving transformation" that creates new structures with emerging properties including strong centres, alternating repetition, boundaries, local symmetries and others. Source: Alexander 2002
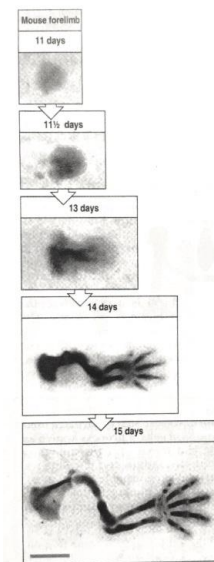
Fig. 3.4-2. The development of mouse foot shows that the unfolding of the embryo follows a path displaying the 15 properties. Source: Alexander 2002

The intellectual development of Alexander in his own words: 'My colleagues and I made observations, looked to see what worked, studied it, tried to distill out the essentials, and wrote them down.'[267] Alexander's process echoes with the flow of this thesis. This thesis will attempt to search for a planning concept from the described landscape in Ezekiel 40-48,[268] a kind of deep regularity from the ocean of the Scripture, as what Alexander observed in the nature of space and matter. This thesis will then observe and recognise certain patterns, examine them in regards to the dynamic process of place-making, and discuss the formation of visions as a result of these patterns.

Alexander's ideas may come across as 'quixotic, grandiose, and impractical'.[269] Even Alexander himself expressed his doubt that 'as a scientist trained in mathematics at Trinity College, Cambridge, I found that I was sometimes formulating concepts which were hard to believe'.[270] But these are not problematic in relation to my study because Ezekiel 40-48 is exactly a piece of work that is also viewed as such. It is Alexander's pattern language and his concept of the nature of

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[267] This is based on how Alexander answered the questions: 'How did you come up with the pattern language? How did you get the actual material?' See the Prologue of *The Nature of Order: The Phenomenon of Life*, p. 3.

[268] Ibid., p. 1.

[269] Ibid., p. 48.

[270] See *Book 1 The Phenomenon of Life*, p. 2. In a meeting with John Liu, one of the colleagues of Alexander in U.C. Berkeley, Liu shared with me that even though he never asked Alexander in person, he has always wondered: As a scientist, what made Alexander think that everyday living space is so important? Isn't the scale of the Laws of nature very different from the scale of our everyday life? How would Alexander think that it was necessary to explore vast matters via the scale of our daily life? Considering architecture as a mundane profession working with tables and chairs, Liu felt that the efforts and talents Alexander put into architecture gave a sense of 大材小用 (dà cái xiǎo yòng): overqualified; a great talent gone to waste; a large material for petty use. Even though architects created churches and temples, architecture itself is secular. How does easy-going everyday spaces respond to cosmic and timeless issues? In spite of all these, Alexander put forth such a great effort to pursue the answer to these questions. Ultimately, from a mathematician's point of view, he found the essence in the form of architecture. Liu inquired, 'What is human? Are humans so worthy? Do Einstein or Newton think about these things? Why does Alexander think of these great matters through ordinary human living conditions even though humans may exist no than another ten thousand years from now.' Furthermore, 'Are these thoughts beyond human, or merely human constructed? I don't know. The existence of God is independent of human imagination. We cannot comprehend this God due to our limitation. God is everything.' I said, 'Alexander is a scientist who devotes himself to a "Theory of Everything" in the field of architecture.' Liu said, 'Yes, in a sense Alexander does not really have a competent opponent. We may need to wait for another physicist-architect to be able to argue with him.'

order that display interdisciplinary strengths and opportunities which enables us analyse the 'labyrinth of God's mysteries' (see Chapter 2) via space patterns that exhibit the hierarchies of regional and local spaces as described in Ezekiel 40-48.

Alexander's physicist mind-set might be comparable to Isaac Newton, who asserted that 'the plan of the temple is the plan of the universe' (section 2.1). Newton, however, as a scientist, was not concerned about everyday spaces with tables and chairs, and did not have to face critiques in the field of architecture. Alexander, on the other hand, always turned his attention to ordinary living spaces no matter how vast his discussions had come to be. In a recent essay 'Making the Garden', Alexander states,

> It has taken me almost fifty years to understand fully that there is a necessary connection between God and architecture, and that this connection is, in part, empirically verifiable. Further, I have come to the view that the sacredness of the physical world — and the potential of the physical world for sacredness — provides a powerful and surprising path towards understanding the existence of God, whatever God may be, as a necessary part of the reality of the universe. If we approach certain empirical questions about architecture in a proper manner, we will come to see God.[271]

Alexander seeks a way of talking about the divine in concrete, physical terms that everybody can understand. This makes me think, that the concrete and physical terms in Ezekiel 40-48, given their practical and cosmic meanings, could contribute in theological terms not only to a wholesome, living landscape, but towards understanding the existence of God. The unceasing efforts Alexander put into understanding the divine seem to respond to what is observed in the book of Ezekiel, that throughout chapters 1-39 Ezekiel constantly employs the recognition formula 'and they shall know that I am Yahweh' to identify Yahweh as the agent behind the changes that are taking place in Israel and Judah as well as among the nations.[272] Zimmerli states, that '[B]ehind Yahweh's acts there stands the intention that precisely these acts will bring about knowledge.'[273] As the concluding chapters of

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[271] Christopher Alexander, 'Making the Garden: Christopher Alexander calls for a humane architecture that raises our eyes to God', *First Things: A Monthly Journal of Religion and Public Life*, 260 (2016), p. 23.
[272] Walther Zimmerli, *I Am Yahweh*, trans. by Douglas W. Stott, ed. and intro. by Walter Brueggemann (Atlanta: John Knox Press, 1982), pp. 29-39.
[273] Ibid., p. 37.

the book of Ezekiel, does Ezekiel 40-48 finish the book with visions based on the same theology? How would the landscape visions ever be helpful for knowing God? Alexander gives us an answer, '[T]he task of making and remaking the Earth — that which we sometimes call architecture — is at the core of any commonsense understanding of the divine'.[274] Even though Alexander's writing might not be the ultimate interpretation of architectural/landscape order, the concept of understanding the divine through understanding the process of creation is a concept I have found helpful to understanding the last chapters of the book of Ezekiel. The exhaustive 253 patterns in the pattern language reveal a sense of ancient Mesopotamian *Listenwissenschaft* ('list science'; cf. section 1.4), and is a tool that I have found effective and appropriate for the study of Ezekiel 40-48.

Despite how it has been criticised, the pattern language is recognised as a key precedent and resource in any exercise in learning from the past as highlighted in a recent architectural campaign — The Big Rethink Towards a Complete Architecture — by architecture critic Peter Buchanan via The Architecture Review. In the Big Rethink Part 5: Transcend and Include the Past, Buchanan states: 'Major regenerative change provoked by crisis involves both a leap forward and a reappraisal and integration of the best of the past.' 'It is this usually unremarked upon dimension of the pattern language that makes it so thoroughly subversive and forward looking rather than regressive, as so many misunderstand it to be.' He further argues:

> Even architects not immune to the charms of the places depicted, are loath to pursue the folksy aesthetic they see as implied and do not want to engage with such primitive construction — although the systemic collapse now unfolding may force that upon them. The daunting challenge for architects then, if such a thing is even possible to realise, would be to recreate in a more contemporary idiom both the richness and quality of experience suggested by the pattern language.[275]

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[274] Alexander, 'Making the Garden', p. 24.
[275] Peter Buchanan, 'The Big Rethink Part 5: Transcend and Include the Past', *Architectural Review*, <https://www.architectural-review.com/the-big-rethink/the-big-rethink-transcend-and-include-the-past/8629373.article?blocktitle=Towards-a-Complete-Architecture&contentID=4950.> [Accessed 9 April 2018].

Many urban development projects continue to incorporate Alexander's ideas, several of which demonstrate a sense of community. For example, UK developers Living Village have been highly inspired by Alexander's work and used the pattern language as the key design approach for The Wintles in Bishops Castle in Shropshire.[276]

Alexander's revolutionary view of archetypal place-making and his approach of incorporating science and mathematics opens a way to understanding an ancient vision as a plan. Through the lens of patterns, Ezekiel 40-48 can be understood not only as an ancient mystery, but as a series of relatively understandable patterns from the depth of the human mind to the nature of things across time and culture.

Therefore, this thesis will further argue that pattern language can be applied to textual analysis regarding the landscape in Ezekiel 40-48, and the concept of the nature of order is helpful for interpretation. The most fundamental reason is that this thesis shares the same concern — the relation between parts and wholes — with Alexander's work textually and spatially. Pattern language treats space as some kind of language: 'Just as words must have grammatical and semantic relationships to each other to make a spoken language useful, design patterns must be related to each other in position and utility to form a pattern language'.[277] According to Alexander, the patterns form a language for the environment. The patterns in a pattern language combine into a holistic set of patterns that are intended to be used together. Therefore, Ezekiel 40-48 can be read as an environment that is 'given its character by the collection of patterns' which Ezekiel 40-48 chooses to build into it.[278]

Secondly, according to Alexander, the pattern language presents each pattern connected to other patterns. 'A pattern is incomplete if it is not connected with smaller and larger patterns.'[279] This fits with my observation of the characteristics of

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[276] See Rob Hopkins, 'Transition Culture', *Transition Culture* <http://www.transitionculture.org/2009/02/24/a-wander-round-the-wintles/.> [accessed 25 May 2018]
[277] 'Pattern language', *Wikipedia.* <https://en.wikipedia.org/wiki/Pattern_language> [Accessed 29 May 2017]
[278] Alexander, *Pattern Language,* xxxvii.
[279] Alexander, *Pattern Language*, vii.

the landscape in Ezekiel 40-48, which consists of small and large interconnected patterns. Thirdly, Alexander's pattern language assumes a hierarchy of patterns at different scales. If a regional or city-scaled pattern can be found in Ezekiel 40-48, then within that pattern, several patterns at a more detailed scale can be related. Fourthly, the pattern language presents the nature of the relationship between problems, context, and solutions. The awareness of the problems is significant for reasoning the concept of the landscape in Ezekiel 40-48, which will be further developed in future chapters in this thesis. Fig. 3.5 shows that a *Pattern Language* is a network.[280]
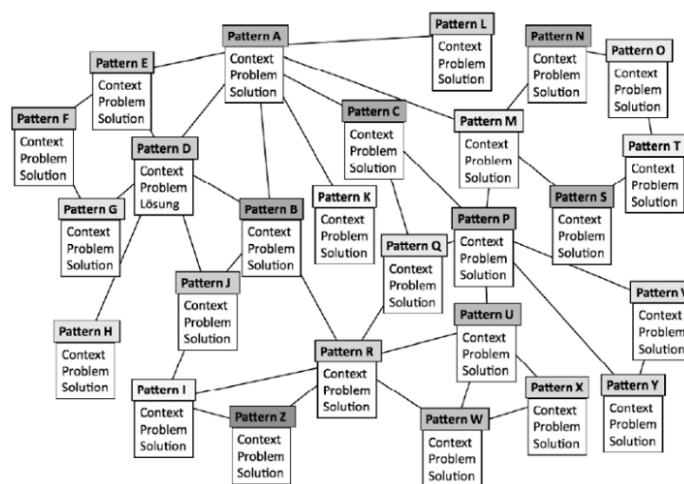

Fig. 3.5. A Pattern language as a network. Each pattern concerns
the context, the problem and solution. Source: Leitner, 2016.

To give a better sense of what is meant by patterns connecting to each other, Nikos Salingaros lists some examples of coupling:[281]

- One pattern contains or generalizes another smaller-scale pattern.
- Two patterns are complementary and one needs the other for completeness.
- Two patterns solve different problems that overlap and coexist on the same level.
- Two patterns solve the same problem in alternative, equally valid ways.
- Distinct patterns share a similar structure, thus implying a higher-level connection.

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[280] Helmut Leitner, 'Working with Patterns: An Introduction,' *Resilience* (2016) <http://www.resilience.org/stories/2016-10-13/working-with-patterns-an-introduction/> [Accessed 7 October 2016]

[281] Nikos A. Salingaros, 'The Structure of Pattern Languages', *Architectural Research Quarterly,* 4 (2000), 149-61 <http://zeta.math.utsa.edu/~yxk833/StructurePattern.html> [Accessed 5 September 2017]

Salingaros's understanding of the patterns is helpful for understanding the concepts of scale, connectivity, and hierarchy of sets of problem-solving oriented patterns. According to Salingaros, 'On one hand, a pattern's internal components will determine its inclusion into a larger pattern. On the other hand, it is the interface that determines overlap, or connection on the same level. Two patterns on the same level may either compete, loosely coexist, or necessarily complement each other'.[282] Future sections will discuss the sets of problem-solving patterns and the corresponding concepts that can be found from Ezekiel 40-48.

Pattern language offers a bottom-up, open source set of patterns that anybody can use to design buildings and plan their neighbourhoods, even whole cities, themselves. As a modern work, the authors believe that many of the patterns are actually 'archetypal' — deeply rooted in the nature of things and a part of human nature.[283] My thesis suggests that the concept of the patterns and the archetype could be good ways to represent Ezekiel's idea of a measurement-minded pattern, a plan, a paradigm (his specified usage of תָּכְנִית is discussed in section 3.1). Archetype, literally meaning the original pattern or model of which all things of the same type are representations or copies, is applicable in the field of environmental sciences and psychology. For C. G. Jung, an archetype is derived from the experience of the race and is present in the unconscious of the individual.[284]

Alexander's idea of the archetypal patterns that are rooted in human responses to the landscape reflects his understanding of the patterns, which combines the environmental sciences and psychology. From the history of scholarship, we may find traces of resonance. When Villalpando painstakingly visualised Ezekiel 40-48, his intent was to provide a material to be meditated on, so the truth could be revealed. The kind of 'truth' Villalpando expected to reveal from an iron-age landscape could be understood as archetypal and universal. When Newton drew his diagrams of the temple, he was revealing the mathematical archetypes in nature, art,

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[282] Ibid.

[283] Christopher Alexander, *A Pattern Language: Towns, Buildings, Construction* (Oxford University Press, 1977), xvii.

[284] 'Archetype', *Merriam-Webster* <https://www.merriam-webster.com/dictionary/archetype> [Accessed 5 September 2017]

science, a model for the creation of any form in the universe. That is why he believed that the plan of the temple is the plan of the universe. Modern day scholar Poser also reads Ezekiel 40-48 as an example of literature that reflects the traumatic experience of exile. The need for safety might be understood as an archetypal response of life to the problem of lack of safety and/or of traumatic disasters.

In order to have a better understanding of the environment of Ezekiel 40-48, this chapter conducts an initial mining of the patterns through an exploration of the Masoretic Text of Ezekiel 40-48. For instance, in Ezekiel 40.6, the angelic surveyor 'went into the gateway facing east, going up its steps, and measured the threshold of the gate, one reed deep'. The description of this very first measuring action consists of geographical information of the built environment and how the architectural features are connected. 'Gateway facing east', 'going up', 'measure (a space)' can be each identified as a 'pattern'. If we check Alexander's pattern language, in which each pattern has a unique name and a numerical ID, we can find correlating patterns including MAIN GATEWAYS (53), MAIN ENTRANCE (110), PATHS AND GOALS (120), OPEN STAIRS (158), and HIGH PLACES (62)[285] that share similar characteristics to the space we observe in the text. Since there is no precise pattern we can refer to for this orientation, I will create a pattern for it entitled FACING EAST. Also, due to the recurrences of the measuring action, I name them as the pattern SPACE TO MEASURE. The river in Ezekiel 47.1-12 can be another example. In 47.1, 'water was issuing from below the threshold of the temple toward the east', in which the SACRED SITES (24), ACCESS TO WATER (25), POOLS AND STREAMS (64) are recognizable patterns in Alexander's pattern language. The FACING EAST pattern appears again and calls for attention to its recurrences in the landscape. Where this pattern appears, the question of its distribution in the literary and physical landscape gives rise to a question about the 'pattern of the patterns'. Water that comes from underneath a sacred building seems to be unique. I entitle this as WATER FROM UNDERNEATH. In 47.11, SWAMPS AND MARSHES can be recognized as a pattern.

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[285] According to Mircea Eliade, the temple constitutes an opening in the upward direction and ensures communication with the world of the gods. This 'upward direction' can be seen as a pattern with identified spatial quality. See Mircea Eliade, *The Sacred and the Profane: The Nature of Religion* (New York and London: Harcourt, Brace & World, 1959), p. 26.

The wetland habitat popular for contemporary ecology is rarely mentioned in the Scriptures and can only be found in Job 8.11; 40.21; Isaiah 30.14; and Ezekiel 47.11. Compared with the other examples, Ezekiel 47 provides the most detailed description of a riparian environment, and a rich pattern language speaking of an ancient ecosystem.

Alexander's patterns are ordered from the very largest regions to cities/towns, households and construction details. Among the 253 patterns, many patterns can be recognized based on my interpretation of the built and natural environment in Ezekiel 40-48.[286] These patterns (with their numerical ID), are listed below according to Alexander's hierarchical grouping of the language:[287]

TOWNS:

These patterns concern large areas from the regional level, to a city, and to smaller areas, the communities and neighbourhoods.

> INDEPENDENT REGIONS (1), THE DISTRIBUTION OF TOWNS (2), AGRICULTURE VALLEY (4), THE COUNTRY SIDE (7), MOSAIC OF SUBCULTURES (8), MAGIC OF THE CITY (10), LOCAL TRANSPORT AREAS (11), SUBCULTURE BOUNDARY (13), IDENTIFIABLE NEIGHBORHOOD (14), NEIGHBORHOOD BOUNDARY (15), RING ROAD (17), PARALLEL ROADS (23), SACRED SITES (24), ACCESS TO WATER (25), LIFE CYCLE (26), ECCENTRIC NUCLEUS (28), ACTIVITY NODES (30), DEGREE OF PUBLICNESS (36), ROW HOUSES (38), WORK COMMUNITY (41), HEALTH CENTER (47), HOUSING IN BETWEEN (48) LOOPED LOCAL ROADS (49), GREEN STREETS (51), MAIN GATEWAYS (53), ROAD CROSSING (54), RAISED WALK (55), QUIET BACKS (59), ACCESSIBLE GREEN (60), SMALL PUBLIC SQUARES (61), HIGH PLACES (62), POOLS AND STREAMS (64), HOLY GROUND (66), COMMON LAND (67), PUBLIC OUTDOOR ROOM (69), GRAVE SITES (70), STILL WATER (71), ANIMALS (74), THE FAMILY (75), HOUSE FOR ONE PERSON (78), YOUR OWN HOME (79), SELF-GOVERNING WORKSHOPS AND OFFICES (80), OFFICE CONNECTIONS (82), TRAVELER'S INN (91), FOOD STANDS (93)

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[286] The patterns are chosen by visualising/imaging what is described in Ezekiel 40-48. Some of the patterns are not explicitly described in Ezekiel, such as ACTIVITY NODES (30). Some patterns are termed and described as if they are purely modern in Alexander's book, such as SELF-GOVERNING WORKSHOPS AND OFFICES (80), OFFICE CONNECTIONS (82), TRAVELER'S INN (91), and FOOD STANDS (93). I include these patterns, however, based on their functions that are perhaps applicable in Ezekiel 40-48.
[287] For the patterns and their textual references in Ezekiel 40-48, see Appendix I.

BUILDINGS:

These patterns start from the overall arrangement of the building complex, the entrances and movements, then positioning the buildings according to the nature of the site. According to Alexander's instruction, after shaping the buildings with the open space, pay attention to the paths and squares. Then work out the fundamental gradients of space, defining the most important areas. Treat the edge between the inside and outside in its own right, and decide on the arrangement of the spaces, gardens and rooms.[288]

> BUILDING COMPLEX (95), NUMBERS OF STORIES (96), CIRCULATION REALMS (98), MAIN BUILDING (99), PEDESTRIAN STREET (100), FAMILY OF ENTRANCES (102), SITE REPAIR (104), SOUTH FACING OUTDOORS (105), POSITIVE OUTDOOR SPACE (106), WINGS OF LIGHT (107), CONNECTED BUILDINGS (108), LONG THIN HOUSE (109), MAIN ENTRANCE (110), HALF-HIDDEN GARDEN (111), ENTRANCE TRANSITION (112), HIERARCHY OF OPEN SPACE (114), COURTYARDS WHICH LIVE (115), CASCADE OF ROOFS (116), SHELTERING ROOF (117), ARCADES (119), PATHWAYS AND GOALS (120), PATH SHAPE (121), BUILDING FRONTS (122), PEDESTRIAN DENSITY (123), ACTIVITY POCKETS (124), INTIMACY GRADIENT (127), INDOOR SUNLIGHT (128), COMMON AREAS AT THE HEART (129), ENTRANCE ROOM (130), THE FLOW THROUGH ROOMS (131), STAIRCASE AS A STAGE (133), A ROOM OF ONE'S OWN (141), BULK STORAGE (145), COMMUNAL EATING (147), SMALL WORKGROUPS (148), A PLACE TO WAIT (150), SETTLED WORK (156), HOME WORKSHOP (157), OPEN STAIRS (158), LIGHT ON TWO SIDES OF EVERY ROOM (159), BUILDING EDGE (160), SUNNY PLACE (161), NORTH FACE (162), OPENING TO THE STREET (165), GALLERIES AROUND (166), CONNECTION TO THE EARTH (168), TERRACED SLOPE (169), FRUIT TREES (170), TREE PLACES (171), GARDENS GROWING WILD (172), GARDEN WALL (173), VEGETABLE GARDEN (177), ALCOVES (179), WINDOW PLACE (180), THE FIRE (181), EATING ATMOSPHERE (182), WORKPLACE ENCLOSURE (183), COOKING LAYOUT (184), DRESSING ROOMS (189), CEILING HEIGHT VARIETY (190), THE SHAPE OF INDOOR SPACE (191), WINDOWS OVERLOOKING LIFE (192), HALF OPEN WALL (193), INTERIOR WINDOWS (194), THICK WALLS (197), SUNNY COUNTER (199), SECRET PLACE (204)

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[288] 'Summary of the Language' in Alexander, *A Pattern Language,* xxv-xxxi.

CONSTRUCTION:

These patterns suggest that the philosophy of structure should be established to let the structure grow directly from the plans and conception of the buildings. The plan should leave room for adaptation. According to Alexander's instruction, after completing the structural layout, start to build from the main frame and its openings, columns, then indoor surfaces and details.[289]

> STRUCTURE FOLLOWS SOCIAL SPACES (205), EFFICIENT STRUCTURE (206), GOOD MATERIALS (207), GRADUAL STIFFENING (208), ROOF LAYOUT (209), FLOOR AND CEILING LAYOUT (210), THICKENING THE OUTER WALLS (211), PERIMETER BEAMS (217), WALL MEMBRANE (218), NATURAL DOORS AND WINDOWS (221), DEEP REVEALS (223), FRAME AS THICKENED EDGES (225), COLUMN PLACE (226), COLUMN CONNECTION (227), DUCT SPACE (229), RADIANT HEAT (230), ROOF CAPS (232), SOFT INSIDE WALLS (235), FILTERED LIGHT (238), ORNAMENT (249), POOLS OF LIGHT (252), THINGS FROM YOUR LIFE (253)

The massive number of patterns explicitly shows us the amount of work that could be required to plan and construct a good space using Ezekiel 40-48, from the vast regional landscape to the details in a room. However, according to Alexander, the patterns are not meant to be just an 'assembly of patterns', but a medium for poetry in which 'each word carries several meanings; and the sentence as a whole carries an enormous density of interlocking meanings, which together illuminate the whole'.[290] Over time, good space creates good poems across lands and cultures with patterns. Even though Alexander's *A Pattern Language* is a book for modern day audiences, this thesis suggests that Ezekiel 40-48 shares a similar concern with Alexander: the archetypal nature of place making. In the process of translating the text into patterns, certain characteristics of space patterns unique to Ezekiel seem to emerge again and again. Since Alexander encourages the users of his pattern language to have a pattern language for their own project,[291] here I list the conjectural patterns I have created according to the hierarchical concept of Alexander's pattern language. From the

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[289] Ibid., xxxi-xxxiv
[290] Alexander, *A Pattern Language*, xli.
[291] Alexander, *A Pattern Language*, xl.

regional level, to a city, and to smaller areas, the communities and neighbourhoods, the patterns that can be added to those found in Alexander's patterns include:[292]

> HEALING RESOURCES THROUGHOUT THE REGION, LIFE ABUNDANCE AND DIVERSITY, LIFE GIVING RIVER, REGIONAL FOOD SUPPLY, SWAMPS AND MARSHES FOR SALT, A RESILIENT CITY, WATER IN THE CITY/ FROM UNDERNEATH

For Ezekiel 40-48, what is highlighted is the 'healing' resources evident throughout the land. The landscape pattern: HEALING RESOURCES THROUGHOUT THE REGION supports Konkel's statement that 'healing' is the most important motif running through the book.[293] Ezekiel 40-48 specifies the wetland landscape features: SWAMPS AND MARSHES FOR SALT. With food, water and salt production for a landscape for life, A RESILIENT CITY in the landscape is recognised as a significant pattern. With the hierarchy of the patterns, bigger and smaller patterns that contribute to A RESILIENT CITY can be found. Chapter 5 will focus on and analyse the resilience of the landscape of Ezekiel. Here, following the regional patterns concerning the land and cities, the first group of patterns regarding the buildings help to lay out the overall arrangement: the height and number of these buildings. Alexander notes that one of the most important moments in the language is when the position of individual buildings is fixed on the site according to the nature of the site, the trees, the sun, and so on. Ezekiel 40.2 points out 'a structure like a city' on the south. This is Alexander's pattern SOUTH FACING OUTDOORS (105). Other associated patterns that could be found in Ezekiel 40-48 include

> HEIGHT AND DEPTH, GOING UP, THREE LEVELS, FOUR CORNERS, IN THE MIDST OF, EXITS, SQUARED SPACES, (FOUR) DIRECTIONAL, FACING EAST

Below are the patterns that shape both the volume of the buildings and the volume of the space between the spaces at the same time; patterns working out the fundamental gradients of space; how the movement will connect the spaces in the gradients; and

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[292] For the patterns and their reference to Ezekiel 40-48, see Appendix I.
[293] Konkel, 'Die zweite Tempelvision Ezechiels (Ez 40-48)', p. 174.

patterns that define the most important areas and rooms (e.g. HOLY OF HOLIES). Alexander suggests giving all the walls some depth, wherever there are to be alcoves, windows, shelves, closets or seats.[294] In the case of Ezekiel, the gate houses in chapter 40 and the recessed opening are specified patterns that are associated with such THICK WALLS (197):

> (SERIES OF) ENCIRCLING/ROUND ABOUT STRUCTURES, FOURFOLD
> MEASUREMENT,
> STANDING FIGURE, THRESHOLD, SPECIAL PAVEMENT/OPEN SPACE/IN BETWEEN,
> NARROW/RECESSED OPENING,
> HOLY OF HOLIES, GATE HOUSE, KITCHEN GARDEN, SINGER AND GATE
> WATCHER'S ROOM

Alexander sets up a principle that a philosophy of structure should be established which would allow the structure to grow directly from the plans and the conception of the buildings.[295] Alexander's patterns STRUCTURE FOLLOWS SOCIAL SPACES (205), EFFICIENT STRUCTURE (206), GOOD MATERIALS (207) and GRADUAL STIFFENING (208) deal with the structural philosophy. This thesis suggests that these four patterns could be applied to studies of Ezekiel 40-48 and Ezekiel's hierarchical world since biblical scholars have already noted the 'graded infrastructure for holiness'[296] in Ezekiel. 'The uniquely hierarchical theology of Ezekiel's book is nowhere clearer than in the design of the restored temple and land in Ezekiel 40-48'.[297] Therefore, STRUCTURE FOLLOWS SOCIAL SPACES (205) is applied; and certainly, Ezekiel 40-48 concerns GOOD MATERIALS (207), and exhibits a sense of simplicity in the planning and design: EFFICIENT STRUCTURE (206). The fact that Ezekiel 40-48 does not contain every detail of the measurement could be understood as a way of GRADUAL STIFFENING (208), a fundamental philosophy of the Pattern

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[294] Alexander, *A Pattern Language*, p. 908.
[295] Alexander, *A Pattern Language*, p. 939.
[296] Stephen L. Cook, 'Cosmos, *Kabod*, and Cherub: Ontological and Epistemological Hierarchy in Ezekiel', in *Ezekiel's Hierarchical World: Wrestling with a Tiered Reality*, ed. by Stephen L. Cook and Corrine L. Patton (Atlanta: Society of Biblical Literature, 2004), pp. 179-97.
[297] Stephen L. Cook and Corrine L. Patton, 'Introduction: Hierarchical Thinking and Theology in Ezekiel's Book', in *Ezekiel's Hierarchical World: Wrestling with a Tiered Reality*, ed. by Stephen L. Cook and Corrine L. Patton (Atlanta: Society of Biblical Literature, 2004), p. 1-23.

Language that 'buildings should be uniquely adapted to individual needs and sites; and that the plans of buildings should be rather loose and fluid, in order to accommodate these subtleties'.[298] Associated patterns dealing with the structural philosophy of Ezekiel 40-48 can be specified as

SPACE TO BEHOLD, SPACE TO MEASURE, SAME MEASURE, SYMMETRICAL DESIGN, STRAIGHT LINED, FOURFOLD MEASUREMENT

Now we have approximately 150 patterns for Ezekiel 40-48. These patterns provide a degree of representation and a sense of place of Ezekiel 40-48. Regional patterns and the concept of the city, specifically A RESILIENT CITY in a landscape, offers great potential for this thesis to develop an overall planning concept of Ezekiel 40-48. I will discuss this further in Chapter 5.

Among the patterns that are proposed based on the reading of Ezekiel 40-48, some patterns seem to serve as the principal order of the layout, for instance the SQUARED SPACES, FACING EAST, ENCIRCLING/ROUND ABOUT STRUCTURES and FOURFOLD MEASUREMENT. Some patterns are experience-based and could be viewed as guiding patterns that introduce actions and responses to the space, namely the SPACE TO BEHOLD and SPACE TO MEASURE. Following Alexander's principle, the recognition of these two patterns is helpful for understanding the subtle arrangement of spaces, the pattern of the patterns, and will be informative for interpreting the planning concept of Ezekiel 40-48. This will be discussed in section 3.4.

Although Alexander's archetypal patterns are insufficient for fully covering the ancient landscape in Ezekiel 40-48, he points out that his patterns are hypotheses. They are tentative and are free to evolve, and more profound and certain patterns are waiting to be discovered.[299] Alexander's pattern language leaves room for discovery and interpretation. Following his view, some patterns might be created, modified and

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[298] Alexander, *Pattern Language*, p. 963.
[299] Ibid., xiii, xv.

adapted to preferences and local conditions in any time and any place, including those that are involved in the creation of Ezekiel 40-48.

Now, the pattern language of Ezekiel 40-48 we initially established is seemingly a mass of codes. The relationship between the patterns is not clear. We need to further investigate the occurrences of the patterns in the text, and the connection, the 'poetry' of the patterns.

In practice, it is very cumbersome to work from a complete catalogue of discovered patterns to create a product. A simplified connective list can drastically improve the utility of any pattern language. It can be done by assembling a group of patterns from the patterns catalogue listed in this section. In order to demonstrate how the patterns can be used as an analytical tool as well as a way of space interpretation, an example is chosen from Ezekiel 40-48. The small courts at the corners of the (big) outer court (Ezekiel 46.21-24) are possibly modelled on ancient Near East kitchen gardens. These are timeless good places that are always benign for cultivation and have satisfied human needs for thousands of years, all the way through the early mediaeval walled gardens in Europe and to our kitchen gardens today.
The description of the courts is:

> [21] Then he brought me out to the outer court, and led me past the four corners of the court; and in each corner of the court there was a court — [22] in the four corners of the court were small courts, forty cubits long and thirty wide; the four were of the same size. [23] On the inside, around each of the four courts was a row of masonry, with hearths made at the bottom of the rows all around. [24] Then he said to me, 'These are the kitchens where those who serve at the temple shall boil the sacrifices of the people'. (Ezekiel 46.21-24, NRSV)

According to the description, several patterns might be directly relevant. I have listed them here, numbered as in the *Pattern Language*.

> 13. SUBCULTURE BOUNDARY
> 15. NEIGHBORHOOD BOUNDARY
> 25. ACCESS TO WATER
> 30. ACTIVITY NODES
> 59. QUIET BACKS
> 60. ACCESSIBLE GREEN
> 61. SMALL PUBLIC SQUARES
> 67. COMMON LAND

SUBCULTURE BOUNDARY (13) and NEIGHBORHOOD BOUNDARY (15) stress the necessity of containment in a living city with a lifestyle. The SUBCULTURE BOUNDARY (13) functions 'just like a cell wall — it protects the subculture and creates space for its transactions with surrounding functions'.[300] ACCESS TO WATER (25) is always precious for it satisfies the need of life. ACTIVITY NODES (30) are small public squares where activities seem to concentrate. QUIET BACKS (59) could be at either side of the wall of the garden behind the busy parts of town where they get sunlight, but are protected from noise by walls and buildings. ACCESSIBLE GREEN (60) provides opportunities to have green place to go to within the city. SMALL PUBLIC SQUARES (61) are small squares no more than 45-60 feet (about 15-20 metres; 30-40 cubits) across where people can communicate comfortably. COMMON LAND (67) plays an effective role in 'knitting people together'.[301] HALF HIDDEN GARDEN (111) is half hidden from the street, and is protected by the wall. HIERARCHY OF OPEN SPACE (114) and COURTYARDS WHICH LIVE (115) suggest that space should be refined so every space 'always has a view into some other larger one, and that all the spaces work together to form hierarchies'.[302] ACTIVITY POCKETS (124) suggest that 'the life of a public square forms naturally around its edge', where it is natural to linger and stop.[303] FRUIT TREES (170) are useful and beautiful. They provide 'the experience of growth, harvest, local sources of fresh food; walking down a city street, pulling an apple out of a tree, and biting into it'.[304] GARDEN WALL (173) protects the gardens. The walls offer shade and irrigation, as well as warmth in cool times and shelter from wind. VEGETABLE GARDEN (177) is

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[300] Alexander, *Pattern*, p. 88.
[301] Ibid., p. 337.
[302] Ibid., pp. 558, 564.
[303] Ibid., p. 600.
[304] Ibid., p. 795.

a fundamental part of human life, and is significant for a 'healthy town'.[305] COOKING LAYOUT (184) exhibits how the cooking area can be fashioned as a workshop. 'The down-to-earth and working character of a good kitchen comes in large part from the arrangement of the stove and food and counter'.[306]

The description above does not include the patterns that are discovered specifically from Ezekiel 40-48. For instance, 'four corners of the court; and in each corner of the court there was a court' and 'On the inside, around each of the four courts was a row of masonry, with hearths made at the bottom of the rows all around' describe ENCIRCLING/ROUND ABOUT STRUCTURES, and FOURFOLD, SQUARED SPACES. These patterns are archetypal patterns significant not only for Ezekiel 40-48, but also for later cloister gardens, courtyards, and monastic enclosures: places that are good for living, for strolling, and for contemplating.[307] The next section will discuss these patterns with regard to their presence in Ezekiel 40-48.

3.3 Patterns that are Observed in Ezekiel: A Preliminary Discussion

Patterns that are observed in Ezekiel refer to the patterns that occur again and again in Ezekiel 40-48. Although these are not included in Alexander's 253 patterns, can be interpreted with the same pattern forming principles, as is discussed in *The Nature of Order*. This implies that, as we further explore the ancient landscape, we may discover many 'ancient patterns' that have been transformed or have disappeared so they are absent from Alexander's thorough survey of the environment. Nevertheless, we may find that these ancient patterns that are as centre-forming and structure-preserving as other patterns that are already recognised by Alexander. Alexander states that contemporary designers fail to put new life into the city if they fail to 'search for the abstract ordering principle which the towns of the past happened to have, and which our modern conceptions of the city have not yet found'.[308] This

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[305] Ibid., p. 819.
[306] Ibid., p. 854.
[307] Ana Duarte Rodrigues et. al., *Cloister Gardens, Courtyards, and Monastic Enclosures* (Centro de História da Arte e Investigação Artística da Universidade de Évora and Centro Interuniversitário de História das Ciências e da Tecnologia; 2015)
[308] In his 'The City is Not a Tree', *Architectural Forum,* 1, 22 April (1965), 58-61, and 2: 58-62. Reprinted in: *Design After Modernism*, ed. By John Thackara (London: Thames and Hudson, 1988);

seems to say that the abstract ordering principle from a long time ago may shed light to our cities today. Recognition of the ancient patterns in Ezekiel 40-48 is significant for my research concerning the knowledge of ancient place-making and landscape envisioning. Now let us explore some of the patterns.

3.3.1 ENCIRCLING/ROUND ABOUT STRUCTURES
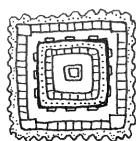
סָבִיב (*sābîb*), an encircling structure 'round about' or 'all around' space, seems to be a distinctive theme within Ezekiel 40-48. A closer look at this spatial pattern is therefore necessary. The very first structure Ezekiel sees — the wall, which probably characterises the 'structure like a city' (כְּמִבְנֵה־עִיר, *kəmibnēh-ʿîr*) in 40.2, or 'the frame of a city' (KJV) — is an encircling structure framing the city. The wall is a massive construction which is 'all around' (NRSV) the city, and the wall is the first thing being measured (40.5). Ganzel and Holtz state that 'this wall, by its very existence, distinguishes Ezekiel's visionary temple from other temples described in the Hebrew Bible'.[309] In Solomon's temple, there is only one verse referring to a stone wall that defines the limits of the sacred realm, where 'he built the inner court with three courses of hewn stone and one course of cedar beams' (I Kings 6.36). In fact, not only the size of the wall characterises Ezekiel 40-48, but the 'round about' pattern is also instructive in Ezekiel's design. Numerous 'round about' (סָבִיב, *sābîb*) expressions — or the duplicated phrase 'round-about round-about' (סָבִיב סָבִיב, *sābîb sābîb*) for the sake of emphasis[310] — are used in the narrative of Ezekiel 40-48.[311] They seem to form a layering system functioning both esoterically and physically. Some of the functions are described as making a separation for the holiness. The temple is surrounded by wood panels (41.16), a raised platform (41.8), chambers

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and in: *Human Identity in the Urban Environment*, ed. by G. Bell and J. Tyrwhitt (Middlesex, England: Penguin, 1992).

[309] Tova Ganzel, and Shalom E. Holtz. 'Ezekiel's Temple in Babylonian Context 1', *Vetus Testamentum,* 64.2 (2014), pp. 211-26.

[310] Francis Brown, S. R. Driver, and Charles A. Briggs, 'סָבִיב', in Brown, Driver, and Briggs, *The Brown-Driver-Briggs Hebrew and English Lexicon,* pp. 686-87.

[311] Appendix 2

(41.10) and the wall (40.5; 42.20). The massive wall which makes a separation between the holy and the common (42.20), as well as protecting the temple, has a 'round about' layer of supports itself (41.6). The court is surrounded by a special pavement (רִצְפָּה, *riṣpâ*), possibly made of special material (see section 4.1.2), which functions and signifies sanctification (40.17). The building that was facing the temple yard on the west side is surrounded by a massive wall just a cubit thinner than the wall of the temple (41.12). The inner room and nave of the temple is surrounded by figurative carvings of cherubim and palm trees. 'Round about' sometimes serves as an expression for the whole territory which is to be holy (43.12; 45.1). The altar is a layered space system designed with 'round about' base and rim (43.13-17). The sanctuary is surrounded by open space (מִגְרָשׁ, *migrāš*) (45.2). The city is designed with round about open space (48.17).

Yosef Garfinkel, the author of *Dancing at the Dawn of Agriculture*, points out that the 'round-about round-about' (סָבִיב סָבִיב, *sābîb sābîb*) expression sounds cultic to him, and that it is like a kind of dancing.[312]After I read *Dancing*, I realised that the series of ENCIRCLING/ROUND ABOUT STRUCTURES in Ezekiel 40-48 could be interpreted from the perspective of cognitive archaeology, an approach that assumes 'there exists in each human mind a perspective of the world, an interpretive framework, a cognitive map — an idea akin to the mental map that geographers discuss, but not restricted to the representation of spatial relationships only'.[313] From this perspective, ENCIRCLING/ROUND ABOUT STRUCTURES, with their recurrences in Ezekiel 40-48, can be viewed as encircling that creates a type of 'endless motif' in a closed circle. It can be symbolic dancing or manifested in the constructed large cultic buildings in the form of architectural features in a geometric-shaped area.[314] Biblical Jericho is encircled seven times before it is conquered (Joshua 6.1-27). In Jewish wedding ceremonies, the bride encircles the bridegroom

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[312] In a private conversation at the conference of the British Association for Near Eastern Archaeology in 2017.

[313] Colin Renfrew and Paul G. Bahn, *Archaeology: Theories, Methods and Practice* (London: Thames and Hudson, 1991), pp. 340-41.

[314] Yosef Garfinkel, *Dancing at the Dawn of Agriculture* (Austin: University of Texas Press, 2003), pp. 54-55.

seven times.[315] *Mishnah*, in which a temple is described based on Ezekiel 40-43,[316] describes a symbolic action of the pilgrimage to the second temple in Jerusalem (*Middot* 2.2).[317] 'Whoever it was that entered the Temple Mount came in on the right *and went around* and came out on the left.'[318] The regulation that one should go out straight ahead without returning to the gateway one has entered is like the order given in Ezekiel 46.9, where 'he that enters by the way of the north gate to worship shall go forth by the way of the south gate; and he that enters by the way of the south gate shall go forth by the way of the north gate'. Interestingly, Ezekiel 46.9 does not seem to ask the worshippers to 'go around'. What keeps coming up is the ENCIRCLING/ROUND ABOUT STRUCTURES, which could be understood as architectural manifestations of the encircling, endless motif. ENCIRCLING/ROUND ABOUT STRUCTURES seem to characterise Ezekiel's literary and landscape construction. The way in which the courtyards at the four corners of the temple are described ('In every corner of the court there was a court', 46.21) seems to correspond with Ezekiel's visions of the whirling wheels as if 'a wheel had been within a wheel' (Ezekiel 1.16; 10.10). This whirling, encircling dance motif makes sense of the arrangement of the structures that go 'round-about round-about' (סָבִיב סָבִיב, *sābîb sābîb*) in the geometric-shaped Ezekiel 40-48 from the perspective of cognitive archaeology, which views the circles as powerful structures. They have the potential to focus attention, to create boundary zones between this world and the next, to present the presence of the deity, and to define the activity area for participation and offering.[319]

Scholars have pointed out the close relation between the visionary contexts of the vision in chapter 1 (1.1-3) and chapters 40-48 (40.1-2).[320] Ezekiel's cherubim,

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[315] Ibid., p. 63.
[316] Naftali S. Cohn, *The Memory of the Temple and the Making of the Rabbis* (Philadelphia: University of Pennsylvania Press, 2013), pp. 73-89.
[317] *Middot* literally mean 'measurements'.
[318] Garfinkel, *Dancing,* p. 46.
[319] Ibid., pp. 87-88.
[320] Joyce points out that 40.1-2 shares with 1.1-3 and 8.1-3 a range of features. The three visionary contexts stand in close relation to each other. Chapter 8 is not discussed in my thesis; however, it is a vision in which the setting is in the temple. See Paul M Joyce, *Ezekiel: A Commentary*, Library of

according to biblical scholar Stephen Cook, manifest the cosmic archetype. The four-faced, winged cherubim depict a symmetrical arrangement that reflects the four directions. Such imagery of guardian beings positioning themselves round about a holy divine axis is common both in the ancient Near East and in the mythologies of world cultures.[321] C. G. Jung believes that 'four' is an 'age-old, presumably pre-historic symbol, always associated with the idea of a world-creating deity'.[322] Cook uses Jung's archetypal *quaternity*,[323] which consists of a four-point or four-fold arrangement of objects or symbols associated with the sacred, the numinous, and the 'four-fold being' — the *Mercurius* — to conceptualize the cherubim figures which are innately associated with shield-forming and a guarded cosmic axis.[324] According to Jung, 'the four symbolizes the parts, qualities and aspects of the One'.[325] The numinous character of the *quaternity* should be called 'sacred'.[326]

In Ezekiel 41.18, the temple is the locale for the guarding cherubim flanking the sacred tree, which marks where God is present (cf. Gen. 3.24; Ezek. 31.9). Giving three-dimensional depth to the decoration of the wall, each image depicts 'the notion of a holy cosmic center and the creation of the world that emanated in all directions from it'.[327] Jung's spatial archetype, the four-point or four-fold arrangement of objects, opens a window for intertextual exegesis with regard to the spatial arrangement of the ENCIRCLING/ROUND ABOUT STRUCTURES, including the walls, the chambers, the pavement/courtyard, the courts in the court and, in a broad sense, the cherubim, their wings and the wheels as ENCIRCLING/ROUND ABOUT

Hebrew Bible/Old Testament Studies, 482 (New York; London: T. & T. Clark International, 2008), p. 222.

[321] Cook, 'Cosmos, *Kabod*, and Cherub', p. 180.

[322] Carl G. Jung, *Psychology and Religion* (New Haven, Conn: Yale University Press, 1938), p. 71.

[323] Jung believes that human dreams and myths provide access to universal archetypes, constitutive of the collective, unconscious mind. His patients' dreams demonstrate the form of an entity containing four main parts. The variations include 'a flower, a square place or room, a quadrangle, a globe, a clock, a symmetrical garden with a fountain in the center, four people in a boat, in an aeroplane or at a table, four chairs round a table, four colors, a wheel with eight spokes, an eight-rayed star or sun, a round hat divided into eight parts, a bear with four eyes, a square prison cell, the four seasons, a bowl containing four nuts, the world clock with a disk divided into 4*8=32 divisions, and so on.' See Carl G. Jung, *Psychology and Religion* (New Haven, Conn: Yale University Press, 1938), p. 64-65; also Cook, 'Cosmos, *Kabod*, and Cherub', p. 180.

[324] Cook, 'Cosmos, *Kabod*, and Cherub', p. 181, 190-91.

[325] Ibid., p. 71.

[326] Jung, *Psychology and Religion,* p. 66.

[327] Cook, 'Cosmos, *Kabod*, and Cherub', p. 181.

STRUCTURES that are used for constructing a meaningful cognitive map in the landscape of Ezekiel. Jung's archetypal *quaternity* creates a conceptual model, which can be used to explain the formation of the patterns that are observed in Ezekiel, the ENCIRCLING/ROUND ABOUT STRUCTURES, FOURFOLD MEASUREMENT, and SQUARED SPACES. Jung's archetypes are applicable to Ezekiel's spatial patterns, which are built upon Alexander's archetypal pattern language.

3.3.2 FOURFOLD MEASUREMENT[328]
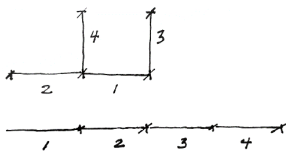
The FOURFOLD MEASUREMENT in 41.13-15 and 47.3-5 stands out from the overall measurement scenarios of Ezekiel 40-48. In 41.13-15, each instance of the fourfold measurement portrays the adjacency of the temple to the yard (open space). This series of measurements constructs a tension between the enclosure and exposure of space by forming a series of bounded squared spaces. The complexity of description is adding up with each measurement: from the temple (first instance), to the yard and the building with its walls (the second instance), to the breadth of the east front of the temple and the yard (the third instance), to the length of the building facing the yard which was at the west and its walls on either side (the fourth instance). The 'building facing the yard which was at the west' is in fact an unknown mysterious structure entitled 'the building' (הַבִּנְיָן, *habbinyān*) that marks the west end of the temple complex without a gate being mentioned but which is protected with a wall five cubits thick round about (41.12).

47.3-5 describes a fourfold measurement of a river. Each measurement is a thousand cubits, ten times longer than 41.13-15. This measurement requires Ezekiel's bodily

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[328] Block introduces the term 'Fourfold measurement' for the river measurement in Ezekiel 47 in his 'Excursus: The Afterlife of Ezekiel's Life-Giving River'. He mentions that the early church is fascinated by Ezekiel 47.1-12 and that Bishop Theodoret of Antioch drew a connection between the fourfold measurement of the river and the four Evangelists. See Block, *Ezekiel 25-48*, p. 699.

involvement: his ankle, knee and loin serve as the measuring tool. Each fold is composed of the same pattern: 'he measured a thousand cubits and he led me through', except for the fourth fold where the water is too deep. The depth of the water increases with each measurement. One can picture that it is 'the man' leading Ezekiel walking along the river. The slope is the distance from ankle to knee and from knee to the loins over a thousand cubits, which is a ratio of approximately 0.001.[329] This could be a smooth slope but a long walk. Ezekiel walks into the depth of water until he cannot pass through for the water has risen too high. He perceives that the water is deep enough to swim in, and concludes that it is a river that cannot be passed through (47.5).
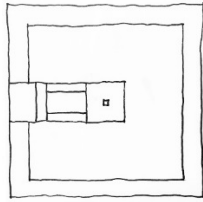
The FOURFOLD MEASUREMENT could be associated with Alexander's patterns. Considering the squares that are created through the measurement, such measurement can be viewed as a method of creating a grid system. In this sense, it is a form of EFFICIENT STRUCTURE (206) for it efficiently constructs a basic outline for drawing a map. In so doing the FOURFOLD MEASUREMENT establishes a set of guidelines for how spatial elements should be positioned within a layout. It effectively provides a rhythm for a design, and it also defines rules of shapes and proportion. Moreover, the FOURFOLD MEASUREMENT actively includes the building with its adjacent open space. This is a profound way to create POSITIVE OUTDOOR SPACE (106). 'Outdoor space is negative when it is shapeless, the residue left behind when buildings — which are generally viewed as positive — are placed on the land'.[330] The open space between the buildings described in 41.13-15 is easily viewed as 'left over' negative outdoor space and ignored. However, the FOURFOLD MEASUREMENT makes this space distinctive and definite. The open space around the temple can be viewed as RING ROAD (17) and PARALLEL ROADS (23). The FOURFOLD MEASUREMENT also creates a series of squares, the shape that is necessary for the right relation between the house and garden/open space.[331] Now let us discuss SQUARED SPACES.

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[329] 50/50,000 (cm), an approximation assuming the distance between ankle and knee is about 50 cm, and a cubit is about 50 cm.
[330] Alexander, *Pattern Language*, p. 518.
[331] Alexander, *Pattern Language*, p. 396.

3.3.3 SQUARED SPACES

 A series of SQUARED SPACES is noticed in the landscape features in Ezekiel 40-48. This pattern is associated with ENCIRCLING/ROUND ABOUT STRUCTURES and FOURFOLD MEASUREMENT. It illustrates well Alexander's description of the relationship between the smaller and larger patterns. According to Alexander, a pattern can be complete only if it is connected with smaller and larger patterns. A smaller pattern is embedded in a larger pattern and is surrounded by patterns of the same size. So, the patterns create a sense of embeddedness and a sense of surrounding.[332] A sequence of SQUARED SPACES in Ezekiel 40-48 depicts these characteristics. Squares of similar or the same size are adjacent to each other. Small squares are embedded in the bigger ones (Fig. 3.6).
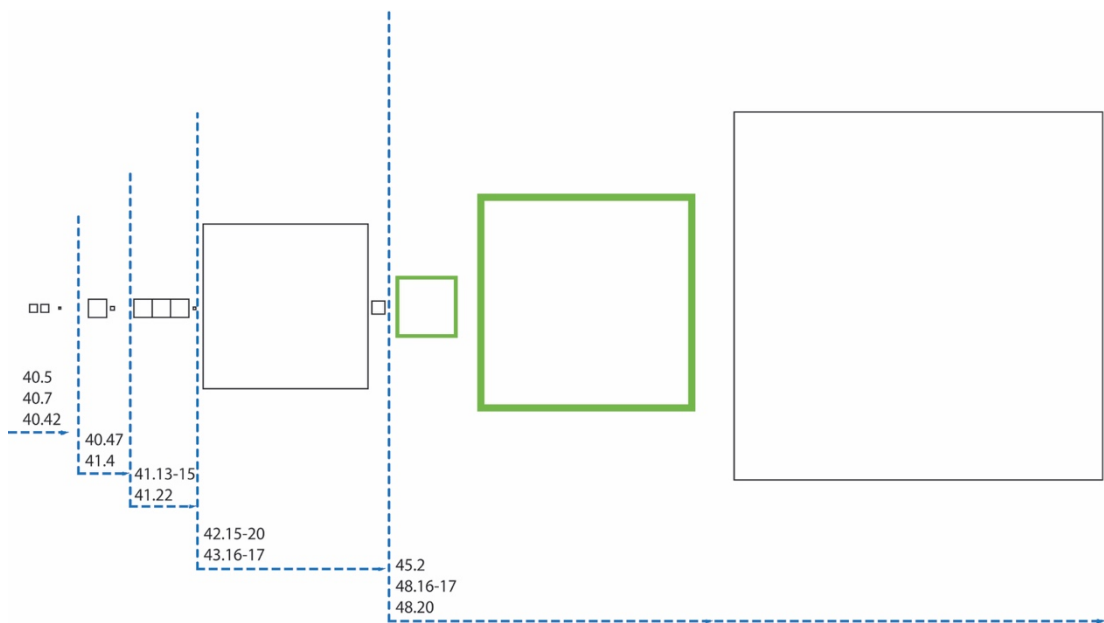

Fig. 3.6. A diagram (not to scale) showing a series of squared spaces in the landscape of Ezekiel 40-48.

After a bird's eye view of a structure like a city (40.2), which is 500*500 cubits square, the first measurement is a cross section of the wall measuring 6*6 cubits in

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[332] Alexander, *Pattern Language*, viii.

40.5.[333] These are followed by: 6*6 (guard room) in 40.7, 1.5*1.5 (stone table) in 40.42, 100*100 (inner court) in 40.47, 20*20 (holy of the holies) in 41.4, three 100*100 (the temple and its surroundings) in 41.13-15, 2*2 (the wooden altar/table) in 41.22, 3000*3000 (wall)[334] in 42.15-20, 12*12 (the hearth of the altar) in 43.16, 14*14 (the settle of the altar) in 43.17, (500+50*2)*(500+50*2) (land for the sanctuary) in 45.2, (4500+250*2)*(4500+250*2) for the city and its surrounding countryside in 48.16-17, and, lastly, the holy oblation 25000*25000 foursquare in 48.20. From this series of squares, we observe the patterns of the squares that characterise the landscape. The squares demonstrate a series of big-small, encompassing-localising, and boundary-centre relationships.

From 500 cubits in the beginning, to 3000 cubits in the centre, and 25000 cubits in the end, larger and larger squared spaces are depicted. The measurement in 42.15-20 serves as a watershed, which literally builds up a climax flanked by two contrasting tiny squared altars (1 cubit square and 2 cubits square), the smallest squares in Ezekiel 40-48. Like Alexander's patterns that are ordered from the largest regions to the smallest household details, the scale of the SQUARED SPACES in Ezekiel 40-48 changes resiliently between the regional scale and the scale of a table. If we view the sequence of the SQUARED SPACES, the viewer of the landscape goes from a large city, passes the most holy place to a small table, expands his view to a larger wall, zooms in to a small altar space, and goes out through the sacred squared land, eventually approaching the largest holy oblation in the regional scale. From the perspective of the cognitive map, the series of SQUARED SPACES delivers a profound sense of space through various sizes of squares. Smaller squares are embedded in bigger ones. When the small one becomes the centre piece of the big ones, a sense of centrality is created. This corresponds with Alexander's pattern CIRCULATION REALMS (98), in which a clear orientation and philosophy of layout is significant for building the mental map to avoid the problem of disorientation. This also can be interpreted with Alexander's 'structure-preserving transformations' (Fig. 3.3; 3.4-1, 3.4-2). With the cross-scaled SQUARED SPACES, Ezekiel 40-48 develops

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[333] 1 reed=6 cubits
[334] Here I take it literally from the MT, which is 500 reed*500 reed.

systems, subsystems, and sub-subsystems, layered in an ever-escalating-ever-deepening succession of spaces. This spatial quality might be associated with 'division, gradation, order, degree, access': the 'priorities central to the priestly world-view', according to Joyce.[335] It is also associated with Alexander's pattern HOLY GROUND (66), a fundamental pattern which consists of layers of access and a series of nested precincts (as in Fig. 3.1).[336]

There is much to discuss regarding the preference for the squared spaces in Ezekiel 40-48. The next chapter will explore the historical parallels of these squared spaces in the ancient Near East. From time to time, a squared space is often preferred. According to the pattern language, 'try to make every house square [...] all this is necessary to create the right relation between the house and garden'.[337]

3.3.4 FACING EAST
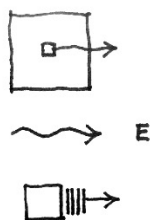
There is directional information in the design of the temple and the landscape in Ezekiel 40-48. Among the four directions, east is highlighted. East is the direction that serves as the starting point of the overall measurement. After witnessing the man with his measuring reed in 40.5, in 40.6 the man goes into the 'gateway facing east' (שַׁעַר אֲשֶׁר פָּנָיו דֶּרֶךְ הַקָּדִימָה, *šaʿar ʾăšer pānāyw derek haqqādîmâ*),[338] going up its steps, and measuring the threshold of the gate, one reed deep. In 42.15, when the man has finished measuring the interior of the temple area, he leads Ezekiel out by the gate which faces east, and measures the temple area round about. He starts from the east side with the measuring reed (42.16).[339]

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[335] Joyce, *Ezekiel,* p. 226.
[336] Alexander, *Pattern Language*, p. 334.
[337] Ibid., p. 396.
[338] Lit. 'the gate whose face was in the direction of the east'. Block, *Ezekiel*, p. 517.
[339] He measures the sides in the order: East-North-South-West.

East is also the direction where Yahweh's glory comes from. 'Behold, the glory of the God of Israel came from the east; and the sound of his coming was like the sound of many waters; and the earth shone with his glory' (43.1). As the glory of the Lord entered the temple by the gate facing east, the Spirit lifted Ezekiel up, and brought him into the inner court; and he experienced the glory of the Lord filling the temple (43.4-5).

East is the direction that the sacred space should face: the temple faces east (47.1) and the steps of the altar face east (43.17). The opening of the east-facing gate is regulated. The Lord commands that the gate of the inner court that faces east shall be shut on the six working days but shall be opened on the Sabbath day and on the day of the new moon (46.1). When the prince provides a freewill offering (either a burnt offering or peace offerings) as a freewill offering to the Lord, the gate facing east shall be opened for him; and he shall offer his burnt offering or his peace offerings as he does on the Sabbath day. Then he shall go out, and after he has gone out the gate shall be shut (46.12).

East is the direction of the flow of water. In the very beginning of chapter 47 where a new landscape is about to be displayed, the man brings Ezekiel back to the door of the temple; and Ezekiel is struck by the sight and says: 'Behold, water was issuing from below the threshold of the temple toward the east (for the temple faced east)' (47.1). The water issuing towards the east resonates with the 'sound of many waters' of the Lord's coming in 43.4. Going on eastward with a line in his hand, the man measured a thousand cubits (47.3).

East is the direction in which the man initiates his measuring of the river. The tool for measurement is changed from the reed to a line. Going on eastward with a line in his hand, the man measures a thousand cubits (47.3). The Eastern region is also the first destination towards which the river flows before it goes to the desert and heals the sea water (47.8). East, when lining up with the west, forms a boundary marker for the allotted land in chapter 48.1-8 with the expression: 'from the east side to the west'.

Archaeological evidence shows that Israelite houses and settlements during the Iron Age had an 'orientational tendency' to face east.[340] However, the reason is unknown in the realm of archaeology.[341] Bringing contemporary theory into discussion, considering Alexander's pattern language, the patterns SOUTH FACING OUTDOORS (105), INDOOR SUNLIGHT (128), and LIGHT ON TWO SIDES OF EVERY ROOM (159) would provide a good reasoning. According to Alexander, it is necessary to 'fix the position of individual buildings on the site, within the complex, one by one, according to the nature of the site, the trees, the sun'.[342] Ezekiel 40.2 says that Ezekiel is brought to a mountain with a structure like a city on the south. It is clear that the sunny SOUTH FACING OUTDOORS (105) is chosen. 'A long east-west axis sets up the building to keep the heat in during the winter, and keep the heat out during the summer'.[343] 'People will always gravitate to those rooms which have light on two sides, and leave the rooms which are lit only from one side unused and empty'.[344] One can understand the correlation between facing east, with natural factors such as sunlight or a human preference to face the sunrise, together with the landscape effect of the light when 'the earth shone with his [the Lord's] glory'. So, the glory of the Lord is perceived as being in the form of light (as is demonstrated in 43.2). From the perspective of the pattern language, FACING EAST is not purely symbolic or religious, but as well a practical pattern that is built upon the understanding of the environment.

We have discussed several key patterns unique to Ezekiel 40-48. Now we shall seek the pattern of the patterns, and try to understand the problems behind the patterns, of which the patterns are the landscape architectural solutions. Alexander develops the Problem – Context – Solution framework for each pattern. This framework is a helpful approach for it sets up a scheme as if we were the ancient planners who attempt to construct a systematic plan for solving the problems. Problems generate

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[340] Avraham Faust, *Judah in the Neo-Babylonian Period: The Archaeology of Desolation* (Atlanta, Georgia: Society of Biblical Literature, 2012), pp. 114-15.
[341] Ibid., p. 114.
[342] Alexander, *Pattern Language*, p. 507.
[343] Ibid., p. 616.
[344] Ibid., p. 747.

needs, and needs raise a question: 'Given a set of needs, how can we generate a form which meets those needs?'[345] In order to solve the problems, the patterns might have been generated to serve as solutions.

3.4 Looking for a Pattern in the Patterns: Narrative Structure of Ezekiel 40-48

What might be the planning concept that possibly constructs the patterns of Ezekiel 40-48? What could be the implicit knowledge Ezekiel 40-48 carries concerning the problems to resolve? To answer these questions, numerous methods can be used for analysing the patterns. As a text-based study, the space patterns in the written landscape in Ezekiel 40-48 need our special attention. Among the space patterns that are observed in Ezekiel 40-48, SPACE TO BEHOLD and SPACE TO MEASURE seem to be overarching and evenly distributed throughout the landscape. Following this observation, two words — 'behold' (הִנֵּה, *hinnēh*) and 'Measure' (מָדַד, *mādad*) are chosen to extract quantifiable landscape characteristics and intangible qualities that arouse the narrator's immediate response or personal interpretation of landscape encounters.[346] The pattern of the patterns presents my best guess as to what arrangement of the physical environment would work to solve the problems.

3.4.1 The Landscape of Awe

In order to explore space patterns that might indicate the meaning behind the grand plan of Ezekiel 40-48, I choose the Hebrew expression הִנֵּה (*hinnēh*) as an indication of vivid amazement and 'excited perception'.[347] הִנֵּה (*hinnēh*) raises immediate attention, which 'emphasizes the immediacy, the here-and-now-ness of the situation'.[348] It can be a striking sight, as Daniel Block translates it vividly in his commentary: 'I was struck by the sight of water issuing [...]'[349] It also serves as a

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[345] Christopher Alexander, 'From a set of Forces to a Form', p. 36.

[346] Linda Steg, Agnes E. van den Berg, Judith I. M. de Groot, *Environmental Psychology: An Introduction* (Chichester, West Sussex; Malden, MA: Wiley-Blackwell, 2012), p. 40.

[347] See Jacob Milgrom and Daniel I. Block, *Ezekiel's Hope: A Commentary on Ezekiel 38-48*, 229; and Block, *Ezekiel 25-48*, p. 690.

[348] T. O. Lambdin, *Introduction to Biblical Hebrew* (New York: Scribner, 1971), p. 168.

[349] Block, *Ezekiel 25-48*, p. 687.

bridge to introduce with emotion a noun clause or perception.[350] The landscape triggers emotions as the narrator feels amazement, awe and excitement — a combined sense of wonder and exhilaration. However, the same Hebrew term can be interpreted and translated as an emotionless observation, as 'I noticed [...]' in Block's translation for 47.7.[351] Some of the landscape scenes may appear to be nothing special and so unworthy of a הִנֵּה (hinnēh) from the perspective of common sense, e.g. a hundred cubits of space before the temple in 42.8. Because of the textual ambiguity the space is literally vague and generally assumed to be the chambers (e.g. RSV and NRSV), while Block suggests that it is a wall. KJV leaves the space unidentified and expresses it with emotion: 'and, lo, before the temple were an hundred cubits'. In my eyes, KJV might be wise to leave the interpretation obscure.

Some Bible translators and commentators seem not to treat the same Hebrew expression in Ezekiel 40-48 equally. KJV translates וְהִנֵּה (wəhinnēh) as 'and, behold' or 'lo!' RSV and ESV usually translates it as 'behold', but not always (e.g. 47.7). NRSV neglects most of the expression but uses some alternative ways to express it, such as 'and there!' (43.12), and 'I saw' (46.19; 47.7). NIV chooses to replace most of the sense of amazement with the plain expression, 'I saw', and even rephrases it with additional words such as 'and show me' (46.19). Regarding this scheme of translation, the preface to the English Standard Version Bible states:

> The word 'behold', usually has been retained as the most common translation for the Hebrew word hinneh and the Greek word idou. Both of these words mean something like 'Pay careful attention to what follows! This is important!' Other than the word 'behold', there is no single word in English that fits well in most contexts. Although 'Look!' and 'See!' and 'Listen!' would be workable in some contexts, in many others these words lack sufficient weight and dignity.[352]

D. J. McCarthy in his discussion of הִנֵּה (hinnēh) notes that we may miss 'the language-user's full meaning if we simply equate the sentences with the suggested

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[350] Bruce K. Waltke, and Michael Patrick O'Connor, *An Introduction to Biblical Hebrew Syntax*, (Eisenbrauns, 1990), p. 675.
[351] Block, *Ezekiel 25-48*, p. 687.
[352] 'Preface to the English Standard Version', *ESV Bible* <https://www.esv.org/resources/esv-global-study-bible/preface-to-the-english-standard-version/> [accessed 31 May 2017]

temporal or conditional or causal or purpose clauses. We get the meaning but not the feeling, and the two must be grasped to get the full force of the language'.[353] My research values the emotional response to the landscape as an intangible quality of space. In so doing, fourteen instances of הִנֵּה (*hinnēh*) expressing awe and amazement at the landscape in Ezekiel 40-48, including thirteen וְהִנֵּה (*wəhinnēh*) and one הִנֵּה־זֹאת (*hinnēh-zōʾt*) are reviewed. Table 3.1 shows a comparison of different versions of translation focusing on the expression of emotions.

Table 3.1. A comparison of the English translations with expression of the emotions of the Hebrew word 'הִנֵּה'.

	KJV	RSV	NRSV	ESV	NIV
40.3	●	●	○	●	○
40.5	●	●	○	●	○
40.17	● (lo!)	●	○	●	○
40.24	●	●	○	●	○
42.8	● (lo!)	○	○	○	○
43.2	●	●	● (and there!)	●	○
43.5	●	●	○	●	○
43.12	●	●	○	●	○
44.4	●	●	● (lo!)	●	○
46.19	●	○	○	●	○
46.21	●	○	○	●	○
47.1	●	●	○	●	○
47.2	●	○	○	●	○
47.7	●	○	○	○	○

●= expression of the awe-inspired emotions as 'behold', 'lo', 'and there!'

○= neglecting/alternative plain expression without emotion

From the table we can see that KJV translates all of the instances containing הִנֵּה (*hinnēh*), including thirteen וְהִנֵּה (*wəhinnēh*) that are related to Ezekiel's direct

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[353] D. J. McCarthy, 'The Uses of w'hinneh in Biblical Hebrew', *Biblica,* 61 (1980), pp. 330-42.

experience of the vision, and one הִנֵּה־זֹאת (*hinnēh-zōʾt*) which is the only instance that is from the direct speech of YHWH, as '(and) behold' or '(and) lo'. These descriptions based on KJV can be construed as:

40.3 and, behold, a man…with a line of flax in his hand, and a measuring reed;
  40.5 And behold a wall on the outside of the house round about, (outside of the house)
    40.17 and, lo, chambers, and a pavement made for the court round about; (outer court)
    (40.24 and behold a gate toward the south;)
      42.8 and, lo, before the temple *were* an hundred cubits. (Priest space)
       (43.2 And, behold, the glory of the God of Israel came from the way of the east;)
       43.5 and, behold, the glory of the LORD filled the house.
        43.12 Behold (הִנֵּה־זֹאת), this *is* the law of the house.
       44.4 and, behold, the glory of the LORD filled the house of the LORD;
      46.19 and, behold, there *was* a place on the two sides westward. (Priest space)
    46.21 and, behold, in every corner of the court *there was* a court. (outer court) (kitchen garden?)
  47.1 and, behold, waters issued out from under the threshold of the house eastward,
  47.2 and, behold, there ran out waters on the right side. (outside of the house)
47.7 (and) behold, at the bank of the river *were* very many trees on the one side and on the other.
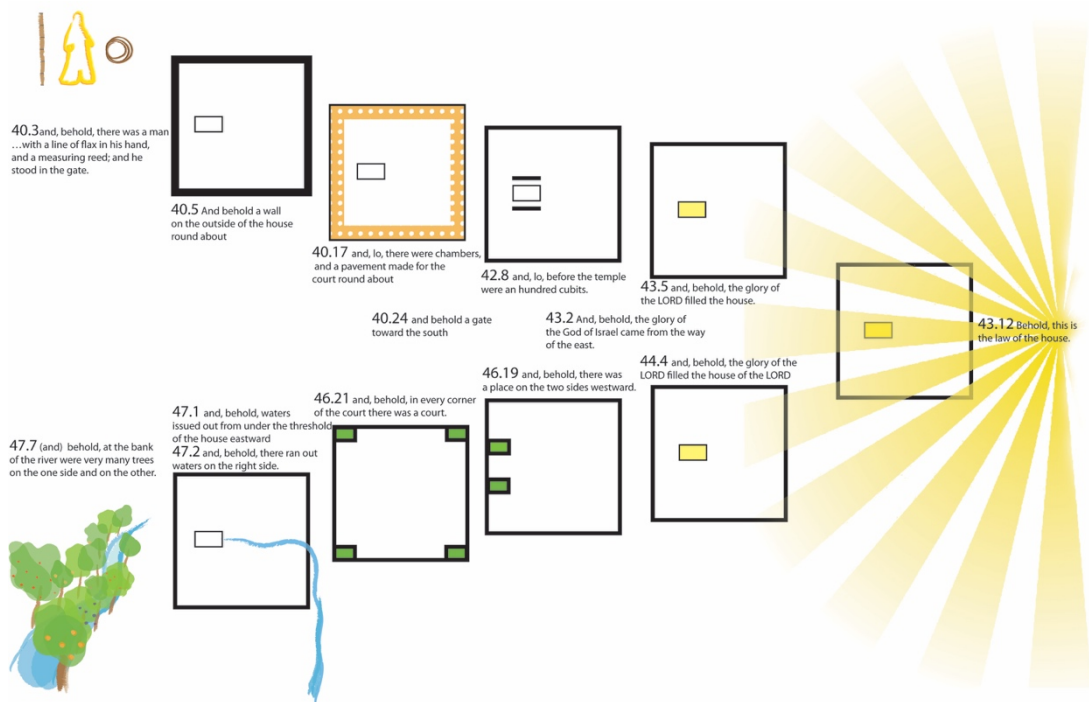
Fig. 3.7-1. A schematic diagram of the landscape of awe in Ezekiel 40-48. A chiastic structure is construed based on the incidences of 'הִנֵּה' in MT Ezekiel 40-48 (The enlarged version is folded in Fig. 3.7-2).

Fig. 3.7-1 is a diagram displaying the landscape of awe as a chiasm. These scenes of 'beholding' are displayed in a thematic chiasm in the landscape in order to reveal possible interrelationships within the texts. In this structure, the law of the house sits

at the centre flanked by a lexical 'glory of the Lord filled the house of the Lord' (43.5; 44.4), and then enveloped by directional structures/space for the priests (42.8; 46.19); and then round about structures including surrounding chambers, a pavement, (40.17) and corner kitchen court/garden (46.21); and outward forces of the temple: the resistance — the wall (40.5), and the running out recovery — the water (47.1, 2). The outermost layer is the one *man* with flax and reed (both are plant material), and many trees on the one side and on the other (40.3; 47.7). It should be noted here that two introductory awe-inspiring scenes, 40.24 and 43.2 stand out from the chiastic pairs of landscape elements. Although corresponding '*hinnēh*' are not found in 46.19-21 and 44.4-46.19 to correspond with the directional instruction provided in 40.24 and 43.2. 40.24 and 43.2 serve as X-Y axis-formers which define the directional layout of the landscape. 43.2 also paves a way for the perfect lexical chiasm of glory of the Lord (43.5; 44.4). They embody Alexander's pattern PATHWAYS AND GOALS (120), with which the pathway and the directional information (south and east) corresponds lexically. Each stands for an axis (north-south and east-west) for the landscape guiding the viewer's attention.

40.24 וְהִנֵּה־שַׁעַר דֶּרֶךְ הַדָּרוֹם
43.2 וְהִנֵּה כְּבוֹד אֱלֹהֵי יִשְׂרָאֵל בָּא מִדֶּרֶךְ הַקָּדִים

and behold, a gate (way) towards the south. (40.24)

and behold, the glory of God of Israel, came from the way of the east. (43.2)

If we read this structure as a two-fold system that views the law of the house as the central line, the dual function of this landscape of awe is seemingly revealed. The upper half is the resistance represented by the angelic authority with his measuring tools (40.3), the round about massive wall (40.5), the round about chambers and pavement (40.17), the gate (40.24). The lower half is the recovery that is manifested by a life support system: the priest's kitchens (46.19), people's kitchen and kitchen garden (46.21), water (47.1, 2), and trees (47.7). Both the resisting and the recovering force are centred on 'the Law of the house' through the glory of the Lord (43.5; 44.4).

3.4.2 The Landscape of Measurement

Colin Renfrew and Iain Morley, in their 'Measure: Towards the construction of our world',[354] state:

> For to measure – whether in the dimensionality of weight, or of distance or of time – is to develop a new kind of material engagement with the world that is at once practical and conceptual. It is an act of cognition – a cognitive act. Such an act has philosophical implications, for measurement allows us to transcend the limitations of the here and now. It involves observation, and it facilitates construction. It encapsulates the seeds of mathematics and of science. It makes possible architecture and design. It is the basis of systematic observation and prediction. It leads on towards astronomy and cosmology. It is the basis of any complex economic system. It is one of the foundations of all human civilisations.

Their view of measurement as a material engagement with the world that is practical and conceptual is helpful for understanding Ezekiel. Ezekiel 40-48 contains detailed and precise measurements of space and landscape. In the very beginning (40.3) the *man* carries a line of flax and a measuring reed that refers to the main task of the journey. A great amount of empirical information is given in this vision through measurement. Considering the infrequent use of measurement in descriptions of the tabernacle or Solomonic temple, the significance of measurement in Ezekiel 40-48 is worthy of our attention. Fifty-three instances of the verb or noun of the root 'measure (מָדַד, *mādad*)' throughout Ezekiel 40-48 is a noteworthy density that constitutes the main substance of Ezekiel's vision.[355] They may have, or suggest, a meaning or message that is not explicitly stated. In chapters 40-42, the guiding angelic figure demonstrates measurement. In 43.10 the house of Israel is commanded to measure the pattern.[356] Land is required to be measured in chapter 45 and thereafter. In chapter 47, Ezekiel participates in the measuring action using his own body to measure the depth of the water. To examine if details of particular importance can be illustrated or highlighted in the literary structure, a careful textual observation has

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[354] Colin Renfrew and Iain Morley, 'Measure: Towards the construction of our world' in *The Archaeology of Measurement: Comprehending Heaven, Earth and Time in Ancient Societies,* ed. by Iain Morley and Colin Renfrew (Cambridge University Press, 2010), p. 1.

[355] See Bennett Simon, 'Ezekiel's Geometric Vision of the Restored Temple: From the Rod of His Wrath to the Reed of His Measuring', *Harvard Theological Review,* 102 (2009), pp. 415-16. For other occurrences of an angelic being with a measuring line/rod in visionary literature, see Zech. 2; I En. 61.1-5; 70.3-4, and Rev. 11.1-2; 21.15-17.

[356] Block translates as 'Let them measure the perfection'. See Block, *Ezekiel 25-48*, p. 586.

been conducted. The result shows that the measuring actions described in Ezekiel 40-48 can be further construed as a parallel (Table 3.2):

Table 3.2. The incidences of 'measure' in Ezekiel 40-48 is construed as a parallel structure.

Chapter	Verses containing 'measure'	Theme	Chapter	Verses containing 'measure'	Theme
40	5, 6, 8, 9, 11, 13, 19, 20, 23, 24, 27, 28, 32, 35, 47, 48	A series of measurement of the temple	43	10	'And you, son of man, describe to the house of Israel the temple and its appearance and plan, that they may be ashamed of their iniquities. That they may measure (וּמָדְדוּ) the pattern[357]
41	1, 2, 3, 4, 5	'This is the most holy place' (v.4).	45	3	shall measure (תָּמוֹד)…The most holy place
41	13, 15 (13-15)[358]	Fourfold measurement of the temple landscape	47	3, 4, 5	Fourfold measurement of the river landscape
42	15, 16, 17, 18, 19, 20	Measuring four sides of the wall	47	18 (15-20)[359]	you shall measure (תָּמֹדּוּ) (Boundary of four sides of the land)

Table 3.2. shows that the verses containing the Hebrew root 'measure' are distributed throughout the whole plan of Ezekiel 40-48. The verses are displayed according to their concentrating themes that I refer to as clusters. The first cluster contains the general but detailed measurements of the temple structure in chapter 40. The second cluster (41.1-5) contains measurements done when the guide and Ezekiel proceed into the palace of Yahweh where the most holy place is. The third cluster contains four highly accurate continuous length measurements of the temple landscape where

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[357] Ibid.
[358] vv.13-15 describes the whole fourfold measurement while the Hebrew root of the verb 'measure' appears in v. 13 and v. 15.
[359] V.18 contains the Hebrew root of the verb 'measure'; vv.15-20 contain the boundary of four directions; v. 21 is a conclusion.

each measurement is a hundred cubits long. The fourth cluster (42.15-20) contains a series of measurements of four sides of the walls of this 'structure like a city' (40.2). In the second column, verses containing 'measure' show a thematic parallel with the previous four clusters of measurements. 43.10 is about measuring the patterns of the temple. 45.3 is the measurement of a piece of land that contains the most holy place[360] responding to the most holy place in 41.1-5. 47.3-5 is four continuous measurements of the river which parallel the fourfold measurements of the temple in 41.13-15. 47.15-20 extends the whole space to its maximum by measuring the four sides of the landscape. This fourfold measurement in 47.15-20 parallels 42.15-20, the last part of the landscape of measurement, and is also 'the concluding temple measurements' identified by Block in his commentary.[361] What is more, both statements of the boundary share an ambivalent sense of scale. 42.15-20 uses measurements beyond measure, while 47.15-20 uses place names that are hard to locate. The unit 42.15-20 used in the Hebrew text is in fact 'reeds', which expands the temple complex six times longer and wider than the cubit square envisioned in 40.15-41.13. However, the unusual vastness seems to tempt some Bible versions, e.g. RSV, NRSV and NIV to follow LXX by deleting the 'reed' and replacing it with 'cubit' to harmonise the incompatibility.[362] On spatial dimension, 42.15-20 refers to the directions of the Hebrew word רוּחַ, 'spirit, wind, breath'. Wind (רוּחַ, *rûaḥ*), according to Block's analysis, has a double meaning: direction, side; and an agency of conveyance, agency of animation, agency of inspiration and mind, and a sign of divine ownership.[363]

As for 47.15-20, according to Block, none of the places named in the boundary list can be identified with certainty. It is impossible to draw a firm boundary line given place 'out of place' when the names of the places cannot be located on the map.[364] Except for the fourfold measurement of the river in 47.3-5, the description of the

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[360] Lit. holy of holies.
[361] Block, *Ezekiel 25-48*, pp. 569-74.
[362] This can be problematic since it is unlikely that the same error occurs four times in a precise way. To delete the word leaves the description without a unit of measurement. Cf. Block, *Ezekiel 25-48*, p. 568.
[363] Daniel Block, 'The Prophet of the Spirit: The Use of RWH in the Book of Ezekiel', *Journal of the Evangelical Theological Society,* 32.1(March 1989), pp. 27-49; also cf. Block, *Ezekiel 25-48*, p. 570.
[364] For Block's analysis of the names of the places, see Block, *The Book of Ezekiel 25-48*, pp. 712-15.

other three incidences in the second column all include an expectation of future measurements. The pattern (43.10), the land area in which shall stand the most holy place (45.3), and boundary of the land (47.15-20) are waiting for future action. Fig. 3.8-1 is a diagram showing the parallel structure of the landscape of measurement.
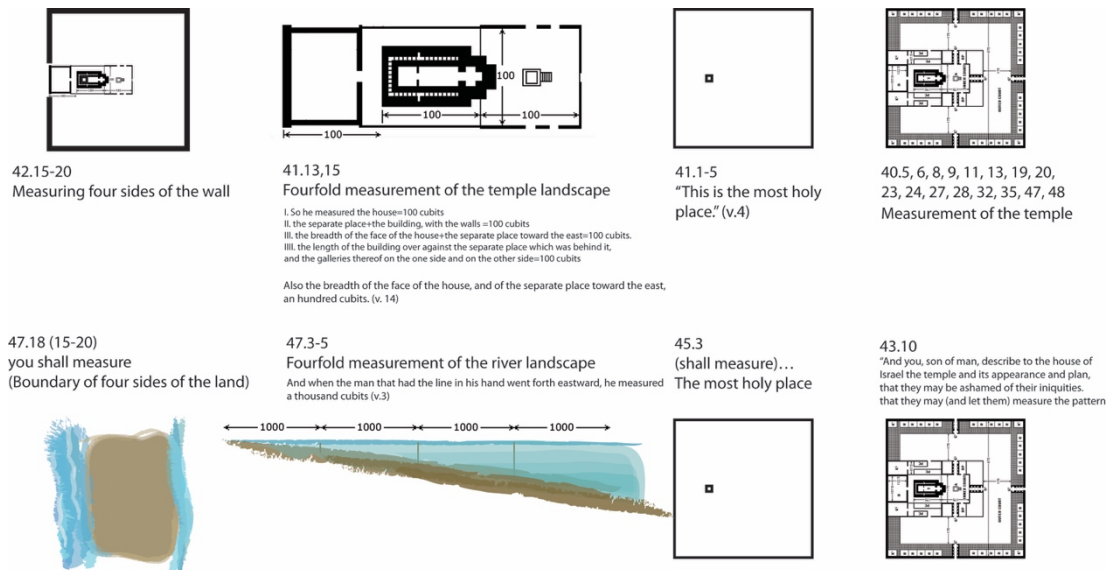

Fig. 3.8-1. A schematic diagram of the landscape of measurement described in Ezekiel 40-48. A parallel structure is construed based on the usage of the Hebrew root 'מָדַד' (The enlarged version is folded in Fig. 3.8-2).

The parallel provides insights for understanding measurement in Ezekiel:

1. It demonstrates an organisation of Ezekiel 40-48 based on the concept of measurement.

2. The parallel can be viewed from the general rule of measurement of the temple, to a condensed focus on the holy of holies, to an elastic fourfold measurement, to the expansion of the boundaries.

3. It implies an underlying concept connecting the measurements or different concepts that categorise the measurements, and places them in groups.

4. It displays a sequence of measurement that can be subdivided into two: (1) temple → the most holy place in the temple → fourfold measurement of the temple landscape → four sides of the temple wall → (2) (let them) measure (Qal consecutive) the temple → (You shall) measure (Qal imperfect) the land

containing the most holy place → fourfold measurement of the river landscape → (You shall) measure (Qal imperfect) four sides of the land.

5. The parallel raises the question of what is in between. The 'return of Yahweh', which falls in 43.1-9 between 42.20 and 43.10, is the single climactic event.[365]

6. The concluding measurements in 42.15-20 using spirited winds as directions create an atmosphere for the coming of Yahweh in the form of sunlight reflected on earth with the sound of mighty waters in chapter 43. This calls our attention to how the essentials of life (sun, air, and water)[366] are placed in the centre of the narrative of measurements, contributing to the climactic event — the 'return of Yahweh'.

7. Measurements done before chapter 43 are done by the (angelic) *man*; measurements of the river in the second column are done with human cooperation, including Ezekiel's, and future action will be undertaken by the people of Israel.

8. Alexander's patterns are listed from the larger patterns to the smaller ones. Ezekiel's measurements also exhibit a hierarchy, which show a resilient spatial pattern that starts with a larger landscape with a bird's eye view. It then zooms into the core, gradually unfolding/growing and stretching into a vast landscape.

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[365] Block entitles the theme of 43.1-9 as 'The Return of Yahweh to His Temple'. See Block, *Ezekiel 25-48*, pp. 575-86.

[366] Resonances in modern day science can be found here, such as research on renewable energy about how sun, air and water might possibly power everything in the future. See Antonio Regalado, in his article entitled 'Reinventing the Leaf: The ultimate fuel may come not from corn or algae but directly from the sun itself' in *Scientific American*, October 2010. He reports research undertaken at the California Institute of Technology around the manufacture of thin and flexible solar-fuel films which mimic photosynthesis in green leaves, using the energy in sunlight to rearrange the chemical bonds of water and carbon dioxide, producing and storing fuel in the form of sugars. The other resonance can be identified within the hydrologic cycle whereby the sun heats the water in oceans, rivers, and lakes. The evaporating water forms air currents and the wind carries the vapour into the atmosphere; the water molecules then collide, grow, and fall as precipitation.

3.5 Summary/Conclusion

- Alexander's *Pattern Language* provides a bottom-up approach to exploring the seemingly top-down 'visions of God' by recognizing the patterns and developing a pattern language of Ezekiel 40-48.

- Patterns are recognised based on Alexander's *Pattern Language* and my own interpretation based on what is described regarding the buildings and landscapes in the final form of Ezekiel 40-48.

- This chapter explores some of the patterns that are unique to Ezekiel. ENCIRCLING/ROUND ABOUT STRUCTURES seem to characterise Ezekiel 40-48 for they recur again and again in the landscape construction. FOURFOLD MEASUREMENT reveals a series of SQUARED SPACES defining the relationship between the buildings and their adjacent open space; as well as the ever-deepening river with the hydrological regulation. The sequence of cross-scaled SQUARED SPACES is displayed, providing a clear sense of orientation, which is important for the construction of a mental map for the users of the space. FACING EAST exhibits the orientational tendency that is well-noted in archaeological reports of Iron Age Israelite settlements.

- These patterns are significant for understanding Ezekiel 40-48 if we review them with Alexander's patterns including SOUTH FACING OUTDOORS (105), INDOOR SUNLIGHT (128), HOLY GROUND (66), CIRCULATION REALMS (98), RING ROAD (17), PARALLEL ROADS (23), POSITIVE OUTDOOR SPACE (106), and the EFFICIENT STRUCTURE (206). The pattern language of Ezekiel 40-48 exhibits the philosophy of the layout of Ezekiel 40-48 that is based on the nature of the landscape and the needs of life.

- The construed narrative structures of Ezekiel 40-48 display the landscape of awe and measurement with a chiasm and a parallel structure. The literary structures exhibit the organisation of the patterns, and the corresponding relationship between the patterns create themes of the landscape. Both structures reveal a landscape that is equipped to coordinate and function. These will be developed in the future chapters. The literary structures give us a view of the whole landscape, from which the various significances of the patterns are revealed.

This thesis proposes a way in which 'patterns' can be used to codify knowledge of the physical and built landscape described in Ezekiel 40-48. This chapter has explored the significant landscape patterns by identifying SPACE TO BEHOLD that catches attention and arouses emotion; and SPACE TO MEASURE that demands material engagement. 'The most beautiful thing we can experience is the mysterious.'[367] By observing Ezekiel 40-48 my thesis assumes that throughout the journey some spatial features cause Ezekiel 'pause to wonder and stand rapt in awe',[368] manifesting the knowledge and the feeling that is at the centre of the landscape vision, which is practical and conceptual. The literary structures that highlight the concept of awe and measurement in the landscape envisioning require special attention to be paid to the spatial patterns such as ENCIRCLING/ROUND ABOUT STRUCTURES, FOURFOLD MEASUREMENTS and life sustaining space patterns that are related to the food/kitchen and water resources, especially WATER FROM UNDERNEATH and the ecosystem with FRUIT TREES (170), TREE PLACES (171) and STREAMS AND RIVERS that characterise the landscape of Ezekiel. In the next chapters we shall further explore these landscape patterns based on their historical context.

Can present day landscape and architecture planning/design concepts and methods be applied to a textual analysis of the Scripture? In this chapter, concepts from the pattern language have proved to be helpful for exploring the biblical space characterised as a written ancient environment. Patterns are useful for pulling together disparate sets of landscape and architectural terms that can be viewed together within a coherent framework, as well as linking ideas of 'landscaping' or 'envisioning' in the ancient Near East Biblical world. However, patterns in Alexander's *A Pattern Language* are not sufficient for a complete codification for Ezekiel 40-48. Ezekiel contains patterns that exceed the realm of Alexander's patterns. As a planned landscape tracing its origins back to Babylonian captivity in ancient Israel's history, Ezekiel 40-48 has its own specific context of being under

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[367] Einstein, *Living Philosophies,* p. 6.
[368] Ibid.

continuous threat of war and facing life and death, while Alexander's mainly focuses on creating a good place in a peaceful world. As a vision, Ezekiel 40-48 contains a high degree of ambiguity and abstraction which results from both the vague terminology and the mystical aspects inherent in the prophetic vision itself. Thus, the patterns in the book of Ezekiel vary in the level of scale both in space and time. It is a plan consisting of not only interior and exterior but also ulterior design as 'visions of God'. In order to answer my research question, looking for the possible underlying planning concept of Ezekiel 40-48, the next chapter will use the patterns as tools to examine the possible historical parallels. With a better understanding of the historical context, it is possible to demonstrate how the landscape which features in Ezekiel 40-48 was conceptualized or constructed when it was written.

CHAPTER 4: POSSIBLE HISTORICAL PARALLELS

> *'From the sequence of these individual patterns, whole buildings with the character of nature will form themselves within your thoughts, as easily as sentences.'*
>
> — Christopher Alexander, The Timeless Way of Building[369]

In order to explore the planning concepts from the designed details, this thesis (Chapter 3) has documented the patterns that Ezekiel 40-48 contains. Drawing upon the concept of Alexander's pattern language, 'each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice.'[370] The pattern language each project chooses to use might be archetypal, based on the nature of things and human nature. The patterns may also provide information about local adaptation. The result of Chapter 3 leads to a pattern language for Ezekiel 40-48. These patterns suggest several things. First, there are problems that occur again and again in the environment of Ezekiel 40-48; and secondly, there should be solutions responding to the problems. For a better understanding of the problems, it would be informative if we explore the historical background of these patterns, and where and how these patterns existed, in what form and with what function. By reviewing possible historical parallels, Chapter 4 further identifies various historical parallels that may be indicative of the underlying conception that surfaced at the planning of Ezekiel 40-48.

4.1 Method: Between Parts — Fragments/Patterns — and Wholes

In this section I will introduce my idea that Alexander's pattern language can be a concept and a method bridging our textual analysis of the landscape in Ezekiel 40-48 and 'down to earth' archaeology. I will deliver my argument in two ways: first through the reality that Ezekiel 40-48 is a piece of work that encompasses textual

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[369] Alexander, Christopher, *The Timeless Way of Building*, Center for Environmental Structure Series, vol. 1 (New York: Oxford University Press, 1979), xiv.
[370] Alexander, Ishikawa, and Silverstein, *A Pattern Language*, x.

difficulties; and second, I will demonstrate that the concept of the patterns is helpful for it naturally coheres the fragments into meaningful patterns and makes sense of many mysterious landscape features.

4.1.1 The Fragments

The New Revised Standard Version adds a footnote to some sentences describing various landscape features in Ezekiel 40-48, saying, 'Meaning of Hebrew uncertain' (40.14, 16; 41.15; 42.3, 5, 12; 46.22; 47.2, 17). Translations of the post, shutters of the window, galleries round about, roof structures, walls, enclosed/small courts and directions in these descriptions are big guesses.

This sub-section serves as an experiment to identify the fragments of a temple structure.

Fig. 4.1. The façade of the stone temple model from its right side. Source: Garfinkel and Mumcuoglu 2016, p. 42.

On May 8, 2012 Professor Yosef Garfinkel, the Yigael Yadin Professor of Archaeology at the Institute of Archaeology at the Hebrew University of Jerusalem, announced the discovery of objects during the archaeological excavations at Khirbet Qeiyafa, a fortified city in Judah.[371] This discovery is extraordinary as it was the first time that shrines from the time of the early biblical kings had been uncovered. Yosef Garfinkel stated:

> The stone model helps us to understand obscure technical terms in the description of Solomon's palace as described in I Kings 7, 1-6. The text uses the term '*Slaot*', which were mistakenly understood as pillars and can now be understood as

[371] See 'Breaking News-Evidence of Cultic Activity in Judah Discovered at Khirbet Qeiyafa', Biblical Archaeology Society (2013) <http://www.biblicalarchaeology.org/daily/biblical-artifacts/artifacts-and-the-bible/breaking-news%E2%80%94evidence-of-cultic-activity-in-judah-discovered-at-khirbet-qeiyafa/> [Accessed 31 May 2017]

triglyphs. The text also uses the term '*Sequfim*', which was usually understood as nine windows in the palace, and can now be understood as 'triple recessed doorway'. Similar triglyphs and recessed doors can be found in the description of Solomon's temple (I Kings 6, Verses 5, 31-33), and in the description of a temple by the prophet Ezekiel (41.6).[372]

It is true that many biblical texts are replete with obscure technical terms that might have lost their original meaning over the millennia, especially for Solomon's temple and Ezekiel's temple design. In July/August 2015, Madeleine Mumcuoglu and Professor Yosef Garfinkel published their new and perhaps revised findings in an article entitled 'The Puzzling Doorways of Solomon's Temple' in the *Biblical Archaeology Review*. They identify the meaning of the Hebrew architectural term *mezuzot* as recessed doorframes, and suggest that enhancing the doorframe with recesses may reflect some architectural concept in the ancient Near East designed to signify the sanctity of important buildings.[373] Double- and triple-recessed doorframes appeared as early as the fifth millennium BCE in the temple at Tepe Gawra, then from the fourth to first millennium many examples were found in the ancient Near East, Greece, and Roman Empire. Persepolis featured them.[374] The same doorframe

Fig. 4.2. The façade of the stone temple model includes recessed frames around the doorway and roof beams in groups of three. Source: Garfinkel and Mumcuoglu 2016, p. 39.

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[372] Israel Ministry of Foreign Affairs, 'Cultic Shrines from Time of King David', Mfa.gov.il, <http://www.mfa.gov.il/mfa/israelexperience/history/pages/cultic_shrines_time_king_david_8-may-2012.aspx.> [Accessed 31 May 2017]
[373] Madeleine Mumcuoglu and Yosef Garfinkel, 'The Puzzling Doorways of Solomon's Temple', *The Biblical Archaeology Review,* 41.4 (July/August 2015), pp. 35-41 < https://members.bib-arch.org/biblical-archaeology-review/41/4/2> [Accessed 7 October 2017]
[374] Ibid., p. 39.

was depicted on ivories found in the royal city of Samaria in the northern kingdom of Israel, and in three royal capitals in Mesopotamia.[375]

'How did the architectural feature get from Mesopotamia and the northern Levant[376] in the Middle and Late Bronze Age to the southern Levant and the Qeiyafa model shrine in the Iron age?' Garfinkel asks, and suggests that the answer could be the professional architects sent from Tyre (II Samuel 5.11), or the contribution of the Phoenician city-states of the Lebanese coast in the later time.[377] Garfinkel points out that certain design patterns can move from one place to another. Hundley states that Mesopotamia represents 'a hodgepodge of people groups and nations always influencing and being influenced by those around them'.[378] Instead of focusing on cultural influences, I would argue that the concept of pattern language provides a complementary way to think about the patterns. Since force generates forms, some archetypal patterns are naturally found in different places because they reflect the character of nature.

Fig. 4.3. Fragment of the roof of the stone temple model. Four groups of roof beams (triglyphs) are shown, three in each group. Source: Garfinkel and Mumcuoglu 2016, p. 39.

Slaot, or *ṣəlāʿôt* (צְלָעוֹת), is used literally in Ezekiel 41.5-6, where a round about structure is described to surround the temple. NRSV and KJV translate *ṣəlāʿôt* as the 'side chambers'. Garfinkel, on the other hand, identifies this term as the 'triglyph', the ends of the 'roof beam'. 41.5 describes the *ṣəlāʿôt* in its singular form, צֵלָע (*ṣēlāʿ*), as 'round about the

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[375] Ibid., p. 39.
[376] Garfinkel considers the architectural elements as 'Mesopotamian and northern Levantine tradition' in Yosef Garfinkel, and Madeleine Mumcuoglu, 'Triglyphs and Recessed Doorframes on a Building Model from Khirbet Qeiyafa', *Israel Exploration Journal,* 63.2 (2013), pp. 135-63.
[377] Mumcuoglu and Garfinkel, 'Puzzling Doorways', p. 40.
[378] Michael B. Hundley, *Gods and Dwellings: Temples and Divine Presence in the Ancient Near East* (Atlanta, GA: Society of Biblical Literature, 2013), p. 49.

house on every side'. In 41.6 ṣəlāʿôt are arranged as 'one over another, three and thirty times'. In 41.7, the subject of the verb 'one goes up' (יַעֲלֶה, *yaʿălê*) is not clear, so the description 'one goes up from the lowest row to the highest by the middle' (וְכֵן הַתַּחְתּוֹנָה יַעֲלֶה עַל־הָעֶלְיוֹנָה לַתִּיכוֹנָה, *wəkēn hattaḥtônâ yaʿălê ʿal-hāʿelyônâ lattîkônâ*) can refer to a roof system that is structured with three layers of beams, or a roof structure creating three layers of usable chamber space. Due to the textual difficulties, the identification of the architectural terms requires further textual and intertextual analysis. Given the unidentified nature of ṣəlāʿôt, what is clearer is that the structural stability of the temple is secured because this beam spaces/roof structures, ṣəlāʿôt, are structurally supported so the ṣəlāʿôt do not sit on the wall of the temple (41.6). The ṣəlāʿôt also have their own foundations (41.8) to hold their own weight. So even though the exact form of the architectural feature is not clear to us, investigation of the concept that it needs to be stabilized may shed some light.

The triglyphs, ṣəlāʿôt, that Garfinkel identifies based on his findings in Khirbet Qeiyafa and their application to the temple in I Kings 7.1-6, leave room for interpretation and debate. Based on the appearance, some scholars understand the architectural features in I Kings 7.1-6 as a 'multistoried façade'.[379] From my perspective by comparing the same word that is used for the temples of Solomon and Ezekiel, building an impressive frontage for a monumental building is based on a different concept from the ENCIRCLING/ROUND ABOUT STRUCTURES that are observed in the temple described in Ezekiel 40-48.

To this point, this sub-section demonstrates that the identification of a fragment is a long journey of clarification. There can be many interpretations of one single fragment, and the results vary according to different assumptions about the space. If one recognizes a building as monumental, then it is the 'multistoried façade' that can enhance the monumental effect. If one looks at the building from the outside, then the ṣəlāʿôt are understood as the triglyphs, which might be merely decorative. If one highlights the structure and construction, the ṣəlāʿôt refer to the beams. Since it is the

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[379] Irene J. Winter, '"Seat of Kingship" – "a Wonder to Behold": The Palace as Construct in the Ancient near East', *Ars Orientalis*, 23 (1993), p. 34.

overall concept that my thesis is mainly concerned with, instead of arguing about what exactly the individual architectural terms may stand for, it would be helpful to use the patterns as strategic themes to examine Ezekiel 40-48 at the landscape level.

4.1.2 The Patterns

From the perspective of the sentence structure, if the meaning of a sentence is uncertain due to the fragmentary meanings of the words, it might be helpful to identify clauses and phrases in order to provide us with the framework to clarify the written expression of ideas. Alexander states: 'From the sequence of these individual patterns, whole buildings with the character of nature will form themselves within your thoughts, as easily as sentences'.[380] Following his view, forming patterns is a way to make sense of the fragments in a landscape.

Archaeologists seem to have applied similar ideas in their research. Garfinkel has identified architectural features, i.e., the 'recessed opening' and the 'triglyph', from his findings in Khirbet Qeiyafa, and discussed the popularity of these specific patterns in the ancient Near East. Garfinkel mentions that the recessed doorframe was meant to signify the sanctity of important buildings.[381] Dalley points out the practical function of the structures and the possible meaning of the seemingly religious term 'sanctification'. According to Dalley, openings such as windows may have contained a panel of lattice-work.[382] Sometimes the panels were solid and 'allowed no light or air to pass through', so as to 'bar demons of disease and pollution'.[383] This may explain why the windows and walls designed in Ezekiel 40-48 are carefully covered:[384]

> Now the temples, and the inner place, and the porches of the court, threshold, and the narrow windows, and windows with recessed frames (הָאֲטֻמִים) round about, all three. Over against the threshold was panelled with wood round about round about (סָבִיב סָבִיב), from the earth to the windows, the windows were covered to the space above

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[380] Alexander, *The Timeless Way of Building*, xiv.
[381] Garfinkel, 'The Puzzling Doorways', pp. 35-41.
[382] Dalley, *The Mystery of the Hanging Garden of Babylon*, pp. 141-42.
[383] Ibid., p. 142.
[384] Other structures showing this characteristic include 40.16, 29, 33, 36.

the door, even to the house, inside and outside. And on all the walls round about round about (סָבִיב סָבִיב), inside and outside, by measure (Ezekiel 41.15-17).[385]

Although the New Revised Standard Version of the Bible translates הָאַתִּיקִים (hāʾattîqîm) as 'windows with recessed frames', it is in fact a hapax, a unique word that is only used in Ezekiel and with uncertain meaning to us (cf. 41.15, 16; 42.3, 5). The recessed doorframe Garfinkel discusses seems to be important in the planning of Ezekiel 40-48. In 41.21, the recessed doorframes of the nave were square. Here, the concept of the recessed doorframes was correlated with the SQUARED SPACES. In 43.8, the Lord says that 'they placed their threshold by my threshold and their recessed doorframes beside my recessed doorframes, with only a wall between me and them'. In 45.19, the priest was commanded to take some of the blood of the sin offering and put it on the recessed doorframes of the temple, the four corners of the ledge of the altar, and the recessed doorframes of the gate of the inner court. In 46.2, we are told that the prince shall enter by the vestibule of the gate from outside, and shall take his stand by the recessed doorframes of the gate. The priests shall offer his burnt offering and his offerings of wellbeing, and he shall bow down at the threshold of the gate. Here, we see that the recessed doorframes serve as the pattern for A PLACE TO WAIT (150), functioning so as to form the ENTRANCE TRANSITION (112) and the INTIMACY GRADIENT (127), where the spaces are 'arranged in a sequence corresponding to their degree of privateness'.[386] The 'offering of wellbeing' suggests a correlation between the prince's action taken in these space patterns and the need of wellbeing that the prince or people were hoping for. Hundley states that Mesopotamian temples served as the link between heaven and earth.[387] The welfare of the temple equals the welfare of the nation and its residents. The king's upkeep of the temple was considered responsible for his success in both war and peace.[388] The cult provides food; the temple provides shelter. The wellbeing of the temple was necessary for the wellbeing of the larger world around it.[389]

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[385] My own translation
[386] Alexander, *Pattern Language*, p. 610.
[387] Hundley notes that Enlil's sacred precinct in Nippur was named Duranki, 'the connection (between) heaven and earth'. See Hundley, *Gods and Dwellings*, p. 49.
[388] Ibid., p. 77.
[389] Ibid., p. 78.

The guarding and defensive powers at the openings are sacred in the ancient Near East. Hundley claims that 'various elements of the temple, including ziggurats, temple doors, door locks, platforms for cult statues, temple pipes, and hybrid guardians, were deified, such that not only the deity but also the elements of its environments were considered divine'.[390] Hundley's statement gives us ideas about the usage of the 'threshold' in the book of Ezekiel. There are three incidences of 'threshold' in Ezekiel 9.3; 10.4, 18. Three of them are related to the Lord's glory. In 9.3 the glory of the God of Israel had gone up from the cherubim on which it rested to the threshold of the house. In 10.4 the glory of the Lord went up from the cherubim to the threshold of the house; and the house was filled with the cloud, and the court was full of the brightness of the glory of the Lord. In 10.18 'the glory of the Lord went forth from the threshold of the house, and stood over the cherubim'. In Ezekiel 40-48, the threshold is the place for worship (46.2), and the place for the spring water to flow out (47.1).

The need to guard the openings of the building is meaningful for creating a landscape that is good for public health/sanctity. A clean surface can be integrated with the recessed doorframe to create the height difference to stop dust or other pollution from entering into the inner space. In so doing, dust is prohibited through layers of retention in the design of the recessed doorframes and window frames in the temple city in Ezekiel 40-48.

The existence of the recessed doorframe, together with the threshold in 43.8 and 46.2, forms an overall protection for the openings of the space. In Ezekiel 46.2, the threshold is the place where the prince will worship. The space of the worship service must be clean, as ancient Israel was among the cultures that 'equated cleanliness with godliness and associated hygiene with religious beliefs and practices'.[391]

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[390] Ibid., p. 76.
[391] Theodore H., Tulchinsky, and Elena Varavikova, *The New Public Health an Introduction for the 21st Century* (San Diego: Academic Press, 2000), p. 2.

The pavement רִצְפָּה (riṣpâ) in the outer court in Ezekiel's landscape planning
(Ezekiel 40.17, 18; 42.3) also appears at the worship place in Solomon's temple (II
Chronicles 7.3), and the precious pavement in the citadel of Susa (Esther 1.6).[392]
Public health, as a means of sanctification, might have been an issue of the place-
making for the people and prince touching the ground. According to II Chronicles
7.3, when all the children of Israel saw how the fire came down and the glory of
the LORD on the temple, they bowed themselves with their faces to the ground upon
the pavement, and worshiped and praised the LORD. In Isaiah 6.7, the רִצְפָּה (riṣpâ)
serves as the burning coal that could take away guilt and blot out sin. Considering the
correlation between the ancient pavement רִצְפָּה (riṣpâ) and its origin רֶצֶף (reṣeph,
cf. I Kings 19.6), which means hot stone, glowing stone or coal, we may imagine and
speculate about the correlation between the landscape effect of the pavement and the
physical or chemical properties of the specific material.

Another special pavement is the גִּזְרָה (gizrâ) in the inner court (Ezekiel 41.11-15;
42.1, 10, 13). In the Bible, this word is only used for the inner court in the landscape
of Ezekiel. The closest word from the same root could be גִּזְרָתָם (gizrātām) in
Lamentations 4.7, with the meaning in Hebrew uncertain. The King James Version
translates it as 'their polishing'. This could be reasonable considering the root גזר
(gazar), which means *to cut*. NRSV translates גִּזְרָה (gizrâ) in the inner court as
'yard', KJV 'the separate place', both point out the characteristics of the open space.
If we consider גִּזְרָתָם (gizrātām, their polishing) in its context, סַפִּיר גִּזְרָתָם (sappîr
gizrātām) in Lamentations 4.7, גִּזְרָתָם (gizrātām) is linked with סַפִּיר (sappîr),
sapphire. The special usage of the word גִּזְרָה (gizrâ) in the inner court might imply
not only a specialized, paved, polished and separate area, but also a landscape with
delicate beauty. A clean and shiny surface perhaps would contribute to the reflection
of the glory of the Lord (Ezekiel 43.2). The stone pavement giving the glowing
effect, could be an effect that is perhaps similar to a glow that has been suggested to

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[392] The precious pavement in Susa consists of porphyry, marble, mother-of-pearl, and coloured stones

be the result of feldspar iridescence in the diorite,[393] an igneous rock that is used by the ancients for sacral purposes such as pyramids, temples and various tomb constructions.[394] We may find more support from the ancient Near East in later sections (Section 4.2.1 Mesopotamian Landscape).

The pavement design in the outer and inner court in the landscape of Ezekiel 40-48 creates the remarkably varied light environments that are present in the sacred landscape. Variations in the treatment of the pavement would affect the intensity of the reflection of light, as well as in its direction and colour. The strength and permeability of the pavement could also be functional in filtering and drainage, and therefore contribute to the arrangement of the waterscape described in Chapter 47. The coal-related pavement in the outer court and the sapphire-related pavement in the inner court reveal a carefully planned landscape. The 'pavement made for the court round about' in Ezekiel 40 and 'the separate place' in the inner court described in Ezekiel 41 need to be examined systematically. All these contribute to a glorious landscape which is godly and clean.

If a picture paints a thousand words, I would like to say that a Hebrew word-study might paint a thousand pictures. Various possibilities wait for archaeological finds and other literary resources to support and clarify the meaning of a word. This is definitely one of the many ways to understand the landscape of Ezekiel. However, for the purpose of this thesis, it is important to observe the bigger pictures of the landscape patterns. Through studying רִצְפָּה (*rispâ*) in the outer court and the גִּזְרָה (*gizrâ*) in the inner court, it is clear that there is a strong connection between the paved spaces and their adjacent buildings (40.17; 42.10), that is, there is a chamber-pavement-court pattern both in the outer court and inner court. Both chambers are probably multi-functional restaurants (42.13) — one is holy, one is common — and these two sets of landscape patterns are related spatially (42.10). Once a repeated

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[393] J. A. Harrell and V. M. Brown, 'Chephren's quarry in the Nubian Desert of Egypt', *Nubica,* 3.1 (1994), pp. 43-57.
[394] Dietrich D. Klemm and Rosemarie Klemm, 'The Building Stones of Ancient Egypt – a Gift of Its Geology', *Journal of African Earth Sciences,* 33.3 (2001), pp. 631-42.

pattern is recognized from the mosaic of biblical lexicons, it is important to pursue the concept of the patterns further.

Based on Alexander's patterns, various elements of the temple — including the pavement, the threshold and recessed door/window frames — reveal the significance of a fundamental pattern: CONNECTION TO THE EARTH (168), a pattern which concerns the earthen surfaces between the floors and the land.[395] It is our task to discuss how the planning of the patterns such as the BUILDING EDGE (160), MAIN ENTRANCE (110), ENTRANCE TRANSITION (112), INTIMACY GRADIENT (127), WINDOW PLACE (180), and WATER FROM UNDERNEATH are patterns that work together for the protection and provision of the glory of the Lord, ensuring the physical and spiritual wellbeing of life.

To this point, it seems to be clear that the landscape discussed here is concerned with the concept of wellbeing and sanctity. The sun, the light, and the cleansing water are highly valued physically and spiritually. The landscape patterns contribute to a package of concepts that function to solve the problem of the unwelcome diseases, pollution and at the same time to create a sacred landscape. After exhibiting how the patterns can be used to integrate the textual analysis of the landscape in Ezekiel 40-48 and archaeology, the next section introduces my observations regarding the historical context of the landscape patterns.

4.1.3 Context of the Patterns

The numerous technical terms relating to the temple-city in the landscape in Ezekiel 40-48 might provide evidence that the writer of these terms must have had knowledge of the distinctive features of the cities and the landscapes in the ancient world. This chapter argues that mystifying fragments can form patterns that are instructive for the planning concept, aiming to resolve the problems and create an ideal environment.

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[395] Alexander, *Pattern Language*, p. 787.

Just as archaeologists earnestly excavate in the fields searching for the meaning of mystifying fragments, so the attempt to seek the meaning of fragments in the soil of the written landscape in Ezekiel 40-48 is also a meaningful exercise.

In *The Timeless Way of Building*, Alexander states that 'every society which is alive and whole, will have its unique and distinct pattern language'.[396] Assuming Ezekiel 40-48 exhibits patterns responding to its specific context, it will be worthwhile to explore how 'visions of God' came out of the cultural matrix in the ancient world. Chapter 3 has introduced the idea that forces generate forms,[397] so the land is shaped, and the landscape is formed. Now the question is: what kind of forces, and who applies what forces to create the landscape? Many commentators have discussed the possible role of foreign influences in designing the landscape of Ezekiel 40-48. Milgrom and Block propose that the author of Ezekiel 40-48 has been 'infatuated and influenced' by the design of the Greek temple of Apollo in Delphi. Just as Garfinkel proposes that professional architects sent from Tyre (II Samuel 5.11) distributed their architectural know-how among the nations, Milgrom and Block suggest that it is very likely that 'news and details of the Delphi temple transmitted by oral reports of the travellers or merchants influenced the design of Ezekiel's visionary temple'.[398] Assyriologist Stephanie Dalley states that in Ezekiel 31, Ezekiel equates Assyria with a land with its channels for watering. Ezekiel must have had knowledge of the Assyrian landscape since he began to prophesy 19 years after the fall of Nineveh, when the fame of Sennacherib's palace garden was widespread.[399] On the other hand, Sulzbach states that Ezekiel 47-48 'imitates the urban splendor of Mesopotamian capital cities', and serves to be a copy of the dazzling city on the water that Babylon was.[400]

I would argue that Ezekiel 40-48 and the possible historical landscapes could have shared certain environmental characteristics. However, as John Walton reminds us,

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[396] Alexander, *A Pattern Language*, xvi.
[397] See Christopher Alexander, 'From a set of Forces to a Form', pp. 36-39, 61.
[398] Milgrom and Block, *Ezekiel's Hope,* p. 52.
[399] Dalley, *The Mystery of the Hanging Garden of Babylon*, p. 158.
[400] Carla Sulzbach, 'From Urban Nightmares to Dream Cities', p. 240.

'similarities may suggest a common cultural heritage or cognitive environment rather than borrowing'.[401] Stephanie Dalley states that 'great inventions are commonly attributed to a later person who succeeded in publicizing the discovery or in putting it to a new use'.[402] This reminds us that any shaped land could be historically dense, sophisticated and complex. Drawing on Alexander's theory, many of the design patterns are archetypally rooted in the nature of things or a part of human nature.[403] In order to solve their contemporary problems, ancient societies would adopt necessary mitigation strategies. It is very likely that different cultures adopted similar solutions through landscape planning and construction. And surely it is important to bear in mind that 'proximity in time, geography, and spheres of cultural contact all increase the possibility of interaction leading to influence'.[404]

Although this present thesis reads Ezekiel 40-48 synchronically based on its final form, the diachronic information is useful for this section to set up a framework of time when we look for the parallels. According to Thilo Alexander Rudnig, the three probable periods of composition of Ezekiel 40-48 are: (1) pre-exilic Judean material redacted during the Exile; (2) material from the Exile in Mesopotamia concerned with a utopian future restoration; and (3) additions and adaptations from the post-exilic Jewish diaspora late in the fifth century BCE.[405] In this sense, Judah's own history and multiple inputs of landscape planning should be considered.

My hypothesis is that the context of Ezekiel 40-48 leads to the creation of a unique plan for the landscape. The historical landscapes that we find in the ancient Near East should be able to serve as benchmarks so that the known might be used to approximate the unknown planning concept behind Ezekiel 40-48. In the face of massive amounts of historical documentation from various landscapes, the concept of Alexander's pattern language will be helpful for evaluating possible historical

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[401] John H. Walton, *Ancient Near Eastern Thought and the Old Testament* (Nottingham: Apollos, 2007), p. 27.
[402] Ibid., p. 8.
[403] Alexander, *Pattern Language*, xvii.
[404] Walton, *Ancient Near Eastern Thought,* p. 27.
[405] Rudnig, *Heilig und Profan,* pp. 58-64.

parallels by exploring the patterns and the context within which the structures of Ezekiel 40-48 were planned.

To sum up, this chapter chooses the possible historical parallel landscapes based on these criteria:

1. Scholars propose that a specific site could be possibly related to Ezekiel 40-48.

2. This site shares similar forms and functions with those of Ezekiel 40-48. Although Ezekiel was brought to the visions of God in the twenty-fifth year of the exile in Babylonia according to Ezekiel 40.1, landscape patterns in ancient Persia of 559-331 BCE are also reviewed for references due to its proximity in time, geography, and spheres of culture.

Based on these criteria the possible historical parallels to Ezekiel 40-48 include: Mesopotamian landscape; Apollo's temple in Delphi; Persian landscape in Pasargadae and Persepolis. Israelite town planning in the Iron Age is studied as significant background.

The problem for understanding the ancient landscape is the lack of evidence of the naturalistic part of the original landscape. Physical remains of the buildings survive as ruins, but the plants or remains of water features occasionally survive only under favourable conditions. Other types of evidence are therefore required. These range from actual landscaped gardens or buildings to written records, pictorial representations such as iconography, and illustrations of the site plan based on archaeological excavation and sculptures.[406] The next section will demonstrate the possible historical parallels between the landscape of Ezekiel 40-48 and these various forms of landscape representation.

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[406] See Maureen Carroll, *Earthly Paradises: Ancient Gardens in History and Archaeology* (London: British Museum Press, 2003), p. 8.

4.2 Possible Historical Parallels

4.2.1 The Mesopotamian Landscape

Mesopotamia was the name of an area, which has come to be applied to the many rich cultures that flourished in ancient Iraq. These included Sumerian, Akkadian, Babylonian, Assyrian and many other cultures from around 5,000 BC.[407]
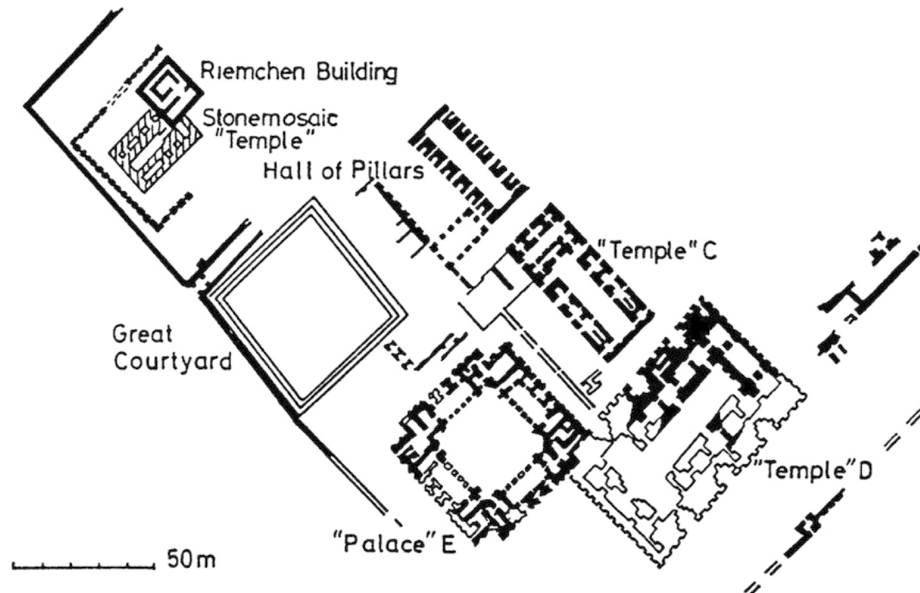

Fig. 4.4. The 'Palace E' in the Eanna precinct. Source: *The Cambridge World History* 2015

The Uruk Period (ca. 4000-3000 BCE), in which the early stages of social hierarchy and large-scale urbanization have been observed, is viewed as a logical starting point for the Mesopotamian palace.[408] There, the administrative and religious complex, 'Palace E' (Fig. 4.4)[409] in the sacred Eanna precinct, a square in plan with a large central courtyard surrounded by banks of rooms, is found. The building could house administrative activities and be related to the religious complex.[410] Schoors states

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[407] Dominique Collon, 'History - Ancient History in Depth: Mesopotamia', BBC (1 July 2011), <http://www.bbc.co.uk/history/ancient/cultures/mesopotamia_gallery_01.shtml> [Accessed 10 May 2018]

[408] Hans J. Nissen, *The Early History of the Ancient Near East: 9000-2000 BCE* (Chicago: University of Chicago Press, 1988), pp. 39-64.

[409] Norman Yoffee, ed., 'Early Cities and Information Technologies', in *The Cambridge World History* (Cambridge: Cambridge University Press, 2015), iii, pp. 111–226.

[410] Winter, ''Seat of Kingship' – 'a Wonder to Behold'', p. 28.

that in the history of the kingdoms of Israel and Judah there is a new type of palace, an Assyrian-style palace, that arose toward the end of the eighth century BCE. The identifying characteristics include an extensive, rectangular ground plan with closed outer walls; a large central courtyard surrounded by a single or double row of rooms; a main entrance in one of the corners of the house and entrances to rooms in the centre; bathrooms and an underground sewer system; and, finally, the preferred building material was brick.[411] Such palaces served as the seat of the Assyrian provincial government. In the southern coastal Philistine cities, kings occasionally may also have built palaces in the 'Assyrian Style'.[412]

From the perspective of the pattern language, the Uruk Period (ca. 4000-3000 BCE) has shown us the earliest evidence of the archetypal SQUARED SPACES and ENCIRCLING/ROUND ABOUT STRUCTURES. The later 'Assyrian Style' exhibits similar archetypal patterns.

Fig. 4.5. shows tribute bearers with city models from a relief of Sargon II from Khorsabad in the last quarter of the eighth-century BCE.

Fig. 4.5. Tribute bearers with city models from a relief of Sargon II from Khorsabad, last quarter of the eighth-century BCE. Source: Schmitt 2015: Fig. 6.9.

The fortified city models in the bearers' hands, though, are seemingly two-dimensional and presented on a relief. The models might be stylized and from foreign countries, however, they seem to exhibit the archetypal nature of the ancient Mesopotamian cities: SQUARED SPACES, and ENCIRCLING/ROUND ABOUT

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[411] Antoon Schoors, *The Kingdoms of Israel and Judah in the Eighth and Seventh Centuries B.C.E.*, Biblische Enzyklopädie, English, vol. 5 (Atlanta: Society of Biblical Literature, 2013), pp. 82-83.
[412] Ibid., p. 83.

STRUCTURES with four towers (at the corners). Schmitt suggests that the scene in Fig. 4.5 could inform an interpretation of Ezekiel 4.1-3.[413] In my view, the city models might provide evidence for the ancient building project documentation by means of city planning and model making, and reveal the possible connection with Ezekiel's model making in Ezekiel 4 and city planning in Ezekiel 40-48. It offers significant parallels to Ezekiel 4.1-3, where Ezekiel is asked to make a model of Jerusalem and build up a scene of siege round about.

Significantly, what characterises the Assyrian landscape is not only the palace buildings but the 'palace garden', which concerns not only the buildings and their construction but embraces the surrounding landscape. Assyrian patterns, according to Winter, highlight a raised citadel and palace that are set into the perimeter wall, overlooking a distinctive natural feature in the landscape, like a river.[414] Stephanie Dalley states that in Ezekiel 31, Ezekiel equates Assyria with the garden with its channels for watering.

> […] Ezekiel must have Sennacherib's palace garden in mind when he described Assyria as a cedar of Lebanon, with rivers made to flow around the planting and canals sent forth to all the other trees of the field, with roots in abundant water, nor any tree in the garden of God was like unto him in his beauty… so that all the trees of Eden that were in the garden envied him.[415]

Dalley also links the Assyrian landscape with the concept of paradise: 'the Babylonians and Assyrians planted gardens in cities, palace courtyards and temples, in which trees with fragrance and edible fruits were prominent for recreating their concept of Paradise'.[416] Gardens are significant cultural elements of the ancient Near East landscape in the way they are reflected in Assyrian stone panels in the palaces.

In the following paragraphs, I will examine the patterns that exist in the Assyrian landscape of Sargon II and Sennacherib. I will also review associated landscapes that

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[413] Rüdiger Schmitt, 'Royal Construction in the Book of Kings: Architecture and/as Iconography', in *Iconographic Exegesis of the Hebrew Bible/Old Testament*, ed. by I. J. de Hulster, Brent A. Strawn, and R. P. Bonfiglio (Göttingen: Vandenhoeck & Ruprecht GmbH & Co, 2015), p. 146.
[414] Winter, ''Seat of Kingship' – 'a Wonder to Behold'', p. 31.
[415] Dalley, *The Mystery of the Hanging Garden of Babylon*, p. 158.
[416] Stephanie Dalley, 'Ancient Mesopotamian Gardens and the Identification of the Hanging Garden of Babylon Resolved', *The Journal of the Garden History Society*, 21.1 (1993), p. 1.

provide information about the Mesopotamian landscape in the time period around the eighth to seventh centuries BCE.
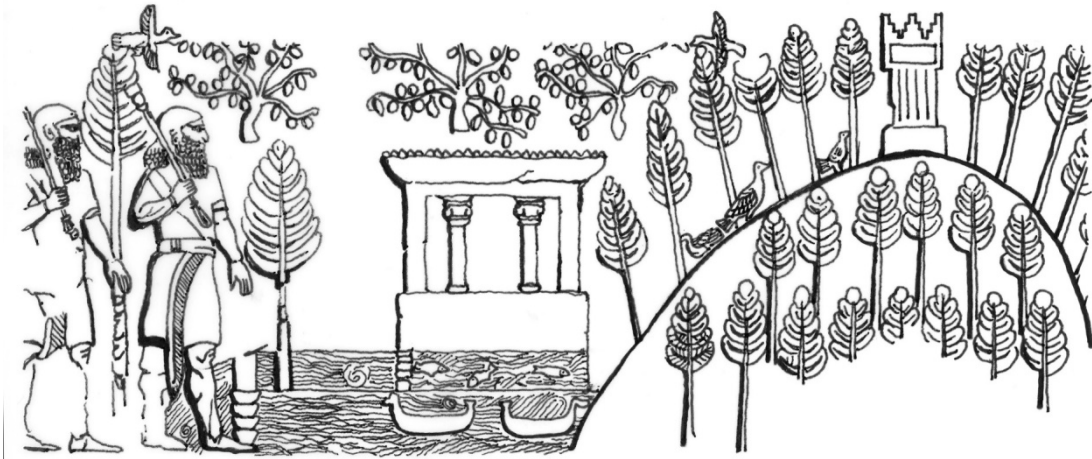

Fig. 4.6. A drawing based on the Garden of Sargon II in Khorsabad in c. 706 BCE (my drawing after P. E. Botta and E. Flandin, Monument de Ninive II; Paris, 1849; pl. 114.)

The stone panels of bas-reliefs installed in the palaces are instructive because they provide information for the appearance of the layout of the landscape. Fig 4.6 is a drawing based on a relief of the Garden of Sargon II in Khorsabad. Here, there is an altar on the top of the hill surrounded by 'a grove of fragrant pines', as Dalley suggests.[417] There may be a pathway leading to the altar implied by the dove-like birds, though this is not clear. There is a pillared pavilion standing with a pond-like water body. There are fish and boats in the water. There are fruit trees. On the left are two men standing beside the pine trees. Dalley states that 'the various trees, a hilly terrain, flowing water, and the particular architectural features become characteristics of royal gardens within cities'.[418] Using the patterns as an approach, the Assyrian landscape patterns offer historical parallels that share these patterns: HIGH PLACES (pillared pavilion, an altar), TREE PLACES (pine-shaped trees), FRUIT TREES, ACCESSIBLE GREEN, POOLS AND STREAMS, ANIMALS (fish/birds).

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[417] Dalley, 'Ancient Mesopotamia Gardens', p. 4.
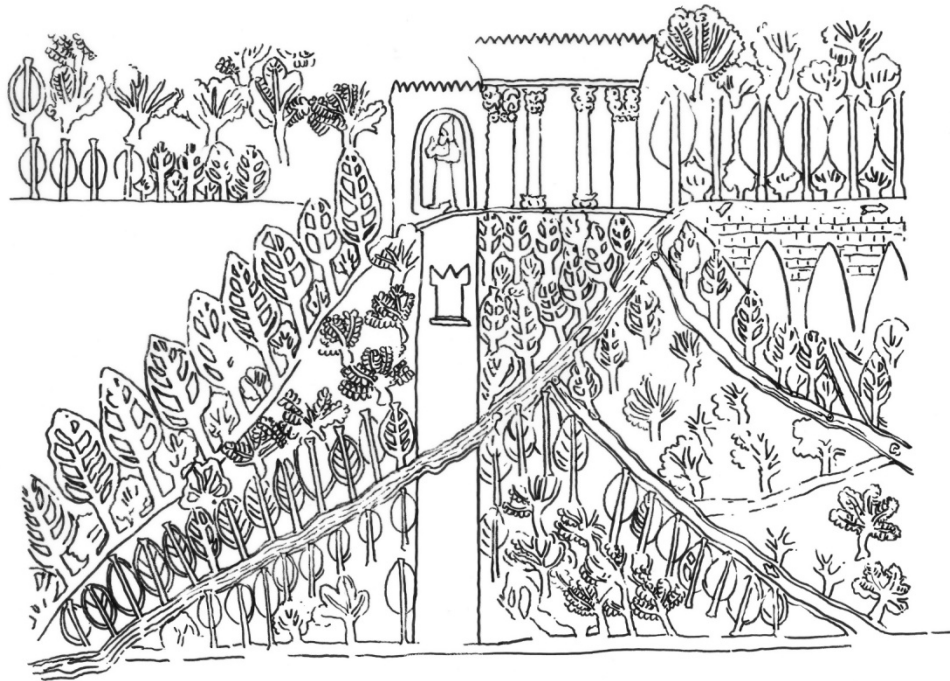[418] Ibid., 4.

Fig. 4.7. My drawing based on the Kuyunjik Relief of the Garden of Sennacherib in c.650 BCE. (The British Museum).

Fig 4.7. is a drawing based on The Kuyunjik Relief of The Garden of Sennacherib in c.650 BCE. Dalley states that the construction of the gardens and their watering systems set a precedent for future kings.[419] In her book *The Mystery of the Hanging Garden of Babylon* Dalley challenges the universally accepted truth that the Hanging Garden was built in Babylon by Nebuchadnezzar and states that it was in fact the Assyrian King Sennacherib (reigned 705-681 BCE) who created the Hanging Garden.[420] If what she states is true, then this image of the garden of Sennacherib is a representation of one of the seven wonders of the ancient world. Unlike the garden of Sargon II, there are two more structures in the garden of Sennacherib: the building that extends from the pavilion, and the bridge-like aqueduct. Vegetation is planted in four rows adjacent to the pavilion.

Assyria began as a small landlocked state based on the upper Tigris. Succeeding emperors built their palaces in the land among undulating landscapes. It is not clear

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[419] Ibid.

[420] Stephanie Dalley, *The Mystery of the Hanging Garden of Babylon* (Oxford: Oxford University press, 2013), pp. 203-8.

how the three dimensions of diverse landscape have been reduced to two. From the point of view of present day landscape planning, the relief of the garden of Sargon II appears to be a cross section, while the perspective of the Garden of Sennacherib displays a multi-layered elevation and a more abstract landform. Sennacherib is Sargon's successor. It is assumed that there are common patterns in their landscapes. The common patterns shared by the two palace gardens are the HIGH PLACES (pillared pavilion, an altar), TREE PLACES (pine-shaped trees), FRUIT TREES, ACCESSIBLE GREEN, POOLS AND STREAMS, and ANIMALS (fish/birds). However, Sennacherib stands out as a man of exceptional planning concepts regarding his restorative landscape construction. Sennacherib moved the capital of Assyria to Nineveh in 705 BCE and expanded the city to accommodate his plans. He criticised earlier kings 'whose construction they had carried out inexpertly',[421] so the sacred buildings inside the city were destroyed by the flood. Sennacherib then 'tore down the small palace and changed the course of the Tebilti River, repaired (the effects of) the erosion, and directed its outflow'.[422] He also raised the flooded area 'out of the water and converted (it) to dry land'.[423] Sennacherib's work required sophisticated engineering. He described himself as who 'put his mind towards the straightening of the city's street(s) and the widening of (its) squares, the dredging of the river, (and) the planting of orchards'.[424] Sennacherib's aim was to create a 'stable imperial structure at peace with the outside world', with the awareness that 'stability could only be ensured by asserting Assyrian power whenever it was challenged'.[425] The concept of the stability along with the tension between the inside and the outside is a worldview that is also manifested in the planning of Ezekiel, which attempts to ensure stability by strengthening the city.

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[421] A. Kirk Grayson, Jamie Novotny, and the Royal Inscriptions of the Neo-Assyrian Period (RINAP) Project, *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 004 <http://oracc.museum.upenn.edu/rinap/corpus/> [accessed 1 July 2018]
[422] *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 004.
[423] Ibid.
[424] Ibid.
[425] Julian Reade and British Museum, *Assyrian Sculpture*, 2nd edn (London: British Museum Press, 1998), p. 50.

Sennacherib attempted to transform Nineveh into a place 'whose size and splendour would astonish the civilized world, a city surrounded at the same time by countryside that was perpetually lush and green'.[426] The astonishing size, splendour and the countryside round about the city catch our attention. According to Jonah 3.3, Nineveh was 'an exceedingly large city, a three days' walk across'. In Sennacherib own words,

> I enlarged the site of Nineveh, my capital city. I broadened its
> squares and brought light into the alleys and streets, making (them) as bright as day.[427]

> Nineveh, the site of whose circumference had been 9,300 cubits since former times
> (and) for which no earlier ruler had had an inner or outer wall built —
> I added 12,515 (cubits) in the plain around the city to (its) previous
> measurement and (thus) established its dimensions as 21,815 large cubits.[428]

Sennacherib constructed the palace with a system of canals and stone aqueducts which brought water forty or fifty miles from the Zagros mountains to the parks, orchards and allotments of Nineveh. He says of the limestone reliefs and his colossi, 'I made them objects of astonishment'; 'I made them a wonder to behold'.[429]

> I made those palatial halls beautiful. To be an object of wonder for all of the people,
> I raised the superstructure of the entire palace. I called it 'The Palace Without a
> Rival'.[430]

According to Winter, the phrase, 'to [or for] the astonishment of all peoples' (an object of wonder for all of the people), is an exact translation of a Sumerian formula of reference to impressive buildings, largely applied to temples in the earlier periods. In Neo-Assyrian usage, the phrase is used to describe both temples and palaces, but it is especially characteristic of texts referring to new palace constructions.[431] Winter suggests that 'it would be interesting to survey extant attestations to see whether it is possible to determine a time when "astonishment" was accorded to palaces as well as

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[426] Julian Reade, 'Studies in Assyrian Geography Part I: Sennacherib and the Waters of Nineveh', *Revue d'Assyriologie et d'archéologie orientale,* 72.1 (1978), p. 50.
[427] *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 004.
[428] *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 008.
[429] *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 001, 015; Daniel David Luckenbill, *Ancient Records of Assyria and Babylonia* (New York: Greenwood Press, 1968), pp. 367, 389, 394. See Winter, '"Seat of Kingship" – "a Wonder to Behold"', p. 37.
[430] *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 017.
[431] Winter, '"Seat of Kingship" – "a Wonder to Behold"', p. 37.

temples'.[432] For my research, the awe-inspiring landscape is significant for the reoccurrences of 'behold' in Ezekiel's vision report. The pattern of SPACE TO BEHOLD (see 3.4.1 The Landscape of Awe) seems to be especially important for Sennacherib, for among the 36 incidences of 'an object of wonder for all of the people' in the *Royal Inscriptions of the Neo-Assyrian Period*, 26 incidences are from King Sennacherib.[433] Reflecting Mesopotamian's view of the landscape, Ezekiel 40-48 might be like new palace constructions full of wonders to behold. The way Ezekiel refers to the layout and the plan (תָּכְנִית, *toknît*) of the temple in 43.10, as well as how the same word is used to refer to the king of Tyre in 28.12, is very similar to the Assyrian kings' mindset, which considers the palace as a physical manifestation of the king. The palace reflects the ruler's power and ability to build, to command resources, induce astonishment, and create a fitting seat of government.[434]

Ezekiel began to prophesy when the fame of Sennacherib's palace garden was widespread.[435] Sennacherib's preference of the SPACE TO BEHOLD and his restorative development of the landscape might have shed light on Ezekiel's landscape vision. According to Holloway, Sennacherib transported live trees from conquered nations to transform 'the dry soil into an Edenic garden through stupendous irrigation projects'.[436] This statement reminds us of Ezekiel 31.9, where all the trees of Eden that were in the garden envied him [Assyria]; as well as Ezekiel 36.35, the land that was desolate has become like the garden of Eden. Cook states that Sennacherib had created forests around Nineveh during his expansion of the city.[437] A city planned with 'countryside that was perpetually lush and green'[438] is very similar to Ezekiel's plan (cf. section 4.3.2.1).

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[432] 'and whether this correlates with any significant development in the Mesopotamian state and in the institution of kingship'. See Winter, '"Seat of Kingship" – "a Wonder to Behold"', p. 38.
[433] Tiglath-pileser III [1], Sennacherib [26], Esarhaddon [9]. See *Royal Inscriptions of the Neo-Assyrian Period*.
[434] Ibid., p. 38.
[435] Dalley, *The Mystery of the Hanging Garden of Babylon*, p. 158.
[436] Steven W. Holloway, *Aššur is King! Aššur is King!: Religion in the Exercise of Power in the Neo-Assyrian Empire* (Leiden: Brill, 2001), p. 355.
[437] Gregory Cook, 'Nahum's Shaking Cypresses', *Bulletin for Biblical Research,* 26.1 (2016), pp. 1-6.
[438] Julian Reade, 'Studies in Assyrian Geography Part I: Sennacherib and the Waters of Nineveh',

Unlike some earlier kings who collected caged, exotic beasts, Sennacherib had a landscape project in Nineveh that seemed to be created with multiple ecological functions.[439] In Ezekiel 40-48, a reed is used as a measuring tool. Usage of the reed might indicate approachable reeds as convenient measuring tools, or the nearby habitat of the reeds, the wetlands. Following the water trickling from underneath the temple, a riparian ecosystem along its wetland is described in Ezekiel 47.9-12.

> [9] Wherever the river goes, every living creature that swarms will live, and there will be very many fish, once these waters reach there. It will become fresh; and everything will live where the river goes. [10] People will stand fishing beside the sea from En-gedi to En-eglaim; it will be a place for the spreading of nets; its fish will be of a great many kinds, like the fish of the Great Sea. [11] But its swamps and marshes will not become fresh; they are to be left for salt. [12] On the banks, on both sides of the river, there will grow all kinds of trees for food. Their leaves will not wither nor their fruit fail, but they will bear fresh fruit every month, because the water for them flows from the sanctuary. Their fruit will be for food, and their leaves for healing. (Ezekiel 47.9-12, NRSV)

In the landscape of Ezekiel 47 a swamp is reserved for managing water salinity, as well as creating a habitat for the wildlife. Plantation seems to be ecologically sound in its richness, diversity, and ability to provide food. Likewise, Sennacherib's own words may provide information of how the man-made palace garden is created by his hand and flourishes by the command of the gods:

> By divine will, vines, all kinds of fruit trees, olive trees, and aromatic trees flourished greatly in (those) gardens. Cypress trees, *musukkannu*-trees, (and) all kinds of trees grew tall and sent out shoots. I created a marsh to moderate the flow of water for (those) gardens and had a canebrake planted (in it). I let loose in it herons, wild boars (lit. 'pigs of the reeds'), (and) *roe deer*. The marshes thrived greatly. Birds of the heavens, heron(s) whose home(s) are far away, made nest(s) and wild boars (and) *roe deer* gave birth in abundance. I cut down *musukkannu*-trees (and) cypress trees grown in the orchards (and) marsh reeds from the swamps and I used (them) in the work required (to build) my lordly [palatial halls].[440]

From his words we know how the natural resources are organized. Water is managed and transported by hydrological construction. The multi-functional artificial swamp is made for preserving fauna and flora. The wild animals are released into this conservation park that provides wildlife's need for shelter, food and breeding. Plant

Revue d'Assyriologie et d'archéologie orientale, 72.1 (1978), p. 50.
[439] D. J. Wiseman, 'Mesopotamian gardens', *Anatolian Studies,* 33 (1983), pp. 137–44.
[440] *Royal Inscriptions of the Neo-Assyrian Period,* Sennacherib 008; italic type original.

and animal ecology are observed and recorded in a vivid way. Construction materials are also prepared in the park and in the swamp.

Despite the similarities, in my view, the aquatic landscape Ezekiel 47 describes differs from the Assyrian landscape and is profound for several reasons. First, the source of the water: the water flow comes from the sanctuary, so that the water resource is *within* the palace and well protected. Massive construction of canals and aqueducts is not necessary. Ezekiel's pattern, WATER IN THE CITY/ FROM UNDERNEATH, needs to be further investigated. Secondly, the Assyrian landscapes tend to be proud of their ability to exhibit and nurture exotic, collected plants and animal species. In Ezekiel's vision, it is a life support system, a livelihood that is being described. HEALING RESOURCES/FOOD SUPPLY THROUGHOUT THE REGION, and SWAMPS AND MARSHES FOR SALT are patterns unique to Ezekiel. Instead of building up private palace gardens that have high energy demands, expensive and seemingly quite artificial, Ezekiel's plan depicts a more natural and habitable ecosystem in which the life-giving power is shared by all.

Scholars of the ancient Near East look for archaeological evidence of landscaping associated with palaces and find that 'the line from Assyrian to Babylonian to Achaemenid to Islamic palace gardens and orchards can be affirmed'.[441] Winter notes: 'Terms utilized in describing these early gardens and orchards all denote pleasure and joy'. 'Wealth and power are associated with management of the landscape for purposes of delectation, not just sustenance'.[442] Winter's view is instructive for my studies for it denotes that the Mesopotamian palace gardens, be they Assyrian, Babylonian, Persian, or Islamic are similar by nature. We have already found the ENCIRCLING/ROUND ABOUT STRUCTURES (for instance, the rooms around the central court) or SQUARED SPACES patterns in the Uruk Period, the early emergence of urban structures in Mesopotamia. And it would be a matter of course that we can find similar patterns in other Mesopotamian cultures.

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[441] Winter, '"Seat of Kingship" – "a Wonder to Behold"', p. 34.
[442] Ibid.

Common patterns in Mesopotamian palace gardens also share these patterns with Ezekiel 40-48: HIGH PLACES, TREE PLACES, FRUIT TREES, ACCESSIBLE GREEN, POOLS AND STREAMS and ANIMALS.

Therefore, we can name the 'Mesopotamian Palace Gardens' collectively as a historical parallel to Ezekiel 40-48. However, the Mesopotamian landscape that is famed for its wealth, power and pleasure is, in my view, different from the temperament of the landscape in Ezekiel 40-48, which highlights a nationwide livelihood and is sustenance oriented. Mesopotamian, and particularly Assyrian palace landscape design or gardens, with their sophisticated hydraulic engineering, may have offered an inspiration for some aspects of Ezekiel, but were certainly not a direct pattern to be copied for his vision.

Now the first fruit of the comparative studies guides us to look for other historical parallels. We shall move away from the palace gardens and look at the landscape of the cities.
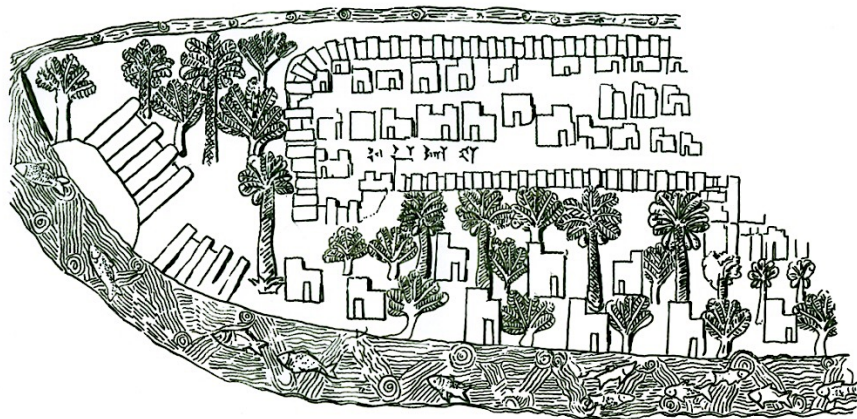

Fig. 4.8. A riverside cityscape that is redrawn based on an Assyrian relief from Nineveh showing the Elamite city of Madaktu surrounded by palm groves on a river (my drawing).

Fig 4.8 shows a riverside cityscape that is redrawn based on an Assyrian relief from Nineveh showing the Elamite city of Madaktu surrounded by palm groves on a

river.[443] According to Maureen Carroll, Mesopotamian settlements and houses were often surrounded by 'a green belt of groves and orchards, where a nearby river made cultivation possible'.[444] Instead of relying on artificial aqueducts, these cities depend on the natural water sources. The land seems to be relatively flat except for a city-like structure, perhaps a citadel that is situated on a hill.

In the scale of a city such as Madaktu, walls become significant in the landscape. The citadel is built on HIGH PLACES (62). Flood is one of the problems. When the Tigris and Eupharates 'burst their banks' city walls serve to divert the floodwater.[445] Gallery suggests that the settlements located along the rivers and irrigation canals were in constant danger of flooding during sudden increases of water flow. Earthen ramparts were erected to protect the settlements.[446] The walls of the city form a raised mound above the flood plain.[447]

From the Assyrian landscapes, we have seen that some patterns do occur again and again. Patterns might be created to cope with the constraints of resources, such as the sun and the water. The patterns include ROOF LAYOUT, FRUIT TREES, TERRACED SLOPE, ANIMALS, ACCESS TO WATER, SUNNY PLACE, OUTDOOR ROOM, POOLS AND STREAMS, TREE PLACES and ACCESSIBLE GREEN. Dalley states that in the natural and uncultivated environment in present central Iraq, heat and the glare of the sun is the major problem. Trees for shelter are essential. By contrast, in southern Iraq the problem seems to be mitigated by the flourishing trees alongside the water-courses.[448] In any man-made environment, therefore, mitigation of the heat of the sun and efficient use of water are significant issues. Trees and vegetation are most useful as a mitigation strategy when planted in strategic locations around the

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[443] Maureen Carroll, *Earthly paradises*, p. 11. Madaktu is a city situated on the middle course of River Kerkha conquered by Assyria.

[444] Ibid., p. 10.

[445] Ibid., p. 2.

[446] J. A. Gallery, 'Town planning and community structure' in *The Legacy of Sumer: Invited Lectures on the Middle East at the University of Texas at Austin*, ed. by Denise Schmandt-Besserat (Malibu, Ca.: Undena Publications, 1976), pp. 69-77.

[447] This would not be the case for a city that is built upon a hill, and surely a flood is more unlikely to happen in the hilly areas that are usually in the upper streams of the watershed; See Carroll, *Earthly paradises*, p. 2.

[448] Dalley, 'Ancient Mesopotamian Gardens', pp. 3-4.

buildings, gardens, and along the sides of roads or water-courses. Root-pits of the trees planted inside and outside of the courtyard of the temple built by Sennacherib were discovered during excavation. The trees and shrubs were planted all around the courtyard in regular rows.[449] As previously mentioned, Sennacherib had created forests around Nineveh during his expansion of the city.[450] We may say that Sennacherib used TREE PLACES and ENCIRCLING/ROUND ABOUT STRUCTURES to form his pattern language of city planning. This might well represent the patterns of Mesopotamian settlements and houses that were often surrounded by 'a green belt of groves and orchards, where a nearby river made cultivation possible'.[451]

Unfortunately, what is considered as the essential component of human existence is also the target for destruction during war (Fig 4.9).[452] Destruction of the trees and agriculture is a frequent tactic of siege warfare in the ancient Near East and Egypt.[453]
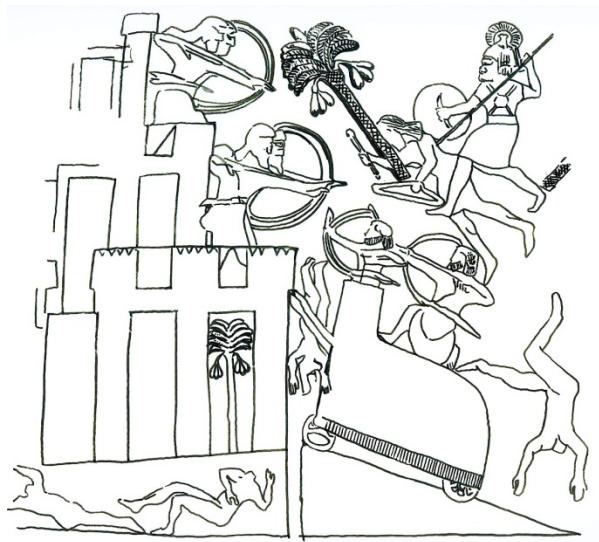

Fig. 4.9. A drawing based on an Assyrian relief from Nimrud showing a siege scene where the trees around a city are felled by an attacking army.

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[449] Ibid., p. 6.
[450] Cook, 'Nahum's Shaking Cypresses', pp. 1-6.
[451] Dalley, 'Ancient Mesopotamian Gardens', p. 10.
[452] Maureen Carroll, *Earthly Paradises*, p. 124; cf. Deut. 20.19-20.
[453] Ibid, 124. Also see Michael G. Hasel, 'Assyrian Military Practices and Deuteronomy's Laws of Warfare', In *Writing and Reading War*, ed. by Brad E. Kelle and Frank Ritchel Ames (Atlanta: Society of Biblical Literature, 2008), pp. 67-81.

The purpose of such 'ecocidal action'[454] is debated. The trees can be used to build siege equipment, to feed the army, or to punish a rebellious city.[455] Carroll understands this action symbolically and states that gardens are 'frequent overt symbols of power and status' and, therefore, would be deliberately destroyed by attacking enemies.[456]

Some patterns are significant for land development and urban expansion, such as ACCESS TO WATER, POOLS AND STREAMS, TREE PLACES, ACCESSIBLE GREEN and FRUIT TREES. New development and urbanization has been an issue since the early stages of a complex social hierarchy and large scale urbanization in the Uruk Period Mesopotamia. Over time the landscape is planned for greater and better capacity for development. Sargon II (721-705 BCE) built an entire new capital city upon entirely 'virgin ground' of his own design at the foot of Mount Musri above Nineveh.[457] In order to build the city, a holistic plan was sought. According to his words: 'The king, with open mind, sharp of eye, in everything equal of the Master (Adapa), who became great in wisdom and intelligence, and grew in understanding [...] day and night I planned to build that city'.[458] Sargon II's personal statement makes it clear that city and landscape planning is laborious work, which takes wisdom, intelligence, understanding of the land, and day and night works of brainstorming. In ancient Assyria, given the geographical limitations, enormous waterworks were undertaken in order to manage water resources. Assurnasirpal II (883-859 BCE) brought water from the foothills of mountain streams to irrigate newly planted orchards. Sennacherib (705-681 BCE) brought clear water from a mountain river down to his gardens and parks.[459]

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[454] Brad E. Kelle, 'Dealing with the Trauma of Defeat: The Rhetoric of the Devastation and Rejuvenation of Nature in Ezekiel', *Journal of Biblical Literature,* 128.3 (2009), p. 486.
[455] See Jacob L. Wright, 'Warfare and Wanton Destruction: A Reexamination of Deuteronomy 20:19-20 in Relation to Ancient Siegecraft', *Journal of Biblical Literature,* 127.3 (2008), pp. 423-58; Hasel, 'Military Practice', pp. 51-94, 125-28.
[456] Maureen Carroll, *Earthly Paradises*, p. 124.
[457] Marc Van De Mieroop, *The Ancient Mesopotamian City* (Oxford: Clarendon Press, 1997), p. 54.
[458] D. G. Lyon, *Keilschrifttexte Sargon's Königs von Assyrien (722-705 v. Chr.)* (Leipzig: Hinrichs, 1883), p. 34.
[459] Dalley, pp. 4-5.

Some patterns are about plants, animals, their ecological niche or habitat and the relationship with humans. These include ANIMALS,[460] ACCESS TO WATER, POOLS AND STREAMS, TREE PLACES, ACCESSIBLE GREEN and FRUIT TREES. The fish and the birds in the relief could represent part of human consumption, for in the ancient Near East, fish consumption was common in the places close to a coast, river, lake, or canal.[461] Maintaining and creating habitats for these animals was significant. Other issues relating to animals include the problems of habitat for the exotic and native wild animals. Exotic animals were offered to the Mesopotamian kings as gifts for collection and were presumably kept at some distance from the palace.[462] Problems with the 'wild animals' occurred when a growing human population (such as in the ancient cities) overlapped with established wildlife territories. Dalley states that the wild boars 'rootled everywhere'. City walls were designed not simply against human enemies but also to keep out 'greedy snouts'.[463] Turner states that lions, tigers, bears and cheetahs were native but became scarce as agriculture intensified.[464]

Assyrian landscape design or gardens, as part of the Mesopotamian landscape, exhibit the archetypal nature of the ancient Mesopotamian landscape: SQUARED SPACES, ENCIRCLING/ROUND ABOUT STRUCTURES, ANIMALS, ACCESS TO WATER, POOLS AND STREAMS, TREE PLACES, ACCESSIBLE GREEN, FRUIT TREES, ROOF LAYOUT, HIGH PLACES, TERRACED SLOPE, SUNNY PLACE, OUTDOOR ROOM. Assyrian landscape may have offered an inspiration for some aspects of Ezekiel, such as SPACE TO BEHOLD, but were certainly not a direct pattern to be copied for the vision in Ezekiel 40-48.

After discussion of the Assyrian landscape, we should turn to the Babylonian landscape. Ezekiel 40.1 projects the visions in the five and twentieth year of the

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[460] Just like the fruit trees, Alexander includes ANIMALS in his pattern language, for animals, domestic and wild, are part of nature. See Alexander, *Pattern Language*, pp. 371-75.
[461] *A Companion to the Archaeology of the Ancient Near East,* ed. by Daniel T. Potts (Chichester, West Sussex; Malden, MA: Wiley-Blackwell, 2012), p. 221.
[462] Dalley, 'Ancient Mesopotamian Gardens', p. 3.
[463] Ibid., p. 2.
[464] Tom Turner, *Garden History: Philosophy and Design 2000 BC-2000 AD* (London and New York: Spon Press, 2005), p. 83.

Babylonian Captivity. It is believed that Ezekiel and his audience must have been familiar with Babylon's fame, had first-hand knowledge of the city as well as its descriptions, and have imagined Babylonian constructions along the lines of the temples with which it was most familiar.[465] Sulzbach states that Ezekiel 47-48 seems to be a copy of the Mesopotamian capital cities on the water.[466] In this sense, geographical features that are unique to Babylon might have been redesigned and transported to a plan depicting a future Jerusalem. The great width and height of the walls of Babylon are noticed in the time of Ezekiel and Jeremiah, the two major prophets of the years before and after Judah's destruction and at the beginning of the Babylonian exile. Jeremiah 51.58 mentions 'the broad wall' and 'high gates' of Babylon. In Ezekiel 40.5 and 42.20, the wall is measured as one reed wide. According to Herodotus' Description of Babylon and the Babylonians, 'the city stands on a broad plain, and is an exact square'. 'The streets all run in straight lines.' After the fall of Nineveh, there is no other city that approaches the magnificence of Babylon.[467]

Jacob Milgrom acknowledges similarities in Ezekiel 40-48 to the Mesopotamian Ziggurat.[468] Kim states that Ezekiel's perfect square is the figure of the temple of Esagila (principal temple of Marduk) and ziggurat of Etemenanki (Tower of Babylon). Both are surrounded by walls (see Fig. 4.10).[469] Odell points out that the square proportion is a 'uniquely Babylonian architectural convention'.[470] However, is this so? We have seen that there are plenty of earlier examples that we have described which are rectilinear and seem to be square — The 'Palace E' in the Eanna precinct, for example, and the city models in Figure 4.5. It is true that some of the

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[465] Tova Ganzel and Shalom E. Holtz, 'Ezekiel's Temple in Babylonian Context', *Vetus Testamentum,* 64 (2014), p. 213.

[466] Carla Sulzbach, 'From Urban Nightmares to Dream Cities', p. 240.

[467] Herodotus and George Rawlinson, *The History of Herodotus*, ed. and trans. by George Rawlinson, bk. 1, ch. 178-181 (Tandy-Thomas, 1909), pp. 174-77.

[468] J. Milgrom, 'The Unique Features of Ezekiel's Sanctuary', in *Mishnah Torah: Studies in Deuteronomy and Its Cultural Environment in Honor of Jeffrey H. Tigay*, ed. by N. S. Fox, D. A. Glatt-Gilad, and M. J. Williams, 9th edn (Winona Lake, Ind., 2009), pp. 300-01. In *Ezekiel's Hope: A Commentary on Ezekiel 38-48*, however, Milgrom and Block argue for parallels between Ezekiel's temple with the Greek Temple of Apollo at Delphi.

[469] Soo J. Kim, 'Yhwh Shammah: The City as Gateway to the Presence of Yhwh', *Journal for the Study of the Old Testament,* 39.2 (2014), pp. 187-207.

[470] Odell, *Ezekiel*, p. 490.

major spatial patterns that characterise Babylonian temple/city landscape are also fundamental to Ezekiel 40-48, for instance the SQUARED SPACES in Fig. 4.10, which shows the layout of the temple of Marduk in the centre of Babylon. According to Marc van de Mieroop, the Marduk temple, called Esagila 'House whose Top is High' was essentially a square building with a courtyard surrounded by rooms, and two large courts on its eastern side.[471] From the perspective of my thesis, these patterns thought to be unique to the Babylonian exhibit the archetypal nature of the Mesopotamian landscape patterns.
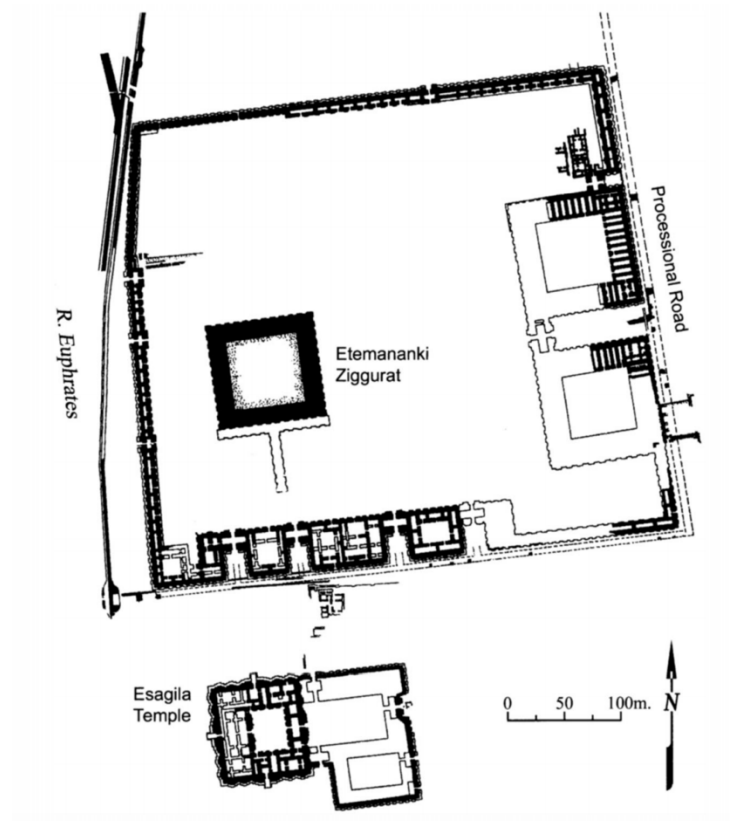

Fig. 4.10. Schematic ground plan of the Ziggurat and the Temple of Marduk Esagila in Babylon. Source: Marc van de Mieroop 2003: Fig. 10

In 'Ezekiel's Temple in Babylonian Context', Tova Ganzel and Shalom E. Holtz show 'similar organization of space and personnel' between Ezekiel's visionary

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[471] Marc van de Mieroop, 'Reading Babylon', *American Journal of Archaeology,* 107.2 (2003), p. 269-70.

temple and Neo-Babylonian temples because it is in Neo-Babylonian Mesopotamia that Ezekiel is said to have experienced his visions and where his audience is said to have lived.[472]

Ganzel and Holtz state that similarities stem from a similar purpose: 'maintaining strict standards of sanctity'.[473] Based on comparative studies, they identify several characteristics from Ezekiel 40-48 that fit in a Babylonian cultural context:

1. The religious term *kəbôd* YHWH (כְּבוֹד יְהוָה)[474] owes more to later Babylonian *melammu* than to other biblical usages.[475] This statement is based on Aster's book *The Unbeatable Light*, from which *kəbôd* YHWH is considered as parallels of the Akkadian term *melammu*, a term that was attributed to buildings in the neo-Babylonian royal inscriptions. Aster defines *melammu* as 'the covering, outer layer, or outward appearance of a person, being, or object, or rays emanating from a person or being, which demonstrates the irresistible or supreme power of that person, being, or object'.[476]

2. Topographical texts that date to the Neo-Babylonian period focus on measurement and emphasize certain architectural features that overlap with the record of Ezekiel's vision.[477]

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[472] Tova Ganzel and Shalom E. Holtz, 'Babylonian Context', p. 213.

[473] Ibid., p. 211.

[474] NRSV translates *kəbôd* YHWH as 'the glory of the Lord'. According to Shawn Z. Aster, *kābôd* derives from the basic meaning 'to be weighty, to be important'. *kəbôd* YHWH in pre-exilic Biblical texts refers to the perceptible Presence of God, and/or God's importance and power as demonstrated through His deeds, such as signs, wonders, miracles and creation. In the book of Ezekiel, however, *kəbôd* YHWH is consistently a radiant phenomenon. The *kābôd* shines, and is described as being like the *kābôd* seen in chapters 8-11 ('in coming to destroy the city') and like the vision in chapter 1 (at the Chebar Canal). See Shawn Z. Aster, *The Phenomenon of Divine and Human Radiance in the Hebrew Bible and in Northwest Semitic and Mesopotamian Literature: A Philological and Comparative Study* (doctoral thesis, University of Pennsylvania, 2006), pp. 346-427.

[475] Tova Ganzel and Shalom E. Holtz, 'Babylonian Context', p. 214.

[476] Shawn Z. Aster, *The Unbeatable Light: Melammu and Its Biblical Parallels* (Münster: Ugarit-Verlag, 2012), p. 352.

[477] Ganzel and Holtz, p. 216.

3. Some Babylonian texts were composed in preparation for reconstructing temples and share the same anticipation for temple reconstruction with 40-48 if we perceive it as a 'program of restoration'.[478]

4. Ezekiel's description of the visionary temple focuses heavily on the surrounding areas: walls, gates and courtyards. The massive outer wall distinguishes it from other temples described in the Hebrew Bible, namely the tabernacle and Solomon's temple. The outer wall of Ezekiel's temple is similar to the walls that surround many Babylonian temple complexes.[479] One Babylonian topographical text begins with the measurements of 'thicknesses of wall'. The temple is described as a series of walls that demarcates the space into eight spaces as one passes through from one end to the other. Accordingly, measurement of the wall is the proper beginning of a topographical text of a Babylonian temple.[480]

5. Ezekiel's descriptions of the gates are similar to archaeological reconstructions of Neo-Babylonian monumental gates that mark the entrances.[481] Rather than just being something 'roughly in between', the gates themselves are significant loci.[482]

6. The physical approach from the portico to the holy of holies is similar to the path of the Babylonian Ezida temple at Borsippa. It is via the 'graduated approach' that the priest has to gain access to the inner sancta through a main gate, a number of rooms, a private area, and finally through the gate to the innermost space.[483] The three-part architectural plan of Ezekiel's temple and Solomon's temple exhibits a common Near Eastern architectural vocabulary famous in Northern Syrian temples.[484]

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[478] Ibid., 216; See George, *Topographical Texts*, 215, 220-21. Greenberg identifies Ezekiel 40-48 as a program of restoration. See Greenberg, 'Design', pp. 181-208.
[479] Ganzel and Holtz point out the brick abutted reinforcement known as *kisu* that is mentioned by Babylonian kings including Nebuchadnezzar II, Neriglissar and Nabonidus. However, it is not clear if this structure is mentioned in Ezekiel 40-48.
[480] Ganzel and Holtz, p. 221.
[481] Ibid.
[482] We can also see this characteristic in Persian landscape, the Persepolis.
[483] Ganzel and Holtz, pp. 219, 222; and Waerzeggers, *Ezida*, p. 13.
[484] Ibid., p. 219. Also Hurowitz, 'Tenth Century', and 'Solomon's Temple in Context', *Biblical Archaeological Review,* 37.2 (March/April 2011), pp. 46-58.

From Ganzel and Holtz's studies of the Babylonian temples we observe the commonalities that emerge with similar patterns that exist in Ezekiel's landscape. Neo-Babylonian topographical texts that focus on 'measurement' and the text that begins with the measurements of 'thicknesses of wall' are strikingly similar to the emphases of Ezekiel 40-48. These suggest that Babylonian temples and their measurement might be considered as historical parallels to Ezekiel 40-48. However, I would argue that many landscape features thought to be unique to Babylon exhibit and amplify the glory of the deity in a universal way. *kəbôd* YHWH and Babylonian *melammu* can be manifested with the creation of the archetypal pattern, the SUNNY PLACE,[485] which is fundamentally essential for a space to give life and to be useful. Aster argues in the same way: he states that the universal characteristic of powerful sources of light, such as the sun and the moon, cannot serve as the basis for claiming that descriptions of *kəbôd* YHWH derive from descriptions of *melammu*.[486] Paralleling *kəbôd* YHWH to *melammu* appears to be correct, 'but only in regard to the visual element of *kəbôd* YHWH in Ezekiel. In contrast, the function of the *kābôd* in Ezekiel does not parallel the function of the *melammu*'. 'In Ezekiel, the *kābôd* is always that of YHWH, and never said to be owned by the city or temple.' 'In Mesopotamian texts, the *melammu* of a city or temple is a sign of its beauty or power, *kəbôd* YHWH in Ezekiel indicates the Presence of YHWH in that city or temple.'[487]

Surrounding walls, gates and courtyards that are the focus of Babylonian temples share similar characteristics with the 'Assyrian style' consisting of a square and rooms round about. Together, these features can be termed as the archetypal Mesopotamian patterns: SQUARED SPACES and ENCIRCLING/ROUND ABOUT STRUCTURES, which contain important patterns including the THICK WALLS, MAIN GATEWAYS and COMMON LAND. The 'graduated approach' identified by Ganzel and Holtz can be understood as the patterns ENTRANCE TRANSITION, PATH

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[485] According to Alexander, The SUNNY PLACE is a pattern that should be considered with SOUTH FACING OUTDOORS. See Alexander, *Pattern Language*, pp. 758-60.
[486] Aster, *The Phenomenon of Divine and Human Radiance,* p. 393.
[487] Aster, *The Phenomenon of Divine and Human Radiance,* p. 426.

AND GOALS and INTIMACY GRADIENT. Ezekiel, as well as the Babylonian temples, are concerned with, and preserve, sanctity by erecting barriers between humans and deities.[488] These features define and delimit increasing zones of sanctity by constructing series of gates, various courtyards and passages between different levels.[489]

In light of the historical context, the constant need for the reconstruction of Mesopotamian temples is worthy of our attention. Ganzel and Holtz mention that some Babylonian texts were composed in preparation for temple reconstruction. Michael B. Hundley points out that Mesopotamian temples were often in need of renovation because the predominant building material, mud brick, was a more perishable substance than the stone of ancient Egypt.[490] The rebuilding rituals are more commonly preserved than the initial building process.[491] Rochberg points out that by the late third millennium BCE, it is customary to draw preparatory plans of buildings on clay. Fig. 4.11 shows the detail of

Fig. 4.11. Detail of the statue of Gudea, king of the Sumerian city of Lagash. The statue is known as 'The architect with a plan', a restoration plan of a temple. Source: Rochberg 2012: Fig. 1.6

the statue of Gudea of the Sumerian city of Lagash with the restoration plan of the Ningirsu temple. The statue presents not only the plan, but also the text describing the construction of the E-ninnu with its architectural details. Garfinkel notes the six doorways, all of which are recessed.[492] The recessed doorways demonstrate BUILDING EDGE (160), MAIN ENTRANCE (110), ENTRANCE TRANSITION (112), INTIMACY GRADIENT (127). These patterns in the restoration plan of the temple remind of us of the Assyrian city model, the city model in Ezekiel 4.1-3, and the
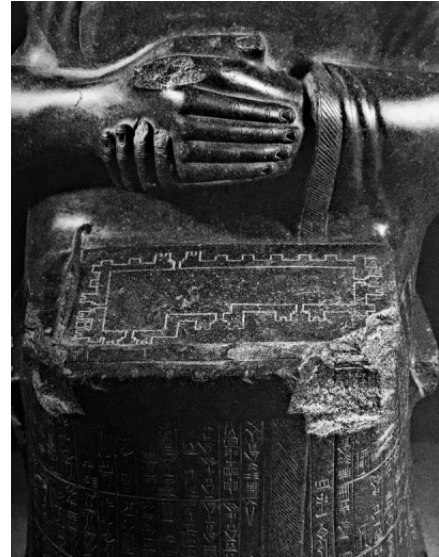
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[488] Ganzel and Holtz, 'Ezekiel's Temple in Babylonian Context', p. 225.
[489] Ibid., p. 222.
[490] Hundley, *Gods in Dwellings*, pp. 49, 78-79.
[491] Ibid., p. 78.
[492] Yosef Garfinkel and Madeleine Mumcuoglu, *Solomon's Temple and Palace* (Jerusalem: Bible Lands Museum Jerusalem and Biblical Archaeology Society, 2016), p. 48.

restoration plan of the city and temple in Ezekiel 40-48. The ancient Babylonian temple plans should be considered as historical parallels to Ezekiel 40-48, but they cannot be precisely dated in relation to Ezekiel because of the problems of dating the latter. It is better to consider the Babylonian influence as part of the context of Mesopotamian landscape, which reflects both inspiration and a contemporary parallel.

Fig. 4.12. Al-Yahudu Tablet. Source: עמית אבידן, 2017: Wikimedia Commons

In 2014, a massive amount of new evidence concerning the life of Judeans in Babylonian exile was published by Laurie Pearce and Cornelia Wunsch. The discovery shed light for the first time on the daily life of Jews exiled to Babylon. The Judean communities in Babylonia, 'attested in both Neo Babylonian and Achaemenid cuneiform records, did not live in a splendid isolation but, while maintaining their Judean identity, were integrated in their Babylonian social and economical, and probably also cultural environment'.[493] The collection consisted of 103 Babylonian tablets written in a place called Al Yahudu ('Judahtown') (Fig. 4.12) and nearby settlements close to Nippur.[494] It also contains documents from the cities of Babylon, Nippur, Borsippa, and even a document signed on the banks of the Kebar or Chebar River (Canal), the setting of several important scenes of the book of Ezekiel. It is referenced eight times in total (Ezekiel 1.1, 3; 3.15, 23; 10.15, 20, 22; 43.3). It is agreed that the location of the Kebar River (Canal) is near Nippur. The *ka-ba-ru* waterway (Akkadian) is mentioned among the fifth-century BCE archives from Nippur.[495] This adjacency suggests it is important to consider the

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[493] Martti Nissinen, '(How) Does the Book of Ezekiel Reveal Its Babylonian Context?' *Die Welt des Orients,* 45.1 (2015), pp. 85-98.

[494] Laurie E. Pearce, Cornelia Wunsch, and David Sofer, *Documents of Judean Exiles and West Semites in Babylonia in the Collection of David Sofer*, Cornell University Studies in Assyriology and Sumerology, 28 (Bethesda, Maryland: CDL Press, 2014)

[495] Henry O. Thompson, *'Chebar', in Anchor Bible Dictionary*, vol. 1, ed. by David Noel Freedman (New York; London: Doubleday, 1992), p. 893.

influence of Nippur. Nippur, according to Rochberg, is the most important religious centre of all Sumerian city-states in the third millennium.[496] McGuire Gibson states that 'it was this holy character which allowed Nippur to survive numerous wars and the fall of dynasties that brought destruction to other cities'.[497] Ideologically Nippur represents the very centre of the cosmos, the 'bond of heaven and underworld'.[498]

Fig. 4.13 is a Nippur city map drawn to scale. It is likely that the map was first drawn by the scribes, implying that the ancient Babylonian scribal training in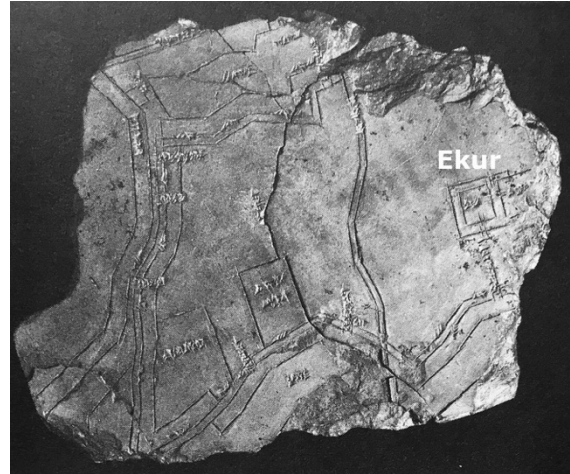cluded how to make plans of buildings and take measurements.[499] Fig. 4.14 is a regional map of Nippur, which shows at least seven

Fig. 4.13. Nippur city map drawn to scale. Source: Rochberg, 2012: Fig. 1.11 (with my emphasis of 'Ekur')

squared cities and their relative positions with respect to the canal.[500] Both cuneiform maps made with clay might give us information about how Ezekiel could 'cut' a map into a brick (Ezekiel 4.1-3). This is crucial for our understanding of Ezekiel's writing, measuring, planning, and model making (Ezekiel 4.1-3; 40-48). In Fig. 4.10, the temple buildings are shown with double-lined squares.

Fig. 4.14. Regional map from Nippur. Source: Rochberg, 2012: Fig. 1.15

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[496] Francesca Rochberg, 'The Expression of Terrestrial and Celestial Order in Ancient Mesopotamia', in *Ancient Perspectives Maps and Their Place in Mesopotamia, Egypt, Greece, and Rome,* ed. by Richard J. A. and Talbert/Kenneth Nebenzahl Jr. Lectures in the History of Cartography (Chicago: The University of Chicago, 2012), pp. 9-46.
[497] McGuire Gibson, 'Nippur - Sacred City of Enlil', The Oriental Institute of the University of Chicago <https://oi.uchicago.edu/research/projects/nippur-sacred-city-enlil-0> [accessed 18 June 2018]
[498] Rochberg, 'The Expression of Terrestrial and Celestial Order in Ancient Mesopotamia', pp. 9-46.
[499] Ibid., p. 18.
[500] Ibid., pp. 30-31.

Ekur, the Sumerian term meaning 'mountain house', is home to the Sumerian main deity Enlil. A hymn to Ur-Ninurta mentions the prominence of a tree in the courtyard of the *Ekur*:

> Chosen cedar, ornament of the courtyard of E-kur! Ur-Ninurta, may the Land refresh itself in your shade. May you be the good shepherd of all lands. May they attend as if to Utu when you deliver a just verdict. As you take your seat upon the royal dais with its firm foundations, may you hold your head high, Ur-Ninurta. May the good crown be your glory. Inspiring fear and trembling, o lion of kingship, may you wear the royal robe![501]

This is reminiscent of the tree of life in the Garden of Eden, the image of the trees in Eden and the cedar in Ezekiel 31. 'Inspiring fear and trembling' is reminiscent of the awe-inspiring SPACE TO BEHOLD in Ezekiel 40-48. Andrew R. George suggests that 'Nippur was a city inhabited by gods not men, and this would suggest that it had existed from the very beginning'.[502] He discusses Nippur as the 'first city' (uru-sag, 'City-top/head') of Sumer. According to the myth of Enlil and Ninlil:

> There was a city, there was a city -- the one we live in. Nibru (Nippur) was the city, the one we live in. Dur-jicnimbar was the city, the one we live in. Id-sala is its holy river, Kar-jectina is its quay. Kar-asar is its quay where boats make fast. Pu-lal is its freshwater well. Id-nunbir-tum is its branching canal, and if one measures from there, its cultivated land is 50 *sar* each way. Enlil was one of its young men, and Ninlil was one its young women. Nun-bar-ce-gunu was one of its wise old women.[503]

In addition, the foundations of Enlil's temple are made of lapis lazuli.

> Enlil, when you marked out the holy settlements, you also built Nibru, your own city. You (?) ...... the Ki-ur, the mountain, your pure place. You founded it in the Dur-an-ki, in the middle of the four quarters of the earth. Its soil is the life of the Land, and the life of all the foreign countries. Its brickwork is red gold, its foundation is lapis lazuli. You made it glisten on high [...][504]

According to Hurowitz, lapis lazuli is a blue stone which has been identified with Hebrew 'sapphire', as well as the blue brick floor in Exodus 24.9-10.[505] This supports section 4.1.2, which discussed the pavement planning and design in the

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[501] 'A Hymn of Inana for Ur-Ninurta (Ur-Ninurta A): Translation', *The Electronic Text Corpus of Sumerian Literature* <http://etcsl.orinst.ox.ac.uk/section2/tr2561.htm> [Accessed 13 May 2018]

[502] George, Andrew Robert, *Babylonian Topographical Texts* (Leuven: Peeters, 1992), pp. 442-45.

[503] 'Enlil and Ninlil', *The Electronic Text Corpus of Sumerian Literature* <http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=t.1.2.1&charenc=j#> [Accessed 13 May 2018]

[504] 'Enlil in the E-Kur (Enlil A): Translation,' *The Electronic Text Corpus of Sumerian Literature* <http://etcsl.orinst.ox.ac.uk/section4/tr4051.htm> [Accessed 13 May 2018]

[505] Wayne Horowitz, *Mesopotamian Cosmic Geography* (Winona Lake, IN: Eisenbrauns, 2011), p. 9.

inner and outer court, that the pavement גִּזְרָה (*gizrâ*) in the inner court (Ezekiel 41.11-15; 42.1, 10, 13) might be sapphire-related. Here, with the help of Mesopotamian cosmic geography, we can further correlate the sapphire-related pavement in Ezekiel's planning with a certain blue brick or stone, lapis lazuli, the foundations of Enlil's temple in Nippur.

In a surprising discovery, Gibson and his team from the University of Chicago found that Gula's temple in Nippur might be the ancient medical centre. They state that the Mesopotamians made regular pilgrimage to Nippur, and some probably sought healing remedies at the temple. Babylonian physicians may have prescribed plants as medicine and, together with magicians who devised spells and priests who prayed for healing, formed the ancient trio of healing professions in the temple.[506] Nippur, as the ancient holy and medical city, along with the medicine of ancient Mesopotamia may serve as a historical parallel to Ezekiel 40-48, which highlights the healing water and medicinal plants in the landscape.

The description of Nippur and its temple reveals a conceptual unity combining the garden, temple, mountain, and city. This undivided divine entity consists of archetypal patterns including SACRED SITES (24), ACCESS TO WATER (25), HEALTH CENTER (47), HIGH PLACES (62), POOLS AND STREAMS (64), HOLY GROUND (66), COMMON LAND (67), STILL WATER (71), TREE PLACES (171), GOOD MATERIALS (207), SQUARED SPACES, ENCIRCLING/ROUND ABOUT STRUCTURES, SPACE TO BEHOLD. These patterns form a particular language that characterises the cities of God(s) — Nippur and Ezekiel 40-48.

This section reviews the Mesopotamian context of Ezekiel 40-48. The vast Mesopotamian floodplain demonstrates its capacity for rich and diverse design patterns that might have inspired the planning of Ezekiel. The patterns that shared by the Mesopotamian and Ezekiel 40-48 should be viewed as shared cultural heritage, not as evidences of borrowing. Among the Mesopotamian archetypal patterns, HEALTH CENTER (47), GOOD MATERIALS (207) and SPACE TO BEHOLD seem to

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[506] Bruce Bower, 'Iraq Temple May Be Ancient Medical Center', *Science News,* 137.26 (1990), p. 405. For the research project of Nippur, see McGuire Gibson, 'Nippur - Sacred City of Enlil', The Oriental Institute of the University of Chicago <https://oi.uchicago.edu/research/projects/nippur-sacred-city-enlil-0>

be particularly important for correlating Ezekiel 40-48 with Nippur as historical parallels. Being a city of gods, Nippur is conceptually very close to Ezekiel 40-48. Geographically, Nippur is a nearby holy-city-planning-model, which might have naturally influenced the Judean communities in Babylonia, and should be understood as a precedent, perhaps more significant than Babylon, that influencing the plan of Ezekiel 40-48.

Summary

- This section has investigated the Mesopotamian landscape from the earliest stage of large-scaled urbanisation of the Uruk Period. The administrative and religious complex reveals the archetypal landscape patterns similar to the patterns recognised in Ezekiel.

- I have reviewed the stone panels installed in the Mesopotamian palaces. The panels provide information of the landscape patterns. The models of the cities might evidence the usage of construction document by means of models and plans (discussed in Chapter 2 and 3).

- This section has explored the characteristics of the ancient Mesopotamia landscape planning based on the Royal Inscriptions of the Neo-Assyrian Period. The first person, character-revealing descriptions show the kings' attempts to create awe-inspiring space to behold, to turn the dry soils into irrigated gardens, to restore the desolate, and to plan for new city development and the landscape with trees and rivers. These also characterise Ezekiel 40-48.

- Part of the section examined the ancient Nippur, a significant sacred and medical city of gods. Nippur was adjacent to the exiled Judean communities. The temple Ekur was drawn as double-lined squares. The foundation of the temple was blue lapis lazuli. Nippur reveals a strong character of a sacred city encompassing the healing temples and rivers/canals in the landscape. It could be viewed as an important precedent of the planning of Ezekiel 40-48.

- We have examined the existing scholarship of the Mesopotamian landscape including the Babylonian temples and their relevance to Ezekiel 40-48. Despite the similarities, Ezekiel 40-48 shows a holistic view of planning for

wellbeing in a regional level. This makes the specific sites discussed in this section sources of inspiration, but not evidences of direct borrowing.

4.2.2 Apollo's Temple in Delphi
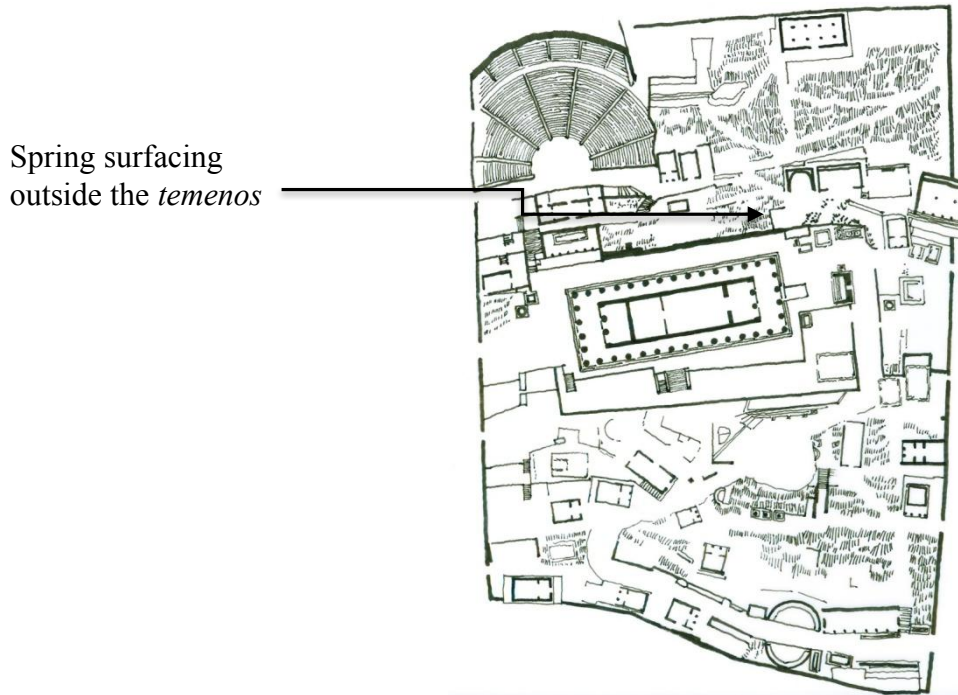

Spring surfacing outside the *temenos*

Fig. 4.15. The ground plan of the temple of Delphi. My drawing based on Milgrom: Fig. 4

The ancient temple of Delphi (Fig. 4.15) hosted the most famous oracles of antiquity that brought together geology, archaeology and myth. Its oracles supposedly prophesied under the effects of intoxicating gas exhaling from a chasm in the ground. The recently emerging discipline of 'geomythology' considers the Delphi Oracle a perfect example of geomyth due to the clear correspondences between mythical phenomena and local geological reality.[507] In Ezekiel 43.2, the sound of the glory of the God of Israel was like the sound of mighty waters; and the earth shone with his glory. The hydrological and geological manifestation of God in the landscape of

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[507] Luigi Piccardi, Cassandra Monti, Orlando Vaselli, Franco Tassi, Kalliopi Gaki-Papanastassiou, and Dimitris Papanastassiou, 'Scent of a Myth: Tectonics, Geochemistry and Geomythology at Delphi (Greece)', *Journal of the Geological Society,* 165.1 (2008), pp. 5-18.

Ezekiel reveals a similar sense of 'geomythology' which inspires us to relate the biblical theophany with the local geological reality. Likewise, it is probable that the planning of Ezekiel 40-48 was related to the internationally well-known temple of Apollo in Delphi. Milgrom and Block state that there is nothing known thus far among the sanctuaries of Israel and Ancient Near East that duplicates or even resembles the following features of the temple in Delphi, except for Ezekiel's sanctuary, with its: (1) sanctuary complex on the southern slope of a high mountain; (2) sanctuary building raised on an elevated platform; (3) design uncircumscribed by a wall; (4) sanctuary building containing no sacred object; (5) worship limited to a sacrificial altar in the inner priestly court; (6) subterranean spring surfacing outside the *temenos*; and (7) human intermediary who hears a message for the people from the voice of the deity emanating from the adytum.[508] I would argue that, first, since Ezekiel 40-48 is 'a structure like a city' (40.2), we should expand our understanding of Ezekiel 40-48 from focusing merely on a sanctuary to the wider concerns of a city. Second, we should question if the unique features identified here are really unique to Delphi and Ezekiel 40-48. Below are seven features found in the temple of Delphi and Ezekiel's sanctuary that may allude to evidence of borrowing but which further investigation shows otherwise.

(1) sanctuary complex on the southern slope of a high mountain:
From the perspective of Alexander's *A Pattern Language*, 'the southern slope of a high mountain' is an archetypal pattern SOUTH FACING OUTDOORS because 'people use open space if it is sunny, and do not use it if it isn't, in all but desert climates'. 'Its significance varies as latitude and climate change [...] at about 50° latitude, the pattern is more essential.'[509] Although both structures rested on the southern slope of a high mountain, archetypal patterns should not be evidence of borrowing.

(2) sanctuary building raised on an elevated platform:

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[508] Milgrom and Block, *Ezekiel's Hope*, p. 52.
[509] Alexander, *Pattern Language*, pp. 513-16.

I would suggest that the 'sanctuary building raised on an elevated platform' cannot be used to connect Ezekiel 40-48 to Delphi because this was also an archetypal pattern HIGH PLACES (62), and was prominent in Mesopotamian planning including the Assyrian, Babylonian and Persian landscape patterns.

(3) design uncircumscribed by a wall:

The inner court that is 'uncircumscribed by a wall' is not sufficient evidence to prove that Ezekiel 40-48 is like Delphi for, as Greenberg has argued, 'omissions cannot serve as a warrant for negative conclusions — unmentioned, therefore absent.'[510]

(4) sanctuary building containing no sacred object:

The absence of the sacred objects can be explained with the 'all sufficiency of God alone' theology (section 4.3; Fig. 4.29).[511] Further, the sacred objects in the Solomon's Temple were also functional objects, for instance, the bronze laver (Exod. 30.17), bronze 'sea' (I Kings 7.23-26), or ten basins (I Kings 7.38-39) were washing basins. The absence of the basins in Ezekiel's plan might indicate that they were replaced by a different design, for instance, the fresh flowing water in Ezekiel 47 might have been preferred over basins filled with stagnant water.

(5) worship limited to a sacrificial altar in the inner priestly court:

Milgrom abandons the Tabernacle's influence because the Tabernacle was centred at the entrance of the shrine, while both Delphi and Ezekiel's sanctuary were altar-centred.[512] This thesis argues that we should not view the Tabernacle as one single rectangle and compare it with the SQUARED SPACES in Ezekiel 40-48. Instead, the Tabernacle should be viewed as two squared spaces with two centres (the ark and the altar) and compared with the structured squares in Ezekiel 40-48. In this sense, both designs were based on

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[510] Greenberg, 'Design', p. 193.
[511] Paul Joyce, 'Temple and Worship in Ezekiel 40-48', in *Temple and Worship in Biblical Israel*, ed. by John Day (London, New York: T&T Clark, 2005), p. 151.
[512] Milgrom and Block, *Ezekiel's Hope*, pp. 48-49.

the same design concept. Section 4.3 (Fig. 4.28) will further discuss the differences and similarities between the two square systems. Worship in the Delphi was centred at an altar and the oracular room, which in my view, reveals the archetypal nature of the HOLY GROUND (66) where a series of nested precincts are formed progressively for the ever-deepening divine encounters (as in Fig. 3.1). This dual-core (altar + oracular room) pattern was shared with the Tabernacle (altar + ark) and Ezekiel (altar + altar/table) for the communication between humans and the divine. The pattern of the centres can be further explained with Alexander's theories on the patterns of the DEGREE OF PUBLICNESS (36) and INTIMACY GRADIENT (127), as well as the nature of order and the phenomenon of nature that in a field, new centres are created with the formation of new spaces through the process of 'structure-preserving transformations' (section 3.2) where a space or spaces become coherent and alive because the centres strengthen one another. In Ezekiel 40-48, this centre-forming process can be observed from the creation of a series of SQUARED SPACES throughout the vision (section 3.3.3). Through moving from a square to another, centre to centre, the worshippers give the offerings to make things right with their God(s), to receive forgiveness, blessings or guidance, so the communication is complete, and relationship is deepened. However, these archetypal patterns are shared characteristics of the holy spaces and should not be considered evidence of borrowing.

(6) subterranean spring surfacing outside the *temenos*:

Indeed, the patterns of water in Ezekiel 40-48 are similar to the spring running under the Delphi temple and surfacing outside the *temenos*. According to Stewart and Piccardi, the sacred sanctuaries in Aegean Antiquity were associated with the seismic faults, the preferred pathways for groundwater movement:

> In the Aegean's karstic landscape earthquake fault scarps act as limestone ramparts on which fortifications, citadels and acropolis were constructed, and underlying fault lines were preferred pathways for groundwater movement and egress […] Votive niches, carvings, reliefs and inscriptions on fault surfaces suggest important sacred sanctuaries, particularly those with oracular functions,

may have been deliberately built astride active fault traces and venerated as direct connections to the chthonic realm ('the underworld').[513]

Limestone ramparts were preferred locations for fortifications, citadels and acropolis. The spring water followed the seismic faults. On one hand, technically, site selection of important places was based on the hydrogeological conditions of safety and groundwater utilisation. On the other hand, naturally, sacred sites emerged from where the spring water was located, where the essential element for survival was given. In Delphi, vapours from the subterranean stream emerged from the adytum, where the Pythia sat inhaling ethylene created by the two faults for ecstatic prophecy.[514] This certainly ensured the sacred status of the place. The Bible describes in many places the importance of springs, wells and water to ancient civilisations (e.g. Genesis 45.4-7; 50.20). The location of springs controlled the route of Exodus (Exod. 15.22-23, 27). Ezekiel 40-48 describes a sanctuary with flowing water from underneath, but this may not be a counterpart of the Delphi paradigm. What is described in Ezekiel 40-48 is not only a site of magic, but a regional source of wellbeing. From the most insignificant trickle on a hillside to the spectacular rush of water, the size of the spring in Ezekiel 40-48 determined its adequacy as a water supply. The questions concerning Ezekiel seemed to include the quality of the water and beyond: Was the flow large enough to provide groups of people and livestock with plenty of water? Was the water supply enough to sustain the growth of a tribe, town or community? Or, was it just large enough to provide a temporary or sporadic source of supply? Was it a mineral spring that can be used for medicinal purposes?[515] In contrast, these questions may not have been the concern of the Temple in Delphi.

(7) human intermediary who hears a message for the people from the voice of the deity emanating from the adytum:

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[513] Iain S. Stewart and Luigi Piccardi, 'Seismic Faults and Sacred Sanctuaries in Aegean Antiquity', *Proceedings of the Geologists' Association,* 128.5-6 (2017), pp. 711-21.
[514] Ibid.
[515] Philip E. LaMoreaux and Judy T. Tanner, *Springs and Bottled Waters of the World: Ancient History, Source* (Place of Publication Not Identified: Springer, 2014), p. 42.

Even though Israel's God also spoke from the adytum (Ezekiel 43; cf. Exod. 25.22; Num. 7.89), the theophany in Ezekiel 43 is not a good counterpart of the oracles prophesied under the effects of intoxicating gas exhaling from a chasm in the ground. It is likely that the prophetess at Delphi 'hears' a message in her head due to the effects of the gas and speaks accordingly, and the audience 'hears' the human intermediary's voice as the representation of the voice of the deity, from the adytum. In Ezekiel 43, Ezekiel is the audience who hears someone speak to him out of the temple (Ezekiel 43.6). Here, and throughout the vision, Ezekiel is called 'son of man' (בֶּן־אָדָם, *ben-ʾādām*), a seemingly archetypal term as if he was the representative of humans. Unlike the prophetess at Delphi who prophesied from the temple, the historical Ezekiel was a refugee who prophesied in the foreign land of Babylon where he was held captive. In my view, the prophetess at Delphi is not a good parallel of Ezekiel. Given the tradition such as the Garden of Eden, Mount Sinai and Mount Abarim,[516] Ezekiel 43 does not need to be founded in Delphi's oracles. From the perspective of this thesis, it is perhaps more important to understand Ezekiel 43 as a theophany in the landscape of the HOLY GROUND (66), which includes the adytum but is not confined to it. The voice of the deity from the adytum manifests the general characteristics of the HOLY GROUND (66), where the divine is revealed in the innermost sanctuary, but it is not sufficient to correlate Ezekiel 40-48 with the Temple of Delphi based on archetypal patterns.

Following the discussion of the temple of Apollo at Delphi, it is indeed that Ezekiel's pattern, specifically WATER FROM UNDERNEATH, shares certain geo-mythological characteristics with the temple at Delphi. However, the regional planning of the water system of Ezekiel 40-48 goes beyond a temple to the cities and the whole region. It makes Delphi a parallel, but not a very good one, to Ezekiel 40-48. Other patterns: SOUTH FACING OUTDOORS (105), HIGH PLACES (62), HOLY GROUND

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[516] Levenson, *Theology of the Program of Restoration*, pp. 25-53.

(66) are archetypal; the absence of walls and objects in the temple should not be taken as evidences of borrowing.

Summary

- We have examined the landscape features of the internationally well-known Temple of Delphi which resemble the features described in Ezekiel 40-48.

- When we look at the features one by one, we find that many of them are archetypal patterns that reveal the nature of the sacred landscape that is shared by different cultures.

- This section then concludes that we should not view these features as direct evidence of borrowing. Further investigation is needed for us to understand the regional concerns in the planning of Ezekiel 40-48.
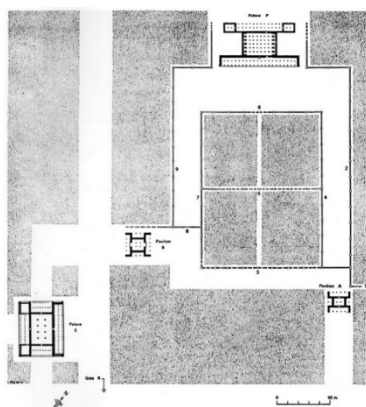
4.2.3 Persian Landscape

Fig. 4. 16. The plan of the palace and pavilions in the landscape of Pasargadae. Source: *Encyclopaedia Iranica*

Pasargadae was constructed by Cyrus II as a palace complex (c. 540 BCE). According to David Stronach, who excavated Pasargadae, this landscape is the oldest example of a classical Persian *chahar bagh*, a form of garden that attempts to emulate the Garden of Eden, with four rivers and four quadrants that represent the world (Fig. 4.16).[517] Mohammad Gharipour, in *Persian Gardens and Pavilions: Reflections in History, Poetry and the Arts*, states that the oldest evidence of the four-part garden is found in the Garden of Eden in Genesis 2, in which the garden is described as containing the division of four rivers branching from a single source.[518]

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[517] 'Encyclopædia Iranica' <http://www.iranicaonline.org/articles/pasargadae> [Accessed 27 September 2017]
[518] Mohammad Gharipour, *Persian Gardens and Pavilions: Reflections in History, Poetry and the Arts* (NY: 2013), p. 15.

According to Fiona Kidd from the Metropolitan Museum of Art, 'several features of the Pasargadae garden differentiate it from its Near Eastern predecessors: the incorporation of the palace and garden into a combined central focus area; the unifying role of the dressed-stone water channels across the royal garden; and its geometric layout.'[519]

The landscape of Pasargadae consists of shallow stone water channels, paths that were made of beaten earth or gravel, and pavilions. Formal gardens and a large hunting park surround the palaces. Given its landscape features integrating the palace and garden, Pasargadae has been referred to as an unprecedented 'garden capital'.[520]

Historian Tom Turner states that the garden 'is likely to have been set within woodland planted with cypress, pomegranate, cherry trees and flowering plants'.[521] According to Lloyd Llewellyn-Jones, the landscape complex includes private and public space. The palace and the garden are assumed to be private space for the use of the royal family. Public space includes the throne hall for the audience ceremonies and the gateway/gatehouse that serves to control access to the monarch's court. The space is appropriated to control access to the king, which is a 'deep-set Achaemenid penchant'.[522] Is this so? Ezekiel 40-48 also demonstrates a strict hierarchy of space, with a controlled access to the king, the differentiated usage of space, and regulated movement of activities (e.g. Ezekiel 46.9-10). If we read Ezekiel 40-48 through the lens of Persian landscape, we may find Ezekiel 40-48 quite *Persian*. However, many characteristics follow the fundamental philosophy of structures, with an archetypal pattern STRUCTURE FOLLOWS SOCIAL SPACES (205), DEGREE OF PUBLICNESS (36) and INTIMACY GRADIENT (127). These are not unique to the Persian landscape.

[519] Kidd, Fiona, 'Ideas of Empire: The "Royal Garden" at Pasargadae', *The Metropolitan Museum of Art, i.e. The Met Museum*, 2013 <https://www.metmuseum.org/blogs/now-at-the-met/features/2013/pasargadae#!#_ftn1> [accessed 31 May 2018]

[520] D. Stronach, 'The Royal Garden at Pasargadae: Evolution and Legacy' in *Archaeologia Iranica et Orientalis: Miscellanea in Honorem Louis Vanden Berghe,* ed. by L. de Meyer, and E. Haerinck, vol. 1 (Ghent: Peeter Press, 1989), p. 483.

[521] Tom Turner, *Garden History: Philosophy and Design 2000 BC-2000 AD* (London and New York: Spon Press: 2005), p. 104.

[522] Lloyd Llewellyn-Jones, *Kings and Courts in Ancient Persia 559-331 BCE* (Edinburgh: Edinburgh Press, 2013), p. 50.

Nevertheless, the patterns of EFFICIENT STRUCTURE (206), which are dictated by pure engineering, make Persian landscape stand out from the Mesopotamian landscapes. The landscape in Pasargadae suggests that 'early in his reign Cyrus had a sophisticated appreciation of the trappings of kingship and understood the effective use of architectural space'.[523] The EFFICIENT STRUCTURE (206) concerns the best way to distribute materials/resources throughout a building/landscape so as to enclose the space, strongly and well, with the least amount of materials/resources.[524] EFFICIENT STRUCTURE (206) is manifested in the planning of Ezekiel's landscape, which is resource-minded and is efficient in the overall straight-lined space layout, measurement, and the omission of furniture, silver and gold, and luxurious decoration in the temple. Other than the distinctive patterns we find here, the prominent 'gardens and pavilions' in the Persian landscape should be connected to 'the line from Assyrian to Babylonian to Achaemenid to Islamic palace gardens and orchards'.[525]
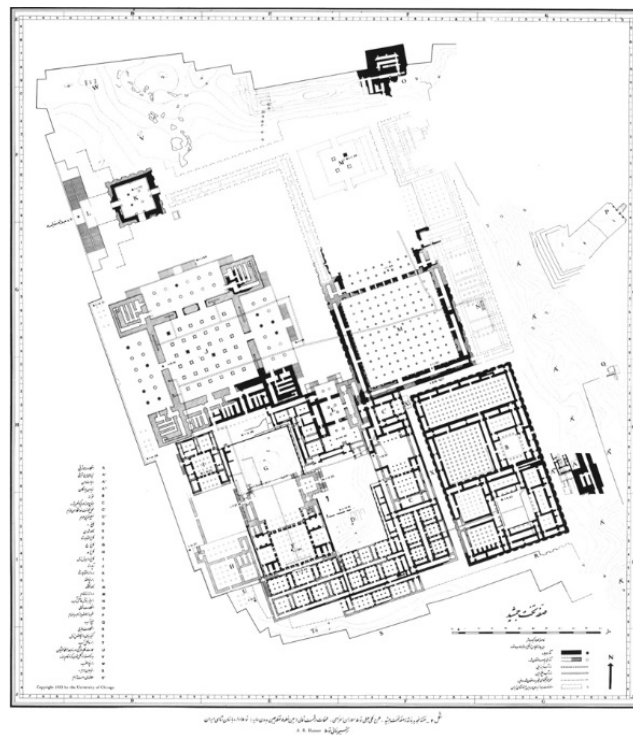

Fig. 4.17. The landscape plan of Persepolis. Source: *Encyclopaedia Iranica.*

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[523] Ibid.
[524] Alexander, *Pattern Language*, pp. 946-47.
[525] Winter, '"Seat of Kingship" – "a Wonder to Behold"', p. 34.

Persepolis (fig. 4.17)[526] is a palace built on a *high terraced platform*: HIGH PLACES (62) that can be divided into two areas, the public area and the private area. The outer court is the public area for group gatherings, parades, and state occasions. The inner court is the private area catering to ceremonial events as well as residential and administrative needs.

According to Lloyd Llewellyn-Jones, the structures built in Persepolis (c. 519 BCE) were chiefly built by Darius I, Xerxes and Artaxerxes I but were still being added to until 330 BCE. The basic function of Persepolis is debated. Some propose that it is a site for Persian New Year celebrations. Some have seen Persepolis as a temple-like religious centre. Other scholars see Persepolis as a collection of palaces, 'the ultimate illustration of royal power' as well as 'a political, economic, and administrative centre for the empire'.[527]

The largest public space is the audience hall (*Apadana*). It is the main site for royal ceremonies. It is a squared terraced space surrounded by a courtyard and four four-storey corner towers.[528] These structures then can be understood as a series of ENCIRCLING/ROUND ABOUT STRUCTURES and SQUARED SPACES on HIGH PLACES (62)/RAISED PLATFORM. Lloyd Llewellyn-Jones points out that, in his mind, 'vastness' characterises the Persian landscape.[529] The large-scaled palatial configuration, city, land and watershed planning in Ezekiel 40-48 may share the same vastness and planning skill with the historical Persian view of the landscape. Since we see these general patterns in Assyrian, Babylonian and Persian landscapes, they might be termed Mesopotamian patterns, and can be viewed as inspirations for as well as parallels to Ezekiel 40-48.

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[526] 'Encyclopædia Iranica', Electricpulp.com. <http://www.iranicaonline.org/articles/persepolis> [Accessed 27 September 2017]
[527] Lloyd Llewellyn-Jones, *Kings and Courts in Ancient Persia 559-331 BCE* (Edinburgh: Edinburgh Press, 2013), p. 53.
[528] Ibid., p. 54.
[529] In a personal conversation.

The ancient Persian word *pairidaeza,* literally means 'walled-around, enclosed space' and is later applied to walled gardens. According to Tom Turner, paradise gardens could be located within or outwith the city. Those located outside of the towns are 'large encampment gardens with pavilions'. Inside the towns, the paradise gardens are 'secluded courts, set apart from the noise and dust of the outside world'. Paradise gardens are used for 'cool relaxation, entertaining friends, sleeping and enjoyment of scenes, sounds, fruits, flowers and decorative animals'.[530] To this point, if we try to correlate Ezekiel 40-48 with the concept of the paradise gardens, the idea of the safe paradise on earth, what occurs immediately might be Levenson's strong links between Ezekiel 40-48 and the tradition of the Garden of Eden. According to Levenson, Ezekiel generally depicts latter-day Mount Zion (and its temple) with descriptions of Eden in an attempt to show that the promises originally inherent in Eden would be realised in the fulfilment of his vision.[531] John Walton states that 'Eden is the source of the waters and [is the palatial] residence of God, and the garden adjoins God's residence'.[532] Recognizing the relationship of Ezekiel 40-48 to the tradition of the Garden of Eden helps us to view Ezekiel 40-48 as a space complex combining the concept of the temple with palaces and the court/gardens. Indeed, the book of Ezekiel describes the trees of Eden as the choice and best of Lebanon with abundant water (Ezekiel 31.16; cf. 31.9). The landscape in Eden is characterised by patterns including FRUIT TREES (170), TREE PLACES (171), ACCESS TO WATER (25) and POOLS AND STREAMS (64) — the archetypal patterns shared by Mesopotamian landscapes, which developed into the 'garden capital' with a grove of trees planted all round.[533] Ezekiel 40-48 might be also viewed as a garden capital centred at the palatial residence of God.

What makes Ezekiel 40-48 stand out from other Mesopotamian landscapes is a long and rich history of ideas concerning disasters in the level of the city and the whole landscape. If we consider other chapters in the book of Ezekiel as within the same

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[530] Ibid., p. 104.
[531] Levenson, *Theology,* pp. 25-53.
[532] John H. Walton, *Genesis*, NIV Application Commentary (Grand Rapids: Zondervan, 2001), p. 167.
[533] Stronach, 'The Royal Garden', p. 483.

context as Ezekiel 40-48, the message of restoration in Ezekiel 36.35 is instructive: 'This land that was desolate is become like the garden of Eden; and the dried/waste and desolate and ruined cities are fortified and inhabited'. This statement suggests that the book of Ezekiel depicts a safe and sound landscape, which combines the Garden of Eden with the fortified and inhabited cities, as a goal of restoration. From the perspective of a post-disaster landscape restoration project, the main concern here is the wellbeing of the land/earth and the cities. When we read the introduction to the whole project of Ezekiel 40-48, Ezekiel 40.1 reminds us that the 'visions' come after the city was smitten. Considering the confrontation with disasters, this thesis suggests that ancient Israel might have attempted to solve the problems by envisioning and building better cities. Therefore, we should be able to find the historical parallels of Ezekiel 40-48 from their own history.

Summary
- We have examined the Persian landscape due to its proximity in time, geography, and spheres of culture. Persian gardens are believed to have emulated the biblical archetypal Garden of Eden, and are relevant to my studies. When we look at the features of the Persian landscape: Pasargadae and Persepolis, we find that both are similar to the landscape of Ezekiel 40-48.
- We have seen that the incorporation of the palace and garden and the geometric layout which are believed to be unique to Persian also characterise Ezekiel 40-48.
- This section concludes that Ezekiel 40-48 might be also viewed as a plan concerning the garden capital centred at the palatial residence of God.

4.3 Ancient Israelite Town Planning

4.3.1 Solomon's Temple and Its Historical Parallels

This section discusses the temple of Solomon and its historical parallels before we further consider ancient town planning that might be relevant to the vast and much fuller described landscape in Ezekiel 40-48.

The temple in the book of Ezekiel is divided into three sections: a portico (40.48-49), a great hall (41.1-2), and the holy of holies (41.3-4) at the westernmost end. This is based on the basic three-room plan, known as the 'long-room plan', which is a common architectural heritage that is evident in the plans of Solomon's Temple and several other temples from northern Israel and Syria.[534]
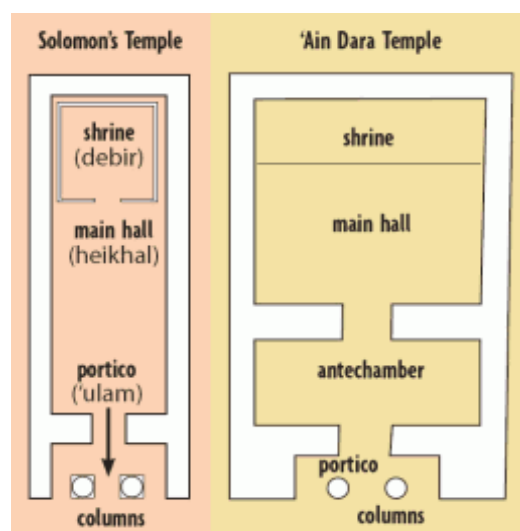

Fig. 4.18. The Ain Dara temple and the Biblical Temple of King Solomon share very similar plans. Source: Biblical Archaeology Society 2018

The Iron Age temple at Ain Dara in Northern Syria has been identified as the most significant parallel to Solomon's Temple ever discovered.[535] Both buildings were erected on huge artificial platforms built on the highest point in their respective cities. Fig. 4.18 demonstrates that the Ain Dara temple and the Biblical Temple of

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[534] John M. Monson, 'The New 'Ain Dara Temple: Closest Solomonic Parallel', *Biblical Archaeology Review*, 26.3 (2000), pp. 20-35, 67.
[535] Ibid.

King Solomon share very similar tripartite plans. Each has a courtyard in front, a portico, two rooms beyond and an elevated inner room, or holy of holies, at the rear. The only significant difference between the two is the inclusion of the antechamber in the Ain Dara plan.

According to Biblical Archaeology Society, 'The Ain Dara temple was originally built around 1300 BCE and remained in use for more than 550 years, until 740 BCE. The plan and decoration of such majestic temples no doubt inspired the Phoenician engineers and craftsmen who built Solomon's grand edifice in the tenth century B.C.'[536] Stager notes 'The plan, size, date and architectural details fit squarely into the traditions of sacred architecture known in north Syria (and probably in Phoenicia) from the tenth to eighth century B.C.E.'[537] Solomon's Temple includes features that belong to both Canaanite and North Syrian building traditions.

Ain Dara provides the first example of corridors surrounding the building on three sides. This is similar with the principle of Iron Age town planning. We will discuss this in later sections. It is probable that the plan of Ezekiel's temple might have followed the same tradition. Despite the similarities, Ezekiel's emphasis on the walls, gates, courtyards and nature in the landscape distinguishes Ezekiel's visionary temple landscape from Solomon's Temple. The biblical description of the temple of Solomon devotes only one verse to 'the inner enclosure of three courses of hewn stones and one course of cedar beams' (I Kings 6.36), which refers to the limits of the sacred precinct. There is no description of gates or other ways of entering the space beyond this wall, and nothing is mentioned about the courtyards, outer complex of chambers, chambered gates and beyond.

It is evident that the plan in Ezekiel 40-48 concerns more than a tripartite temple. Now the thesis will further discuss the possible precedents and parallels from the perspective of ancient town planning.

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[536] Biblical Archaeology Society, 'Searching for the Temple of King Solomon', *Biblical Archaeology Society* (2018) <https://www.biblicalarchaeology.org/daily/biblical-sites-places/temple-at-jerusalem/searching-for-the-temple-of-king-solomon/.> [Accessed 1 May 2018]
[537] Lawrence E. Stager, 'Jerusalem and the Garden of Eden', *Eretz Israel,* 26 (1999), p. 187.

4.3.2 Ancient Israelite Town Planning

This section argues that in ancient Israel and Judah, the capital cities (e.g. Jerusalem, Samaria); major administrative cities (e.g. Lachish); and secondary administrative cities (e.g. Beersheba) share a similar planning concept with the planning of Ezekiel 40-48. Urban city planning of ancient Israel and Judah in the Iron Age (1200-586 BCE) has its distinctive patterns of defence. 'The major defensive components of Iron Age II fortifications include administrative buildings, city walls, city gates, palaces, storehouses and water systems.'[538] These landscape features characterise Ezekiel 40-48. Chapter 3 exhibited the landscape patterns that characterise Ezekiel 40-48 by examining the literary structure of the landscape of awe and measurement. ENCIRCLING/ROUND ABOUT STRUCTURES, termed by the characteristic Hebrew 'round about' (סָבִיב סָבִיב, *sābîb sābîb*), is used to describe the landscape features. These include the round about wall, chambers and pavement system. The landscape of Ezekiel 40-48 also contains patterns such as FOURFOLD MEASUREMENT and SQUARED SPACES, altogether giving an impression that they form a seamless and perfect protection for the planned area. Life sustaining space patterns also characterise the landscape of Ezekiel. These patterns are related to the food/kitchen, water and healing resources, namely WATER FROM UNDERNEATH and the ecosystem with FRUIT TREES, and STREAMS AND RIVERS. Following the historical parallels discussed in this chapter we see how these patterns are also fundamental for varied Mesopotamian and Greek landscapes. However, I would argue that the literary analysis of the written landscape in Ezekiel 40-48 has revealed a framework calling for a systematic understanding of the landscape, as well as the distinctive historical context of Ezekiel 40-48 in its own right. What was the problem? What was the vision? The powerful Mesopotamian kings, the makers of the wonders to behold in the land, were also the makers of the appalling dried/waste, desolate and ruined cities in Ezekiel 36.35. How would ancient Israel and Judah respond to the awful enemies? If there was a chance to start everything again, how could the damaged lands be restored? How would the vision/promised land be

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[538] Samuel Rocca, *The Fortifications of Ancient Israel and Judah 1200-586 BC* (Oxford: Osprey, 2010), p. 21.

designed? Could the new construction prevent disasters? Did they have any paradigms to follow?

4.3.2.1 The Levitic Town Planning

The Book of Numbers depicts the planning effort of the promised land. After the border of the promised land is defined in Chapter 34, special attention is paid to the 48 cities set aside for the Levites. The Levitic town planning in Numbers 35.1-5 reveals a pattern which is similar to Ezekiel 40-48 with regards to the relationship between the city and its pasture lands.

> In the plains of Moab by the Jordan at Jericho, the LORD spoke to Moses, saying: Command the Israelites to give, from the inheritance that they possess, towns for the Levites to live in; you shall also give to the Levites pasture lands surrounding the towns. The towns shall be theirs to live in, and their pasture lands shall be for their cattle, for their livestock, and for all their animals. The pasture lands of the towns, which you shall give to the Levites, shall reach from the wall of the town outward a thousand cubits all around. You shall measure, outside the town, for the east side two thousand cubits, for the south side two thousand cubits, for the west side two thousand cubits, and for the north side two thousand cubits, with the town in the middle; this shall belong to them as pasture land for their towns (Numbers 35.1-5, NRSV).

Numbers 35.1-5 details the amount of pasture land each town should have. Measuring from the edge of the town, the area for pasture was to extend outward a thousand cubits in each direction. Jacob Milgrom argues that this geographical layout is a realistic town plan. Moreover, the plan is adaptive for future development, because the pasture-land increases with the growth of the town.[539] Fig. 4.19 demonstrates the development of Milgrom's theory.
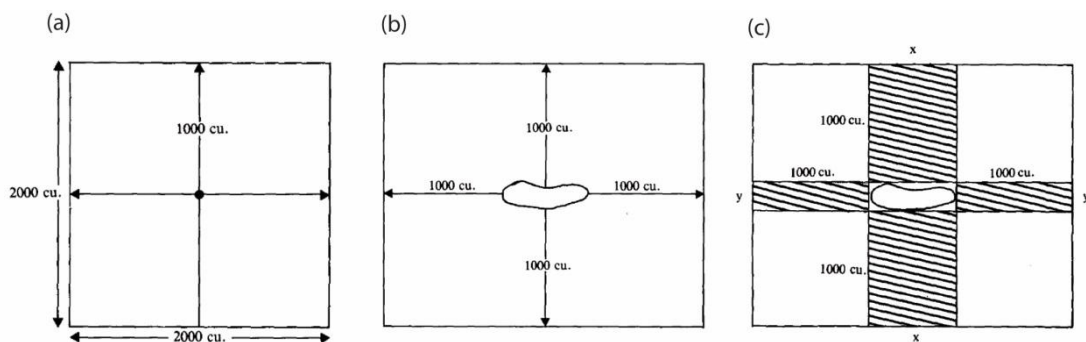

Fig. 4.19. Three interpretations of the measurement in Numbers 35.4-5. (a) The city is viewed as a point; (b) The city is viewed as an area; (c) Milgrom highlights the possible growth of the city as uncertain x and y. The shaded area is the extended pasture-land. Source: Milgrom 1982

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[539] Jacob Milgrom, 'The Levitic Town: An Exercise in Realistic Planning', *The Journal of Jewish Studies,* 33.1 (1982), pp. 185-88.

He argues that the only configuration that can contain the measurements in vv. 4-5 requires that the town be considered as a point, as represented in Fig. 4.19 (a) (It is the pasture-land which forms a square of 2000 cubits per side and whose perimeter is 1000 cubits in every direction from the town wall.) A realistic version would be Fig. 4.19 (b), which is based on Greenberg's explanation that the rabbis measured the 2000 cubits from the extreme limits of the town in each direction on the Sabbath, when the walking limit was 2000 cubits.[540] Taking the future growth into consideration, Milgrom highlights the extended pasture-land, as is shown in Fig. 4.19 (c), for a 'practical, utilitarian formula for creating a Levitic township regardless of its initial size and subsequent growth'.[541]

The Levitic town plan could be viewed as a biblical parallel of the planning in the book of Ezekiel. According to Ezekiel 45.2, the 500 square cubit temple-city has a pasture-land (open space) around it. The width of the pasture-land is 50 cubits. The much larger lowland city in Ezekiel 48.16-17 is 4500 square cubit with a 250 cubit wide pasture-land around it. Comparing the plans of the Levitic cities with the plans of the Ezekielian temple and city, however, the 1000 cubits of pasture-land around the Levitic cities seems to be exceedingly wide. Inspired by Milgrom's innovative exegesis, we can imagine the space described in Numbers 35.4. To do so we need to keep the meaning of מִקִּיר הָעִיר וָחוּצָה (*miqqîr hā 'îr wāḥûṣâ*) as 'from the town wall outwards', but re-interpret אֶלֶף אַמָּה סָבִיב (*'elep 'ammâ sābîb*) as being from 'a thousand cubits every side' to 'a thousand cubits in a circuit/as a whole'. This is based on the interpretation of סָבִיב (*sābîb*) (see section 3.3.1), which is defined mostly as 'circuit, round about',[542] and then the width of the pasture-land could be 250 cubits in each direction (Fig. 4.20). It seems that this view of the scale as 250 cubits in each direction is a more reasonable interpretation than thinking of it as being 1000 cubits in each direction, because in the latter view, the city would be

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[540] Greenberg argues that the Sabbath limit took its reference from the pasture land of the Levitical cities. See Moshe Greenberg, 'Idealism and Practicality in Numbers 35.4-5 and Ezekiel 48', *Journal of the American Oriental Society,* 88.1 (1968), pp. 59-66.

[541] Milgrom, 'The Levitic Town', p. 187.

[542] סָבִיב (*sābîb*) that is used to denote a total number all around can also be found in Song of Songs 3.7 (60 mighty men); Jeremiah 52.23 (100 pomegranates); and Ezekiel 40.17 (30 chambers).

considered a point (Fig. 4.19-a). In Ezekiel 48.16-17, the pasture-land around the city is also described as 250 cubits wide.[543] Fig 4.20 is an attempt to demonstrate this alternative idea with a diagram.
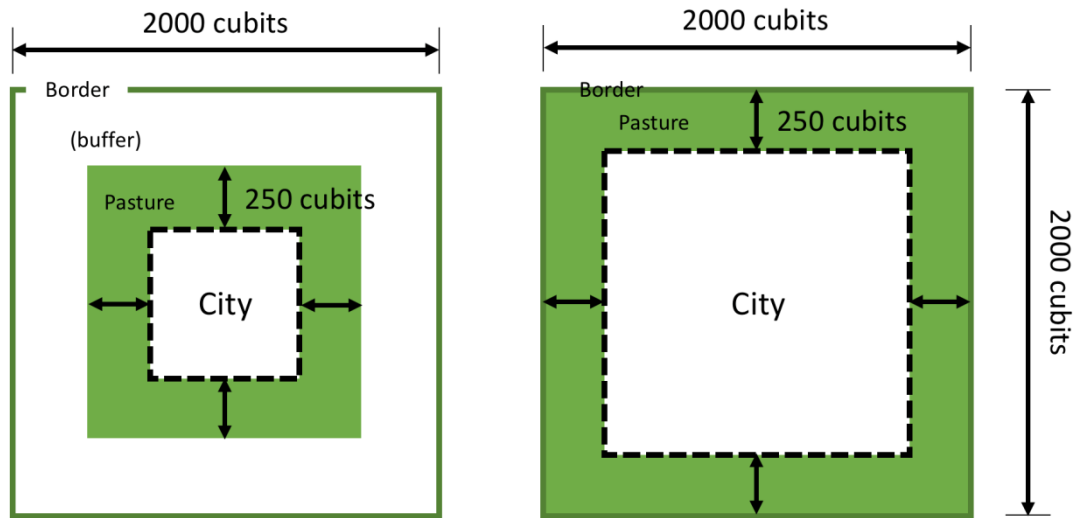

Fig. 4.20. A diagram showing two of many possibilities of a growing city according to the suggested principle of the Levitic town planning in Numbers 35.3-4. Left: a smaller city surrounded by pasture-land within the 2000-cubit border. Right: a full-grown city reaching its carrying capacity.

The model of Levitic city planning Milgrom proposes is excellent in the way that it realistically commensurates with the town's initial size and potential growth. However, Milgrom's model assumes an unlimited growth and undermines the continuity and geometry of the measurement in Num. 35.5, where the measurements form a square of 2000 cubits per side. Unlimited growth of the cities would be unlikely if we consider the fixed number of the cities (Num. 35.7), and if we compare with the measurements and proportion of the Ezekielian cities.

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[543] Discerning what is a reasonable proportion of the pasture-land is beyond the scope of this thesis. It might be helpful, however, if we use the ratio of the pasture-land over the developed area of the city for comparison. We are comparing four ratios. The first is the area of the pasture-land in Ezekiel's temple plan and it is 44%: (600*600-500*500)/500*500=0.44. The second is the ratio of the pasture-land over the city plan (Ezekiel 48), and it is approximately 23% of the developed urban area: (5000*5000-4500*4500)/4500*4500=0.23. The third is the area of the pasture-land of the Levitic town in Fig. 4.20 (right, when it is fully developed) and it is 78% of the urban area: (2000*2000-1500*1500)/1500*1500=0.78. The fourth is the model in 4.19 (c). This model gives a 1500 cubit square city an extra-large pasture-land, which is 4.44 times of the developed urban area: (3500*3500-1500*1500)/1500*1500=4.44.

It is not my intention to complicate our understanding of Ezekiel 40-48 with another puzzling town plan in the book of Numbers, but a comparison of the plans is informative one to the other, if we leave room for interpretation. This thesis, therefore, suggests an alternative way to understand the Levitic cities with a limited extent, as is shown in Fig. 4.20. It is not clear why 48 cities were proposed to be scattered in the nation, but it is likely that the planning of the cities was appropriate-size-minded considering the carrying capacity of the region. The cities could grow, but were not supposed to grow without limit. The pasture-land might support reasonably within the extent of 2000 cubit SQUARED SPACES and ENCIRCLING/ROUND ABOUT STRUCTURES combining the FRUIT TREES (170), TREE PLACES (171), ACCESS TO WATER (25) and POOLS AND STREAMS (64) for the livelihood for the cities. The Levitic and Ezekielian cities reveal similar planning philosophy and basic structure, and should be considered parallels to each other.

4.3.2.2 Other Planning Models from Ancient Israel

According to biblical tradition, Samaria, capital city of the Kingdom of Israel, was frequently besieged. In the days of Ahab in the ninth century BCE, Benhadad II came up against it with thirty-two vassal kings, but was defeated (I Kings 20.1-34). During the siege, a prophet approached the king of Israel and said to him: 'Come, strengthen yourself, know and consider what you have to do' (I Kings 20.22).

In the late eighth century BCE, the impending Assyrian expansionism was the major political problem for the smaller area. To survive, Judah and Israel could either submit to, or collaborate with, the Assyrians or join forces and fight against them. So far as the kingdom of Judah is concerned, Ahaz was a strict advocate of the more cautious policy of submission, but his successor, Hezekiah, attempted to free himself from the Assyrian by force.[544] Either way, both kings painstakingly engaged themselves in protecting the temple and the city. Ahaz probably had attempted to fortify the temple with ENCIRCLING/ROUND ABOUT STRUCTURES (II Kings

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[544] Jesper Høgenhaven, 'The Prophet Isaiah and Judaean Foreign Policy under Ahaz and Hezekiah', *Journal of Near Eastern Studies,* 49.4 (1990), pp. 351-54.

16.18).[545] 'Ahaz, when Isaiah found him, was probably inspecting the water supplies in order to prevent their use by the approaching invaders.'[546] Successful fortification meant that when King Rezin of Aram and King Pekah son of Remaliah of Israel came up to besiege Ahaz they could not conquer him (Isaiah 7.1; II Kings 16.5). During the reign of Ahaz the waters of the Shiloah from the Gihon spring are mentioned: 'Because this people has refused the waters of Shiloah that flow gently […] therefore, the Lord is bringing up against it the mighty flood waters of the River, the king of Assyria and all his glory' (Isaiah 8.6). The meaning of Shiloah, 'sent' or 'conducted', rather implies some kind of artificial channel.[547] Therefore the water that flows gently seems to have its flow controlled, indicating that there was a conduit before the time of Hezekiah.[548] If we follow II Chronicles 32, King Hezekiah blocked the source of the spring water of the upper Gihon and dug a tunnel underneath the city of David, a pattern WATER FROM UNDERNEATH, which led the water straight down on the west side of the city under the campaign of Sennacherib against the Kingdom of Judah in 701 BCE. He planned with coordinated professionals (v.3). He built two layers of walls and strengthened Millo (הַמִּלּוֹא), which is derived from 'fill' (מלא), and probably relates to the Assyrian *mulu* referring to 'earthworks'.[549] Millo is found to be the 'Stepped Stone Structure' that connects with and supports the 'Large Stone Structure', an Israelite royal palace in continuous use from the tenth century until 586 BCE.[550] According to different versions of

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[545] II Kings 16.18 in Hebrew is unclear. I take the view of the 1599 Geneva Bible (GNV) that King Ahaz's actions were designed either to flatter the King of Assyria, when he should thus see him change the ordinance of God, or else that the Temple might be a refuge for him if the King should suddenly assail his house.
[546] George Adam Smith, *Jerusalem: The Topography, Economics and History from the Earliest times to A.D. 70* (London: Hodder and Stoughton, 1907), p. 128.
[547] 'Siloam; Siloah; Shelah; Shiloah Definition and Meaning - Bible Dictionary', Bible Study Tools <http://www.biblestudytools.com/dictionary/siloam-siloah-shelah-shiloah/> [Accessed 12 June 2017]
[548] Carol A. Dray, *Translation and Interpretation in the Targum to the Books of Kings*, Studies in the Aramaic Interpretation of Scripture, vol. 5 (Leiden, The Netherlands; Boston: Brill, 2006), p. 59.
[549] Richard Gottheil, Gotthard Deutsch, Martin A Meyer, Joseph Jacobs, and M. Franco, 'JewishEncyclopedia.com', *Jerusalem - JewishEncyclopedia.com* <http://www.jewishencyclopedia.com/articles/8604-jerusalem> [accessed 27 September 2017]
[550] Eilat Mazar, *The Palace of King David: Excavations at the Summit of the City of David; Preliminary Report of Seasons 2005-2007* (Jerusalem; New York: Shoham Academic Research and Publication, 2009)

translations it could be the citadel of the city of David,[551] or supporting terraces.[552] Based on Hezekiah's list of repairs to military fortifications, Millo could be a part of the system of fortification. Based on the description in II Kings 12.21, 'House of Millo' (בֵּית מִלֹּא, *bêt millō*') seems to be a liveable structure. Could Millo be a structure that is part of the fortification that needs to be 'filled' or 'strengthened' in the time of war, but functions differently in the time of peace?
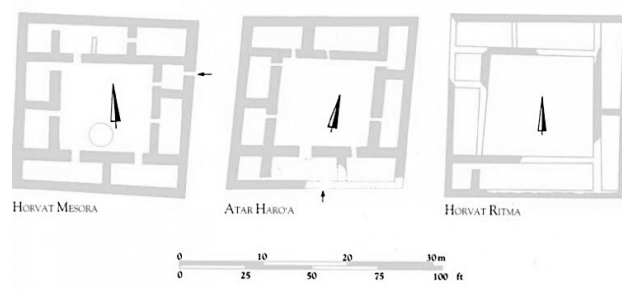

Fig. 4.21. Square fortresses in the Central Negev (Source: Cohen 1985)

From the strategies of the kings who undertook siege wars we see the crucial role of the planning of the fortification and life support system in the land. Cohen examines the fortresses in the southern border.[553] Whether these structures are purely military is debated. Faust suggests that most 'fortresses' were fortified settlements, some other sites served as centres.[554] Among the fortresses, three types — oval, rectangular and square — contemporary with one another, are identified. Fig. 4.21 exhibits the layout of the squared fortresses. Each building is composed of a system of casemate rooms encircling an open yard, and this appears to be the primary shared characteristic of the structures.[555]

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[551] Richard Gottheil, and others, *Jerusalem - JewishEncyclopedia.com* <http://www.jewishencyclopedia.com/articles/8604-jerusalem> [accessed 27 September 2017]

[552] II Samuel 5.9. NKJV describes Millo as 'the landfill'; in NIV Millo is translated as 'supporting terraces'.

[553] Rudolph Cohen, 'The Fortresses King Solomon Built to Protect His Southern Border', *Biblical Archaeology Review,* 11.3 (1985), pp. 56-70.

[554] Faust argues that various schools have interpreted the structures as royal forts, settlements of nomads in the process of sedentarization, or a combination of these two. The variation in plan and size, and especially the illogical distribution of the 'fortresses', indicates that the phenomenon cannot be viewed as an entirely royal operation.

[555] Ibid.

Israelite fortresses at Ein Hatseva (Ein means spring in Hebrew), identified as the

Fig. 4.22. Israelite fortresses at Ein Hatseva. Source: Israel Ministry of Foreign Affairs

biblical Tamar (Ezekiel 48.28), are located on a strategic position on the hill in the Arava Valley with a spring as the source of water in this desert region. Fig. 4.22 shows fortresses at Ein Hatseva with a smaller fortress surrounded by a 50 x 50 m. fortified wall, and the expanded 100 x 100 m. fortress with massive defences, reaching the peak of its importance as a central component in the border defences of the Kingdom of Judah.[556] The squared, casemate wall/rooms around the wall, its strategic location on a hill with food storage and spring water resources, are strikingly similar to Ezekiel 40-48.
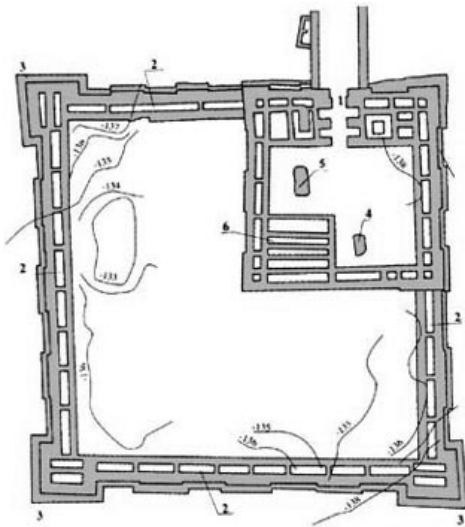
In a paper entitled 'Elements in the Development of Town planning in the Israelite City',[557] Shiloh identifies a typical Israelite town as a patterned landscape consisting of 'a central core, ring road, and outer belt of structures which are clearly integrated into the brick walls of the outer casemate walls as a single construction unit' (Fig. 4.23). In other words, a central core (a courtyard, open space or built up) surrounded by casemate walls formed with adjacent rooms are the basic layout of city planning of ancient
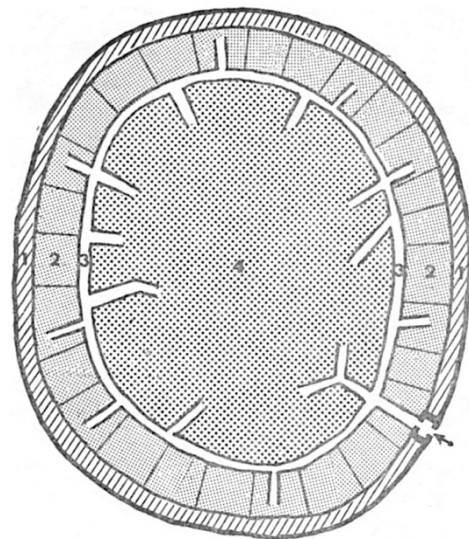

Fig. 4.23. A typical Israelite town. Source: Shiloh 1978:41

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[556] 'Ein Hatzeva-an Israelite Fortress on the Border with Edom', <http://mfa.gov.il/MFA/IsraelExperience/History/> [Accessed 8 May 2017]
[557] Yigal Shiloh, 'Elements in the Development of Town Planning in the Israelite City', *Israel Exploration Journal,* 28.1/2 (1978), pp. 36-51.

Israelite towns and cities. This is very similar to the 'Assyrian style' (Assyrian Patterns) or Mesopotamian patterns we discussed (in section 4.2.1 The Mesopotamian Landscape), but here it is Israelite. Even though the ENCIRCLING/ROUND ABOUT STRUCTURES are common patterns shared by the ancient Israelite and Mesopotamian town planning, the dynamic process of the creation of the patterns make the Israelite patterns distinct from other ancient Near Eastern parallels.

In 'The casemate Wall, the Four Room House, and Early Planning in the Israelite City',[558] Shiloh further identifies the casemate wall and the 'four room house' as fundamental elements, which were interdependent with the development of the Israelite town and city planning, and formed an 'archaic' fashion characteristic of city planning. Fig. 4.24 exhibits Shiloh's idea of the development of the combined pattern of the 'four room house' (1a) and casemate walls (1b). The 'four room house' and its subtypes appear in the Israelite settlement beginning in the twelfth century BCE. The four room house and the concept of the casemate wall, which is used in its developed form from the tenth century BCE, eventually were joined to each other to form 'a belt encircling the site' in Iron Age I

Fig. 4.24. Development of the combined pattern of the 'four room house' (1a) and casemate walls (1b), in Iron Age I sites (2-3), provincial towns (4), and royal centres (5) of the Iron Age II. Source: Shiloh 1987, Fig. 3

(Settlement Period) sites (Fig. 4.24: 2-3). This becomes an identical planning unit and is repeated in each structure, 'forming a chain of elongated boardrooms with
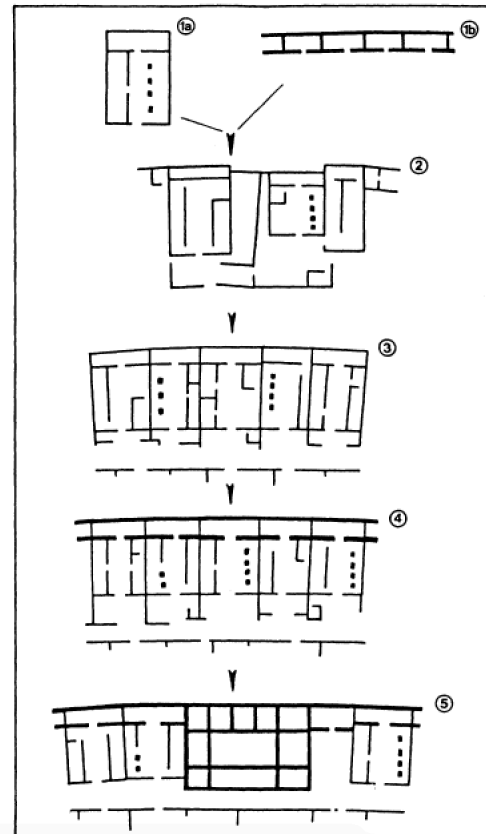
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[558] Yigal Shiloh, 'The Casemate Wall, the Four Room House, and Early Planning in the Israelite City', *Bulletin of the American Schools of Oriental Research*, 268 (1987), pp. 3-15.

double walls and an inner space'. From the tenth century BCE forward the casemate wall was entirely incorporated into the system of the buildings surrounding the city (Fig. 4.24: 4-5). Shiloh concludes:

> The same elements later contributed to formation of the typical pattern of the Israelite provincial city, particularly the outer ring of buildings. In royal centers, the casemate wall is an independent unit, but it incorporates fortress and palaces. This combined pattern started to appear in the 12th-11th centuries BCE and reaches its fullest development in the tenth. Its reappearance in eighth-century site plans, demonstrates that it was not a random configuration but a customary pattern characteristic of planning principles in many types of Israelite cities.[559]

On one hand, Shiloh demonstrates the continuity of development of the 'four room house' and 'the casemate wall' in Palestine sites, 'side by side with each other, from 12th century BCE on'. This undermines the assumption that they originated outside the region'.[560] On the other hand, what is recognized can be viewed as an archetypal pattern, ENCIRCLING/ROUND ABOUT STRUCTURES, which demonstrates a clear process of development from the most basic elements, combining the housing and the protection (the wall).

Herzog identifies three principles of Israelite city planning: orthogonal, peripheral, and radial.[561] Orthogonal planning is based on a square plan and does not necessarily conform to the natural contour. For example, in the case of the Negev fortresses/fortified settlements, the squared ones do not correspond to the topography of the hill on which they are built; however, they are likely to be built in accordance with a standard 'plan'.[562] According to Rocca, many such settlements 'thus stand out from the surrounding area, giving them a monumental character'.[563] This type of plan was implemented as an acropolis, a capital city, or a main administrative centre. It requires considerable engineering, such as levelling and quarrying work. Because of the limits of its engineering capacity, at Samaria only the acropolis demonstrates

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[559] Shiloh, 'The Casemate Wall', p. 3.
[560] Ibid., p. 11.
[561] Ze'ev Herzog, 'Settlement and Fortification Planning in the Iron Age', *The Architecture of Ancient Israel,* ed. by Aharon Kempinski and Ronny Reich (Jerusalem: Israel Exploration Society, 1992), pp. 231-74.
[562] Rudolph Cohen, 'The Fortresses King Solomon Built to Protect His Southern Border', *Biblical Archaeology Review,* 11.3 (1985), pp. 56-70.
[563] Rocca, *The Fortifications*, p. 20.

orthogonal planning.[564] The city of Samaria consists of a royal acropolis and a lower city. This might serve as a parallel to the 'structure like a city' and the 'city' in Ezekiel 40-48. The temple-city my study focuses on might be the acropolis of an even larger imagined city. In Judah, Lachish III follows orthogonal planning. Fig. 4. 25 exhibits the orthogonal city planning of Samaria and Lachish, Strata V-III.

The city fortifications of Lachish III are characterised by an outer and an inner defensive wall. This opens a window for the re-interpretation of Ezekiel 42.15-20, where each side of the wall changes from 500 cubits to 500 reeds.
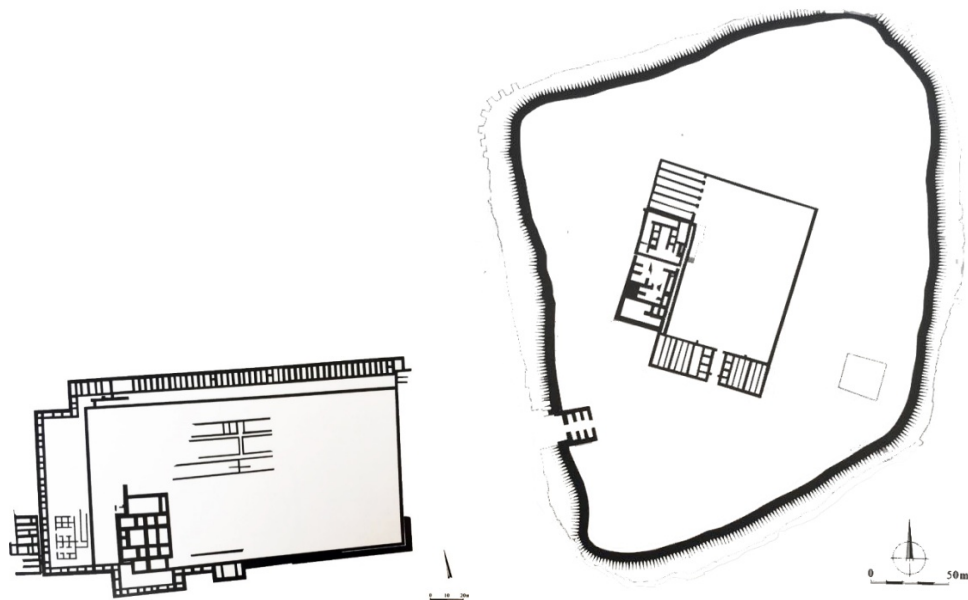
Fig. 4.25. Orthogonal planning: (left) Omride Samaria. The royal acropolis consists of a levelled rectangular enclosure; (right) Lachish III. The city fortifications are characterised by an outer and an inner defensive wall. The outer wall included a six-chambered gate. Source: Rocca, *The Fortifications*; Dalit Weinblatt-Krausz

Beersheba, literally associated with a 'well', is considered as a significant centre in the patriarchal narratives on water management (Genesis 21.25; 26.25). Tel

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[564] Davies argues that 'the land of Israel' is unique to Ezekiel, and Ezekiel distinguishes 'Judah' from 'the land of Israel' (יְהוּדָה וְאֶרֶץ יִשְׂרָאֵל) in 27.17. Therefore, 40.2, where Ezekiel is brought to 'the land of Israel' should not be in Judah, but in Samaria. For his argument see Philip R. Davies, 'Mapping Palestine', *History, Politics and the Bible from the Iron Age to the Media Age,* ed. by James G. Crossley and Jim West (London and New York: Bloomsbury T&T Clark, 2017), p. 65.

Beersheba is agreed to be the best planned urban centre thus far uncovered, with carefully planned public construction including secured water, a casemate wall system and city street, leaving other space for resilient use.[565] Fig. 4.26 exhibits adjacent four-room houses arranged perpendicularly to the periphery that compose an eleventh-century BCE 'courtyard site' found in stratum VII.[566]
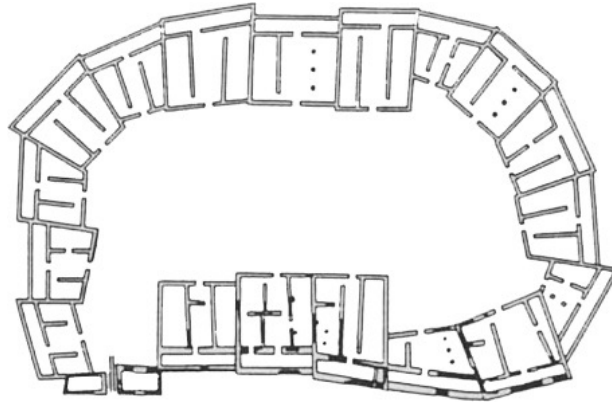

Fig. 4.26. In Tel Beersheba, adjacent four-room houses arranged perpendicularly to the periphery compose an 11th-century BCE 'courtyard site' found in stratum VII. Source: Finkelstein 1988

According to Faust, what is especially significant at Tel Beersheba is the fact that the rear room of each four-room house was at the same time one of the casemates of the city wall, in other words, an integral part of the city's fortifications.[567] Shiloh claims that in the ordinary provincial towns, the same combination of residential buildings and casemate wall in the encircling belt existed throughout Iron Age II.[568] Iron Age II, 1000-586 BCE, serves as the historical background of the book of Ezekiel.

Drawing on Faust, an outer belt of houses associated with the casemate wall seems to be more typical of Judah, while a (paved) peripheral street adjacent to a massive wall is more typical of Israel.[569] These structures characterise the landscape of Ezekiel 40-48, where the wall round about (40.5), chambers and a pavement made for the court

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[565] Faust, 'Accessibility', p. 311.
[566] Israel Finkelstein, 'Searching for Israelite Origins', *Biblical Archaeology Review,* 14.5 (1988), p. 34.
[567] Faust, 'Accessibility', p. 311.
[568] Yigal Shiloh, 'The Casemate Wall', p. 13.
[569] Faust, 'Accessibility', pp. 311-13.

round about (40.17), the courts at the corners (46.21), the (thick walled) building (41.12), and the six chambered gates (40.10, 21, 24) should all be integral to the fortification. Based on what is discussed, Ezekiel 40-48 should be viewed as an example of a plan building upon the basic layout of ancient Israelite city planning. Using the pattern language of my research, the archetypal patterns — for example, the ENCIRCLING/ROUND ABOUT STRUCTURES — set up a fundamental framework forming a defensive system, which is evolved from the most basic unit of livelihood (the four-room house and the casemate wall), and form the 'structure like a city' that impressed and perhaps puzzled Ezekiel (40.2).
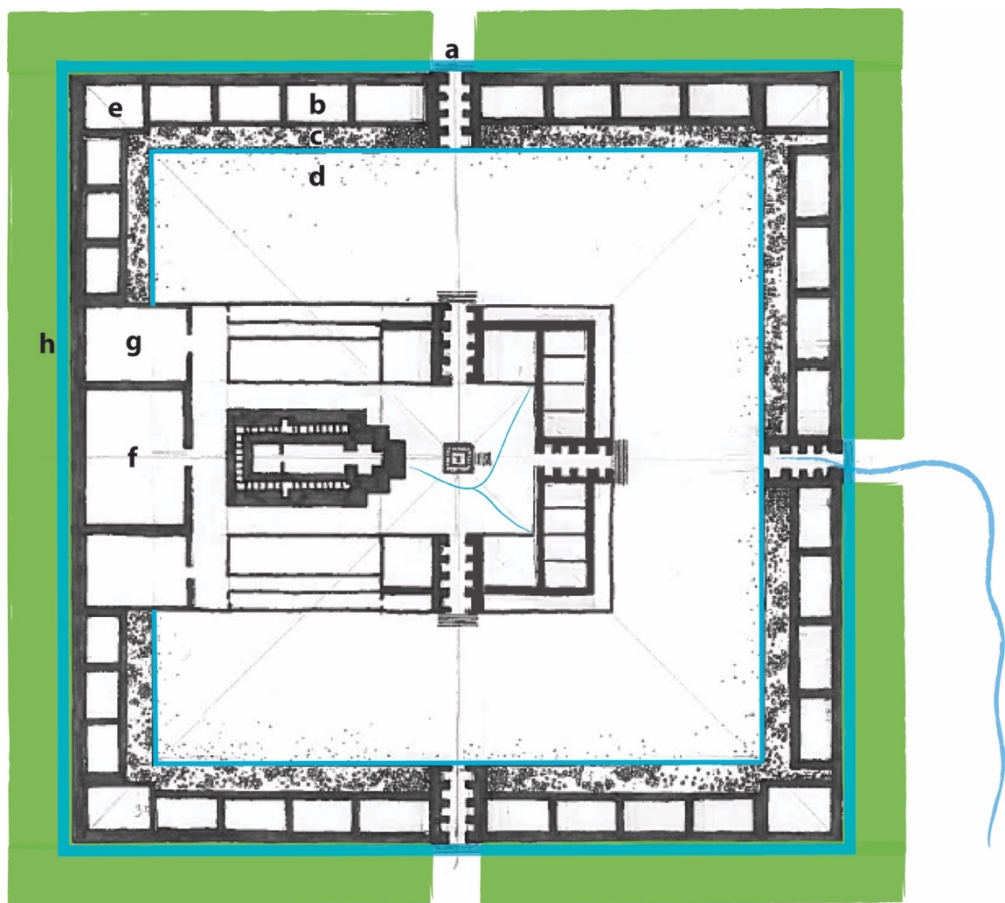
Fig. 4.27. My conjectural drawing based on the descriptions of the landscape features in Ezekiel 40-48. The six-chambered gates (a), rooms (b) and pavement (c) round about the courtyard (d), courts at the corners (e), and the 'building' (f) and space at the west end (g) could be understood as a systematic fortification. (h) represents the pasture-land and perimeter canal round about the city. I leave the pencil marks unerased to show the process of my conjecture based on the geometrical characteristics of the layout.

Fig. 4.27 shows a conjectural plan of the architectural features of Ezekiel 40-48 consisting of the structures discussed. The casemate wall with rooms around the courtyard exhibits the basic Iron Age town planning pattern. From the perspective of Iron Age city planning, the mysterious building (41.12), a parallel walled room behind the holy of holies, could be understood as the 'rear room' of a 'four-room house' (see Fig. 4.23). It is an integral part of the city's fortifications in Ezekiel 40-48. It did not exist in the design of the tabernacle — the two-squared system which was a design for nomad's hut or tent — but exists in a city where the fortification is the fundamental element of defence (Fig. 4.28). Ezekiel 40-48 seems to extend the religious two-squared system into a three-squared system with a rear room to integrate the fortification, based on the concept of Iron age town planning — a plan meant to create a defensive city, a safe place.
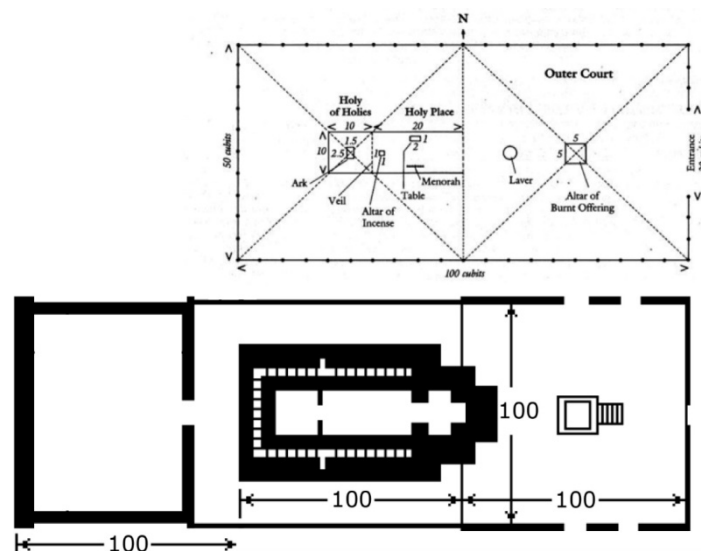
Fig. 4.28. A comparison between the construed two-squared plan of the Tabernacle and the three-squared plan of Ezekiel 40-48. Source: (above) Milgrom, *Leviticus 1-16*, 135; (below) modified from *Bible Knowledge Commentary[OT],* 1303.

Fig. 4.28 highlights the fourfold measurement in 41.12-15, which covers a series of measurements over this three-squared area that can be considered as a central area of a citadel, the defensive core of the city. Each measurement includes a structure along with the adjacent open space. In Chapter 3 we have discussed that the SQUARED

SPACES is a pattern that ensures a good relationship between a house and the open space/garden. It also efficiently defines a grid system with a clear orientation: CIRCULATION REALMS (98). Based on the principle of Iron Age town planning, this arrangement can be understood as defining the ring road (circulation routes around the core; see Fig. 4.23) to ensure accessibility and defence of the area.
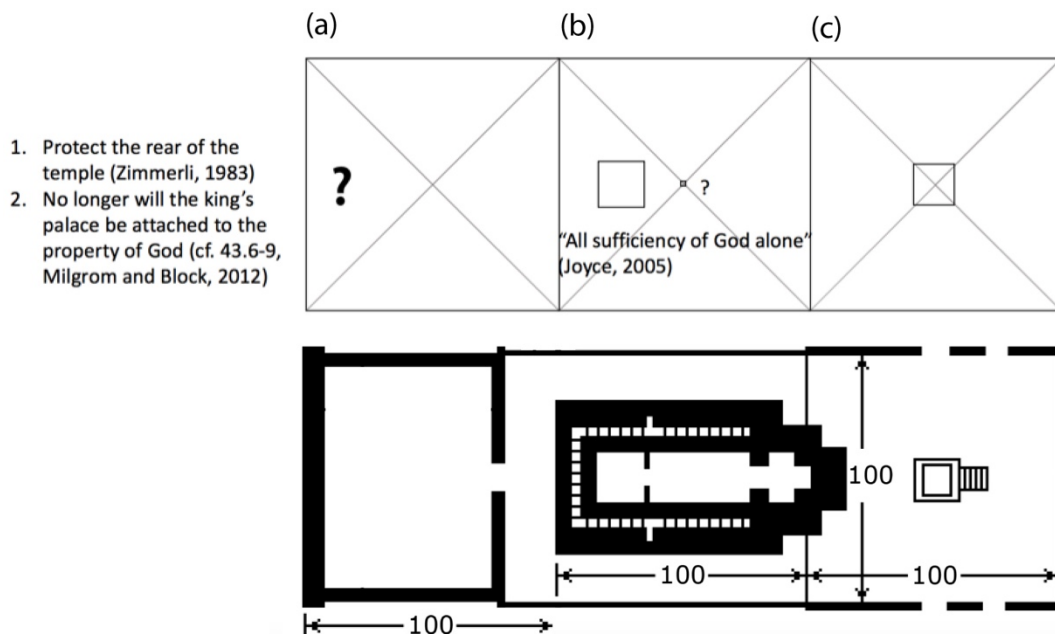
Fig. 4.29. A diagram of the spatial analysis of the construed three-squared system based on the measurements described in Ezekiel 41.12-15. An altar is placed in the centre of square (c). A question mark is placed in the centre of square (b), in which a wooden table, the only furniture, may stand. In square (a) where a centre is missing, another question mark is placed in the 'building'. Two explanations are given: 1. The building is to protect the rear of the temple; 2. No longer will the king's palace be attached to the property of God (because the 'building' has occupied the space).

Fig. 4.29 is a diagram of the three-squared temple planning with an attempt to locate the centres and make sense of the layout of the space. If we compare the square system in Ezekiel 40-48 with the tabernacle (Fig. 4.25), the squared 'holy of holies' in the centre of the tabernacle is set back towards the west in the square (b) in the plan of Ezekiel. In Ezekiel's three-squared temple planning, the centre of the square (c) is a squared altar with four corners (43.15). The centre of the square (b) remains obscure. There could stand here the item like an altar of wood, which is a walled structure and is the only furniture, the 'table before the face of the Lord' (41.22). Theologically, according to Joyce, the absence of other furniture implies the 'all

sufficiency of God alone'.[570] These two verses support the concept that the
ark/furniture is no longer needed:

> And when you have multiplied and increased in the land, in those days, says
> the LORD, they shall no longer say, 'The ark of the covenant of the LORD'. It shall not
> come to mind, or be remembered, or missed; nor shall another one be made. At that
> time Jerusalem shall be called the throne of the LORD, and all nations shall gather to it,
> to the presence of the LORD in Jerusalem, and they shall no longer stubbornly follow
> their own evil will. (Jeremiah 3.16-17, NRSV)

> I heard someone speaking to me out of the house [temple], while the man came to
> stand beside me. He said to me: Son of man, this is the place of my throne and the
> place for the soles of my feet, where I will dwell in the midst of the sons of Israel till
> forever [...] (Ezekiel 43.6-7, my translation)

Jeremiah 3.16-17 implies that one day the ark no longer represents God for the
people. Jerusalem will be the throne of the Lord. In Ezekiel 43.6-7, God lives in a
'place' (מָקוֹם, *māqôm*), the off-centred Holy-of-Holies. On the other hand, the
centralized wooden table, which is probably the table of the bread of presence (cf.
Exodus 25.23-30),[571] is a striking parallel to the tree of life in the Garden of Eden,
God's first sanctuary. Scholar of Judaism Lifsa Schachter identifies the garden of
Eden as God's first sanctuary through visualizing the text. She states that throughout
the period of the Bible Eden was commonly perceived as an archetype of the Temple
(e.g. Isa. 51.3; Ezek. 28.13; 31.8). 'The parallels between the Garden of Eden, the
desert Tabernacle and the later Holy Temple in Jerusalem and other Near Eastern
sanctuaries are striking.'[572] The evidence indicates that they are God's dwelling place
(Ex. 25.8; Deut. 12.4; Gen. 3.8). They are oriented eastward and cherubim are
present (Ex. 25.17-22; Gen. 3.24); fire is a significant element (Gen. 3.24; Ex. 12.9;
27.20-21); and Adam assumes a priest-like role (Num. 3.7-8; Gen. 2.15). Schachter's
statement supports the findings of this thesis. Both the tree of life and the wooden
table in Ezekiel are wood. They are both located in the centre. They represent life,
sustenance and God's provision for his people. In this sense, the square could be

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[570] Paul Joyce, 'Temple and Worship in Ezekiel 40-48', in *Temple and Worship in Biblical Israel*, ed.
by John Day (London, New York: T&T Clark, 2005), p. 151.
[571] Milgrom and Block, *Hope of Ezekiel*, p. 48.
[572] Lifsa Schachter, 'The Garden of Eden as God's First Sanctuary', *Jewish Bible Quarterly,* 41.2
(2013), p. 74.

understood as a representation of the garden, the walled safe place securing life. The multiple squared systems in Ezekiel 40-48 present themselves as conceptual 'gardens'. Different scales of ENCIRCLING/ROUND ABOUT STRUCTURES are used to create life-sustaining frameworks.

(a) The Garden of Eden Archetype (Genesis 2)

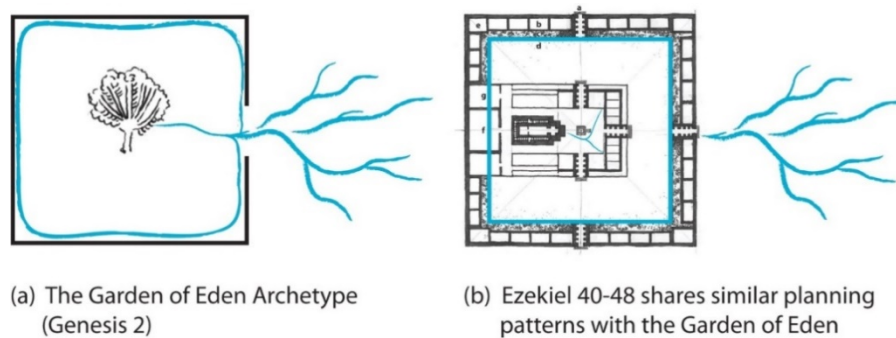(b) Ezekiel 40-48 shares similar planning patterns with the Garden of Eden

Fig. 4.30. A conceptual diagram of (a) the Garden of Eden and (b) Ezekiel 40-48.

As an illustration of this parallel between Eden and Ezekiel's temple, Fig. 4.30 shows Eden as an archetype of the Tabernacle and the Temple described in Ezekiel 40-48. The garden, the Tabernacle and the planning of the temple in Ezekiel 40-48 exhibit the development from one-squared, two-squared, to three-squared space systems. In the Mosaic Tabernacle, the construed two squares are centred at the Ark and the altar respectively. In the planning of the temple area comprising three squares in Ezekiel 40-48, the only centre that can be identified clearly is the altar in the inner court. The centre of the square in the middle might be the wooden altar or table, an ambiguous item (discussed in Fig. 4.29). Since the inner sanctuary is itself a square, it is possible that the inner little square (20*20 cubits) forms a square system with the wooden 'altar' serving as the centre of the next square. This might be reasonable considering the games of squares that are played through the hierarchy of SQUARED SPACES in Ezekiel 40-48, which creates a series of conceptual micro-macrocosms, a mathematical fractal system (cf. section 3.3.3). What stands out in this three-squared system is the distinctive third square, which is formed by (part of the casemate) wall and the open space. The thick casemate wall in the third square safeguards the conceptual micro-macrocosmic landscape in the widest sense עִיר (ʿîr, city) — a protected, guarded space (section 1.2). Zooming out to look at the whole garden-temple-city and the 'primeval' garden of Eden, Fig. 4.30 further illustrates

that Ezekiel 40-48 and the Garden of Eden can be understood as conceptual counterparts. Ezekiel 40-48 *inherits* the patterns, e.g. the FRUIT TREES (170), GARDEN WALL (173), ACCESS TO WATER (25), LIFE GIVING RIVER to build up A RESILIENT CITY. These will be further discussed in Chapter 5.

Summary
- Section 4.3.2 is an attempt to investigate the possible paradigms of planning that can be found in ancient Israel.
- 4.3.2.1 demonstrates the Levitic town planning as a precedent in the biblical world based on the similar planning layout and philosophy of the cities and their pasture-land.
- 4.3.2.2 discusses the constant threats of siege warfare in ancient Israel and how it affects the town planning and the mitigation of food production and water resources. Patterns in the development of town planning in the Israelite city based on Shiloh's theories reveal a combined pattern of house and wall to form the ENCIRCLING/ROUND ABOUT STRUCTURES and SQUARED SPACES. Despite their archetypal appearances, square fortresses in the Central Negev, fortresses at Ein Hatseva (biblical Tamar), Samaria, Lachish, and Beersheba demonstrate the resilient use of the space to function as everyday living spaces as well as fortification to be able to cope with war.
- 4.3.2.2 demonstrates the conjectural planning of Ezekiel 40-48 based on what is described in the text. In light of the similar patterns to the historical precedents, Ezekiel 40-48 could be understood as a resilient landscape planning aiming for security.
- The last part of section 4.3 compares various systems of squared spaces in the biblical landscape. The Garden of Eden and the Tabernacle are chosen for discussion because they are God's sanctuaries in different stages of the biblical history with similar spatial patterns.

4.4 Re-interpret Ezekiel 40-48 Based on Ancient Israelite Town Planning

Ezekiel 40-48 begins with Ezekiel's bird's eye view of 'a structure like a city' (40.2). Space analyses based on archaeological finds in Iron Age Israelite towns demonstrate that significant spatial patterns in Ezekiel 40-48 are similar to the patterns that feature in historical Israelite landscape planning including fortresses, towns and settlements. Iron Age town planning is interdependent and evolved with the prototypical four-room house and casemate walls. The wall system in Ezekiel 40-48 seems to include the casemate wall system that was more fashionable in the kingdom of Judah, as well as a massive wall that was more popular in Israel. Both, according to Avraham Faust, share siege-inspired defence and accessibility to the city wall as common planning strategies.[573] The ENCIRCLING/ROUND ABOUT STRUCTURES identified in Ezekiel 40-48, with its fourfold construction consisting of the wall (40.5), the chambers, the [courtyard] pavement (40.17) and the courts within the court (46.21), should be considered as a revision based on an existing customary plan with which Ezekiel and his audiences might have been familiar.

A vision of a new landscape planning must be developed with siege-inspired landscape planning strategies considering fortification and life support, for 'under Iron Age conditions, if the settlers could not have collected enough food or water, they would simply have perished'.[574] Bearing the historical context in mind, Ezekiel 40-48 should be viewed as a reconstruction plan envisioning an ideal world having experienced the notorious wave of destructions carried out by the Assyrians in the late-eighth century, and the Babylonian destruction in the late-seventh and early-sixth century.[575] On the other hand, Tainter notes that post-collapse societies tend to treat the past as 'a paradise lost, a golden age of good government, wise rule,

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[573] Faust, 'Accessibility', pp. 297-317.

[574] Avraham Faust, 'The Negev "Fortresses" in Context: Reexamining the "Fortress" Phenomenon in Light of General Settlement Processes of the Eleventh-Tenth Centuries B.C.E.', *Journal of the American Oriental Society,* 126.2 (2006), pp. 135-60.

[575] Avraham Faust, *Judah in the Neo-Babylonian Period: The Archaeology of Desolation* (Society of Biblical Literature Archaeology and Biblical Studies, vol. 18 (Atlanta, Ga.: Society of Biblical Literature, 2012), pp. 149-80.

harmony and peace'.[576] Considering Judah during the time of the writing of Ezekiel 40-48 as a post-collapse society, the planning in Ezekiel 40-48 seems to embody various ideas of a habitable landscape in different scales meeting the past with the future. Perhaps it exhibits a parallel to the Mesopotamian mentality, in which 'the way forward was back to the beginning'.[577] For in Akkadian and Sumerian expression, to 'restore' is literally 'to lead something back to its planned/predetermined place'.[578] This echoes Levenson's theology of the program of restoration of Ezekiel 40-48, which stands for an ideal of pre-political state, the deliverance from tensions of political life,[579] realistically. For the visions of God in Ezekiel 40-48, to restore might mean to lead the world to its planned place combining the most fundamental life-securing planning principles. The orthogonal planning of Ezekiel 40-48 exhibits a monumental landscape that is confident in having sufficient engineering capacity. With a series of squares of different sizes, the landscape defines multiple outside and inside, boundary and centre. Taking the outside-in perspective, Ezekiel 40-48 presents a firm vision that consists of various transformed 'rooms' forming a casemate wall system guarding the courtyard from threatening forces coming from the outside. Viewing inside-out, from a table to a city, Ezekiel 40-48 embraces the purest idea of a garden by creating a safe place where life flourishes from inside with the presence of God.

Ezekiel 40-48 envisions a future landscape encompassing the remembrance of disastrous experiences and an accumulated knowledge of the landscape planning based on Israel's own history. With sophisticated Mesopotamian landscapes around, Ezekiel 40-48 exhibits a vision to build up/restore not only 'a city that is called the perfection of beauty, the joy of all the earth' (Lamentations 2.15); but for the living environment ensuring a healthy Edenic landscape with a well-protected, habitable city (Ezekiel 36.25).

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[576] Joseph A. Tainter, 'Post Collapse Societies', vol. 2, Companion Encyclopedia of Archaeology, ed. by G Barker (London: Routledge, 1999), p. 1028.
[577] Stefan M. Maul, 'Walking Backwards into the Future', *Given World and Time: Temporalities in Context*, ed. by T. Miller (Budapest/New York: 2008), pp. 15-24.
[578] Characteristically the Akkadian (and also the Sumerian) expression found in the dictionaries for 'restore'. See Ibid., p. 19.
[579] Levenson, *Theology,* p. 57.

4.5 Summary/Conclusion

- Given the textual difficulties of Ezekiel 40-48, this chapter demonstrates that pattern language can be not only useful for decoding the textual space, but is also helpful for integrating pieces of knowledge about archaeological fragments with the plan at a landscape level.

- The pattern language provides a lens that brings the ancient landscape, textual or archaeological, closer to us because the patterns point to the fundamental principles of place-making across cultures.

- This chapter offers multiple representations of landscapes in the ancient Near East. The Mesopotamian style palace is characterised as a central court surrounded by a row of rooms. The Mesopotamian palace and its emphasis on distinctive landscape features, especially the river, is similar to Ezekiel 40-48.

- The Mesopotamian kings were keen to create awe-inspiring landscapes. The landscape made to be a 'wonder to behold' echoes our textual observation of Ezekiel 40-48 that consists of a series of awe-inspiring scenes.

- Mesopotamian landscapes manifest the concept of a pleasure-seeking paradise consisting of gardens/yards, temples, cities, trees, animals and water features. However, Ezekiel 40-48 seems to reveal a different planning concept of the landscape. This chapter highlights the concept of the Garden of Eden in the book of Ezekiel as the context for Ezekiel 40-48. Instead of presenting wealth, power and pleasure, the idea of the Garden of Eden represents a safe-and-sound landscape that is recovered from its desolate and ruined situation. This is closer to our observation of a restorative and sustenance-oriented planning of Ezekiel 40-48.

- As a restoration plan, the scale of Ezekiel 40-48 goes beyond the scale of the temples: Temple of Apollo at Delphi or the Mesopotamian brick temples that require constant renovation. Ezekiel 40-48 manifests itself as a regional, nationwide restoration plan including the temple, the cities, livelihood of the river, and the land.

Alexander states: 'When you build something you cannot merely build that thing in isolation, but must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole'.[580] This might be very true to Ezekiel 40-48. In this chapter I introduce various examples of landscape features in the ancient Near East that could help us understand the empirical background to Ezekiel 40-48. This chapter argues that Ezekiel 40-48 shares similar environmental characteristics to known historical landscapes from the ancient Near East. However, the similarities may suggest a common cultural heritage or cognitive environment rather than borrowing.[581] As David Pinder puts it, based on urban theorist Lewis Mumford: 'the archetypal ancient city' in the Near East was 'the very first utopia', 'being created by a king acting in name of a god, and being established as a sacred place, initially through the construction of a temple and surrounding walls, with an intrinsic relation to the cosmic order'.[582] In Mumford's words, 'the city itself was transmogrified into an ideal form — a glimpse of eternal order, a visible heaven on earth, a seat of life abundant'.[583] Mumford and Pinder's concept of the ancient Near East 'archetypal city' sheds light on the conclusion of this chapter, and provides a supportive background for the recognition of the 'archetypal patterns' of this thesis.

From the perspective of *The Pattern Language,* archetypal patterns for towns and neighbourhoods, houses, gardens and rooms occur based on the nature of the building process. However, the patterns need to be developed based on the nature of the site, and each community needs to have a pattern language for one's own project.[584] Consequently, this chapter argues that instead of merely considering cultural influences from others, we should consider Israel's own history of town planning.

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[580] Alexander, *Pattern Language*, xiii.
[581] Walton, *Ancient Near Eastern Thought and Old Testament*, p. 27.
[582] David Pinder, *Visions of the City: Utopianism, Power and Politics in Twentieth-century Urbanism* (Edinburgh: Edinburgh University Press, 2005), p. 18-19.
[583] Lewis Mumford, *The City in History: Its Origins, Its Transformations and Its Prospects*, Pelican Books, A747 (Harmondsworth: Penguin, 1966), p. 13.
[584] Alexander, *A Pattern Language*, xl.

My enquiry in this chapter refers to the reflection of the patterns in the landscape in the ancient Near East and the contextual factors behind Ezekiel 40-48. Given the complexity of the historical background to Ezekiel 40-48 in ancient Near East, containing possible mutual influences from Assyria, Babylonia, Persia or even Greece and elsewhere, this chapter establishes the existence of the underlying conception that surfaced at the planning of Ezekiel 40-48 in/after the post-exilic period through reviewing possible historical parallels. The result shows that Ezekiel 40-48 shares similar design patterns with different cultures in the ancient Near East. These include Assyrian paradise landscape planning integrating cities, palace courtyards, temples, the planting of trees, and management of natural resources; Babylonian squared city planning and restoration plans for the temples; Babylonian scribal training in writing, measuring, and planning; the Mesopotamian religious and medical city; the arrangement of the spring in Delphi; the garden capital and vast and efficient landscape structures in the Persian landscape. Many of these may have offered an inspiration for some aspects of Ezekiel. However, many landscape patterns that scholars consider as evidence of imitation, such as RAISED PLATFORMS/HIGH PLACES (62), HOLY GROUND (66), DEGREE OF PUBLICNESS (36), INTIMACY GRADIENT (127), and SOUTH FACING OUTDOORS (105) are archetypal landscape patterns, and should not be viewed as evidence of direct borrowing or imitation. The 'court surrounded by rows of rooms' considered the Assyrian, Babylonian or Mesopotamian style is in fact a kind of ENCIRCLING/ROUND ABOUT STRUCTURE that is common among different cultures. Nevertheless, there are precedents more likely to be influencing Ezekiel. Ancient Near East city planning might have shed light on Ezekiel's plan, specifically, Mesopotamian holy city Nippur should be viewed a significant parallel to Ezekiel 40-48, for it shares patterns that characterise Ezekiel's landscape. These include the SACRED SITES (24), ACCESS TO WATER (25), HEALTH CENTER (47), HIGH PLACES (62), POOLS AND STREAMS (64), HOLY GROUND (66), COMMON LAND (67), STILL WATER (71), TREE PLACES (171), GOOD MATERIALS (207), SQUARED SPACES, ENCIRCLING/ROUND ABOUT STRUCTURES, and SPACE TO BEHOLD. The geo-mythological spring in the temple at Delphi might be a precedent of Ezekiel's pattern WATER FROM UNDERNEATH, but as the trickle swells into a

stream and then into a wider healing river, the scale of Ezekiel's plan goes far beyond the spring of the temple of Delphi.

Alexander argues that 'every society which is alive and whole will have its unique and distinct pattern language'.[585] The last part of this chapter suggests that Iron Age town planning serves as the base map for the planning of Ezekiel 40-48 to secure defence and accessibility. Shiloh clearly demonstrates the continuity of development of the 'four-room house' and 'the casemate wall' in Palestine sites from twelfth century BCE on. The same elements later contributed to formation of the typical pattern of the Israelite provincial city, particularly the outer ring of buildings. This 'outer ring of buildings' forms the fundamental structures in Ezekiel 40-48, and can be understood as the ENCIRCLING/ROUND ABOUT STRUCTURES. Envisioning a vision, Ezekiel shows parallels with his ancient Near East context, but fundamentally has his own way of planning the landscape. The major planning conception that Ezekiel 40-48 bears in mind for a preferred future seems to be based on its own town planning strategies. Within the context of a shared landscape heritage, instead of imitating an exemplar, Ezekiel 40-48 exhibits a certain kind of self-reliance that reaches a higher form of excellence of landscape planning. Ezekiel 40-48 exhibits various forms of significance and different scales of palaces, gardens, temples, acropolis, citadels, fortresses and cities. Perhaps, due to this integration of the landscape, Ezekiel did not define what he saw in the report in 40.2. From time to time, 'a structure like a city' (כְּמִבְנֵה־עִיר, *kəmibnēh-ʿîr*) leaves room for interpretation.

The historical context reveals Ezekiel 40-48 as a practical measure that attempts to minimize the impact from external hazards. This chapter concludes that Ezekiel 40-48 can be understood as a problem-solving oriented restoration project that exhibits the ancient Israelite town planning strategies against the threatening forces round about. In the next chapter, I will further explore the mechanism of the landscape of Ezekiel 40-48 that might be planned for the wellbeing of the landscape and its inhabitants via liveable and functional spaces.

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[585] Alexander, *A Pattern Language*, xvi.

CHAPTER 5: EZEKIEL AND RESILIENCE

Two Excellencies Make a Singular Resilience

— Randolph T. Hester

Chapter 4 discussed the historical context of Ezekiel 40-48, which included battles in the open field and the dominant mode of battle, the siege, from the eighth-century BCE. After the city was destroyed, Ezekiel 40-48 envisioned a plan which adopted strategies based on the ancient Israelite town planning and Mesopotamian landscape know-how to secure the wellbeing of their cities. Chapter 5 is going to conceptualize the fabric of the landscape of Ezekiel 40-48. Here I start with a diagram.
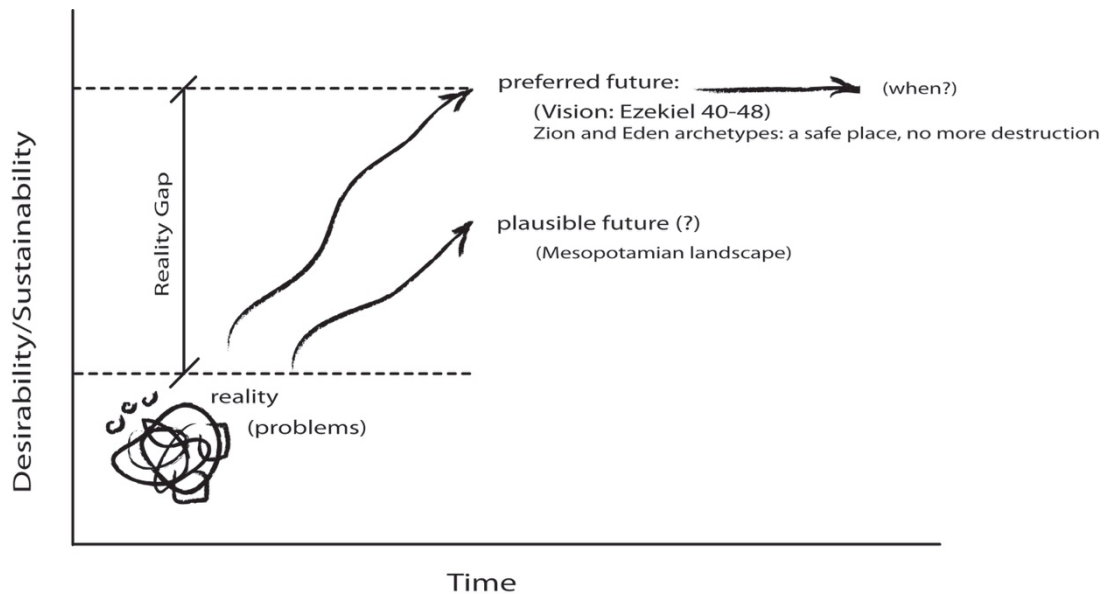
Fig. 5.1. A diagram showing the 'Reality Gap' between the reality and the preferred future considering the desirability/sustainability during the time of the author(s) of Ezekiel 40-48.

Fig. 5.1 is an attempt to illustrate my interpretation of the formation of Ezekiel 40-48. The post-exilic situation might not be quite satisfactory, and thus forms a reality gap with the preferred situation, which should be accomplished in the future — as is envisioned in Ezekiel 40-48. According to Konkel, the preferred future is 'everything remains as it was', and 'no more destruction of Israel' (discussed in section 2.2.2 of this thesis). The preferred future should be the final state of healing and salvation of Israel — that they can live in the land in safety. According to Levenson, the ideal

future should be accomplished by merging the imagery of Zion and Eden. The disastrous political reality of the exile could be reformed to an ideal of pre-political existence, where the tensions in political life are relieved (section 2.2.2). According to Ruth Poser (section 2.2.7), the vision is to build a safe place.[586] The magnificent archetypal cities in Mesopotamia (discussed in Chapter 4) may provide images of plausible futures, but in the mind of the planners of Ezekiel 40-48, they might not be preferable enough considering ancient Israel's specific aim and planning tradition (therefore, in Fig. 5.1, the plausible future is noted with a lower desirability/sustainability). To this point, Ezekiel 40-48 has been viewed as a problem-solving oriented restoration project that exhibits ancient Israelite town planning strategies. What needs to be further studied are specific questions, including: What are the problems? What is the preferred solution? What steps can be taken to close the reality gap? This follows Alexander's way of thinking, which uses the archetypal patterns to denote the context, the problem and the solution (section 3.2).

Konkel's view of the ideal future in which 'everything remains as it was' brings up a question: What does the 'was' refer to? Eichrodt interprets Ezekiel 47 as 'the return of paradise' and the 'coming to a climax'.[587] Levenson combines the image of the (political) Zion with the 'pre-political' Eden. In the book of Ezekiel, the desolate land is promised to become like the garden of Eden, and waste and desolate and ruined towns are now inhabited and fortified (Ezekiel 36.35-36; discussed in section 4.3 Ancient Israelite Town Planning).

Spatially, the preferred future which merges Zion and Eden is an integrated landscape of a garden and a (fortified) city, probably the best archetype one could come up with in the time of Ezekiel. As is described in Ezekiel 40-48, an ideal future includes a walled, safe city with the elements from Eden, the trees and river of life. However, there seem to exist some contradictions between Eden and Zion. How would the concept of a primeval paradise (Eden)[588] and the climax of a state (Zion)

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[586] Poser, *Das Ezechielbuch als Trauma-Literatur,* pp. 615-37.
[587] Walter Eichrodt, *Ezekiel* (London and Philadelphia, 1970), pp. 585-86.
[588] Stager, 'Jerusalem and the Garden of Eden', pp. 183-94.

be mingled, and together form one vision of an ideal future? If we consider time and space together, present day 'resilience' thinking might be helpful for us to understand this Eden and Zion combination. This is where the concept of 'resilience' comes into play in interpreting the planning of Ezekiel. Offering a broad sketch of its historical development, an interpretation might be applied to Ancient Israel, which went through growth (from a garden), exploitation (the nomads' life in the tents, and settling in the city), and reached its climax (the kingdom), and collapse.

5.1 Introducing Resilience
(a) The Adaptive Cycle
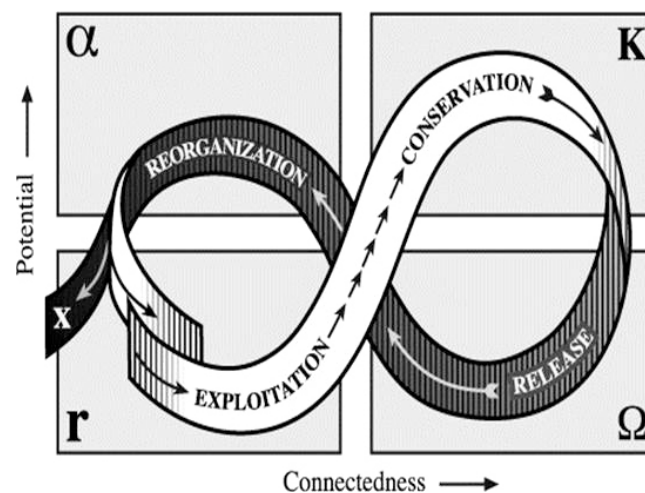
Fig. 5.2. Holling's 'The Adaptive Cycle'. Source: Holling 2002

Fig. 5.2 exhibits the Adaptive Cycle, a conceptual model depicting a resilient system proposed by ecologist C. S. Holling.[589] Holling examines the dynamics and structures of ecological systems and how they are similar to social systems in their adaptive and renewal cycles in moving through processes of exploitation, conservation, release, and reorganization. This thesis will introduce his theories of resilience further in future sections. The diagram shows that, for ecosystem and

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[589] C. S. Holling, L. Gunderson, and G. Peterson, 'Sustainability and Panarchies' in *Panarchy: Understanding Transformations in Human and Natural Systems*, ed. by L.H. Gunderson and C.S. Holling (Washington, D.C: Island Press, 2002), pp. 63-102. Also, C. S. Holling and L. Gunderson, 'Resilience and Adaptive Cycles' in *Panarchy*, pp. 25-62.

social-ecological system dynamics that can be represented by an adaptive cycle, four distinct phases have been identified:

1. growth or exploitation (r)
2. conservation (K)
3. collapse or release (Ω)
4. reorganization (α)

The adaptive cycle exhibits two major phases (or transitions). The first, often referred to as the foreloop, from r to K, is the slow, incremental phase of growth and accumulation. The second, referred to as the backloop, from Ω to α, is the rapid phase of reorganization leading to renewal. Adaptive cycles are nested in a hierarchy across time and space, which helps explain how adaptive systems can generate novel recombinations that a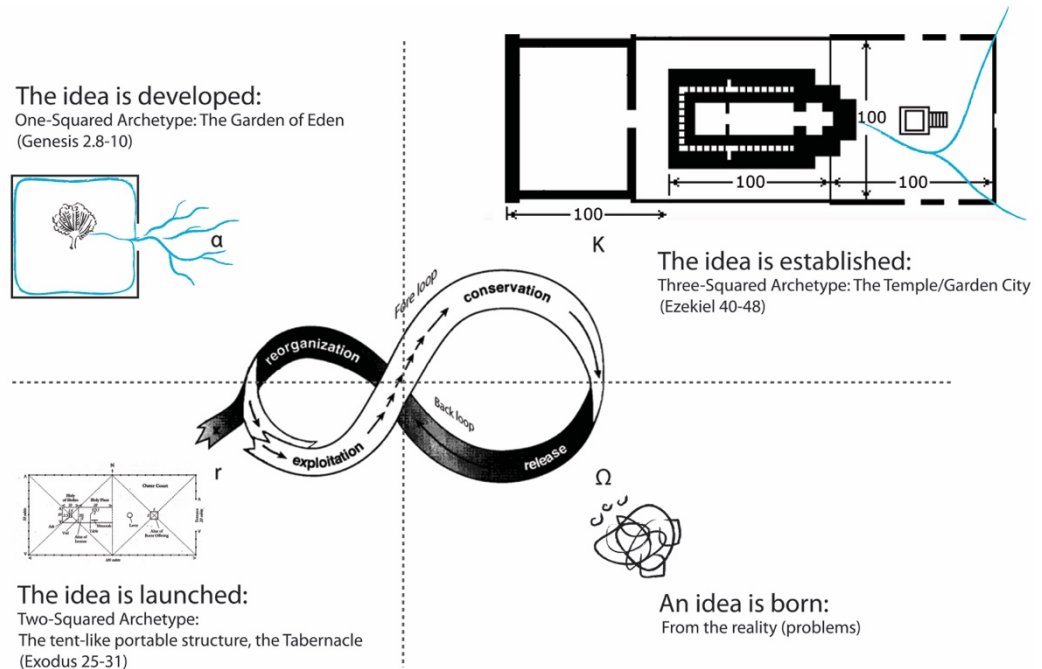re tested during longer periods of accumulation and storage of resources.[590] These 'novel recombinations', for the purpose of my thesis, can be used to interpret the novel combinations of the Zion and Eden landscape imagery in the planning of Ezekiel 40-48.

(b) The Adaptive Archetypes

The idea is developed:
One-Squared Archetype: The Garden of Eden
(Genesis 2.8-10)

The idea is established:
Three-Squared Archetype: The Temple/Garden City
(Ezekiel 40-48)

The idea is launched:
Two-Squared Archetype:
The tent-like portable structure, the Tabernacle
(Exodus 25-31)

An idea is born:
From the reality (problems)

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[590] 'Adaptive Cycle', Resilience Alliance, <https://www.resalliance.org/adaptive-cycle> [Accessed 1 September 2017]

Fig. 5.3. The Adaptive Archetypes. A conceptual diagram combining the biblical archetypes with the concept of the Adaptive Cycle in the studies of resilience.

My idea is to combine the biblical archetypes (as in Fig. 5.3) with the adaptive cycle notion and to call them the adaptive archetypes. The SQUARED SPACES which were discussed in Chapter 4 (section 4.3) and are illustrated above (Fig. 5.3, α, r, K) are biblical archetypes and when we view them together as part of an adaptive cycle we can call them adaptive archetypes. The three adaptive landscape archetypes are the Garden of Eden, the Tabernacle, and the established innovation of the temple/garden city in Ezekiel 40-48. The first, α, represents reorganisation, the second, r, growth or exploitation, and the third, K, conservation. Each of the three landscape archetypes is resilient because each is capable of adaptation.

Therefore my idea is that we have a dynamic system in which growth, conservation, collapse, and reorganisation of the system are linked together, and the system is resilient.

Ezekiel 40-48 represents an ideal vision with high connectedness (represented by the horizontal axis in the visual depiction of Fig. 5.1) and potential (represented by the vertical axis of the cycle of Fig. 5.1). The plan in Ezekiel 40-48 reveals the ability of a system to internally control its own destiny, and the range of accumulated resources such as knowledge, inventions, and skills that are available and accessible.[591] The vision demonstrates a coherent sense of the way the world ought to be in the prophetic messages, which could form the basis of an ecologically sensitive exegesis (section 2.4.1).[592]

Chapter 4 of the thesis has demonstrated how Ezekiel 40-48 might be developed based on Israel's rich planning experience in the context of Mesopotamian civilisation. Here, the model of the adaptive cycle serves as a tool of thought which

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[591] C. S. Holling, 'Understanding the complexity of economic, ecological, and social systems', *Ecosystems,* 4.5 (2001), pp. 390-405.
[592] For the ancient world-view and an ecologically sensitive exegesis, see Marlow, *Biblical Prophets*, pp. 95-98.

is helpful for navigating the various archetypes we have discussed. Ezekiel 40-48 can be understood as a product of the adaptive cycle running through the biblical history of Israel. Ezekiel 40-48 reveals itself as a plan that is capable of coping with the worst-case scenario — collapse (Ω). Ω is where an idea (of the world ought to be) is *born* aiming to overcome the problematic reality gap (Fig. 5.1). Following the cycle (as in Fig. 5.3), the idea is *developed* to a one-squared pre-political garden of Eden, *launched* through a two-squared Tabernacle, which represents the life style of the nomads, and gradually *established* to a three-squared temple/garden city, delivering an ideal future plan (the preferred future in Fig. 5.1).

From the books of Genesis and Kings we know that the conceptual Eden and Zion might not be ideal themselves. Inequality must have risen before the time of Ezekiel. In Ezekiel 45.9 God says 'Enough, O princes of Israel! Put away violence and oppression, and do what is just and right. Cease your evictions of my people'. According to historian Walter Scheidel, nearly all periods of peace seem to widen inequality. The only serious historical forces solving the problem of inequality are the 'four horsemen of equalization': war, disease, revolution and state collapse.[593] Similarly, the four deadly acts of judgement in Ezekiel 14.21 are sword, famine, evil creatures, and pestilence. War and disease are the common forces in both Ezekiel's four deadly acts of judgement and Scheidel's 'four horsemen of equalization'. Collapse, which gives an impression of creating a dead end, functions to heal the society. This view resonates with the concept of the adaptive/resilient system. The reality behind Ezekiel 40-48, however traumatic, can be understood as release and re-organization: both are needed in the ecological dynamics. The reality gap, however disappointing, is an opportunity for planning innovative ways toward the preferred future for a living system.

After linking the vision of the preferred future described in Ezekiel 40-48 with its Eden and Zion imagery, and interpreting the reality (collapse and the hope to

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[593] Walter Scheidel, *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century* (Princeton: Princeton University Press, 2017); and Ben Collyer, 'Learning to be fair: Lessons from the deep past', *New Scientist,* 3136 (2017) <https://www.newscientist.com/article/mg23531360-700-learning-to-be-fair-lessons-from-the-deep-past/> [Accessed 01 September 2017]

envision) with the concept of a resilient, adaptive cycle, I hope that 'resilience' is no longer a great leap, but a logical step to a deeper understanding of the planning of Ezekiel 40-48.

5.1.1 A General Review of the Development of the Concept of 'Resilience'

'Resilience' stems from *resilire, resilio*, Latin for 'bounce' — hence the idea of 'bouncing back'.[594] As a concept, resilience involves some potentially serious conflicts or contradictions, for example between stability and dynamism. Recently, resilience has become a fashionable term in various fields such as ecology, psychology, social research, sustainability science and disaster risk reduction.[595]

In a proverb of St. Jerome, the concept of resilience was used to describe the rebounding effect of matter. 'No one cares to speak to an unwilling listener. *An arrow never lodges in a stone: often it recoils upon its sender.*'[596] (*Sagitta in lapidem numquam figitur, interdum resiliens percutit dirigentem.*) In Middle French, *résiler* came to mean 'to retract' or 'to cancel', and then it migrated into English as the verb *resile*, 'return to a former position' or 'desist'. In 1625, Sir Francis Bacon, Attorney General of England, published a compendium of writings on natural history, the *Sylva Sylvarum*. In the section entitled 'Echo', 'resilience' is used to describe the ability to rebound, for example as a sound might. 'If you strike a *Ball* side-long, not full upon the Surface, the Rebound will be as much the contrary way'.[597]

A similar concept can be seen in the English translation of *Lumen divinum reformatae synopsis* ('Natural Philosophy Reformed by Divine Light'), written by

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[594] S. B. Manyena, and others, 'Disaster Resilience: A Bounce Back or Bounce Forward Ability?' *Local Environment,* 16.5 (2011), pp. 417-24.

[595] Alexander, 'Resilience and disaster risk reduction', pp. 2707-16.

[596] This proverb has been attributed to St. Jerome (ca. 347-420) as well as St John Chrysostom (ca. 347–407), Archbishop of Constantinople. See Alexander, 'Resilience and disaster risk reduction', pp. 2707-16.

[597] Note that when explaining echo, he uses the mirror to describe the angle of incidence from the object to the glass, and from glass to the eye, as 'resilience'. See Francis Bacon, *Sylva Sylvarum, or of Natural History in Ten Centuries* (London: printed for William Lee, 1625).

the Moravian theologian John Amos Comenius (1592–1670) in 1651. On page 189 on the topic of vision, 'resiliencie' means the 'rebound' of the light:[598]

> Whence it appears: 1. *Why only things that are coloured are seen?* Because the light must of necessity rebound to the eye, but that which hath no colour is transparent as the aire, *&c.*
>
> 2. *Why those things that are to be seen must of necessity be enlightened?* Because sight is the resiliencie of the light from the object to the eye.

The use of 'Resilience' in mechanics appeared in the writing of Scottish engineer William J. M. Rankine (1820–72). He defines 'Resilience' or 'Spring' as 'the quantity of mechanical work required to produce the proof strain, and is equal to the product of that strain, by the mean stress in its own direction which takes place during the production of that strain'.[599] Here, resilience describes the strain and stress of a solid, e.g. as of steel beams. Applied in engineering, a resilient steel beam survives the application of a force by resisting it with strength (rigidity) and absorbing it with deformation (ductility).[600] In mechanics, the Modulus of Stiffness/Elasticity defines the relation between stress and strain. The ratio indicates that stress is proportional to strain up to the 'proportional limit'. Before reaching the limit, a material stays resilient in that it has the ability to regain its shape after becoming deformed.

In the 1960s, the concept of 'resilience' passed to ecologists who began to expand the meaning of resilience by putting the emphasis on adaptability and how much disturbance the system can take and stay within critical thresholds.[601] Ecologist

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[598] Johann Amos Comenius, *Naturall philosophie reformed by divine light, or, A synopsis of physicks by J.A. Comenius ...; with a briefe appendix touching the diseases of the body, mind, and soul, with their generall remedies, by the same author* (London: Robert and William Leybourn for Thomas Pierrepont, 1651), p. 189.

[599] William J. M. Rankine, *A Manual of Applied Mechanics* (London: R. Griffin, 1858), p. 273. The first edition of this work was published in 1858 and the twelfth 1888. According to Todhunter, 'The work itself is important in the history of elasticity, for it was among the first to bring the theory of elasticity in a scientific form before engineering students'. See Isaac Todhunter and Karl Pearson, *A History of the Theory of Elasticity and of the Strength of Materials from Galilei to the Present Time* (Cambridge: University Press, 1886), p. 316.

[600] Alexander, 'Resilience and disaster risk reduction', p. 2710.

[601] Simin Davoudi, 'On Resilience', *DisP - The Planning Review,* 49.1 (2013), pp. 4-5.

Crawford Stanley Holling uses the term to describe the resilient character of natural systems under environmental change:

> The whole sequence of environmental changes can be viewed as changes in parameters or driving variables and the long persistence in the face of these major changes suggests that natural systems have a high capacity to absorb change without dramatically altering. But this resilient character has its limits, and when the limits are passed [...] the system rapidly changes to another condition.[602]

Holling treats resilience and stability as two different kinds of behaviour as well as two different ways to view ecological systems. Stability, or the pursuit of stability, stands for a traditional view based on physics and engineering that concentrates on the precise quantitative degree of constancy near an equilibrium steady state. Resilience, on the contrary, is a qualitative capacity to devise systems that, if measureable, are 'a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables'.[603] Hollings calls for a shift in awareness from aiming at predictable stability to establishing resilience that emphasizes the need to keep options open when dealing with a system profoundly affected by changes external to it and continually confronted by the unexpected.

5.1.2 Ecological Resilience versus Engineering Resilience

In 'Engineering Resilience versus Ecological Resilience', Holling redefines stability and resilience as two faces of resilience. He differentiates the 'engineering resilience' (efficiency, constancy, predictability) from 'ecological resilience' (persistence, change, unpredictability) by recognizing 'resistance to disturbance' and speed of return to the equilibrium as the measure of engineering resilience.[604] The dichotomy between stability and resilience of ecological systems is constructed by drawing

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[602] C. S. Holling, 'Resilience and Stability of Ecological Systems', *Annual Review of Ecology and Systematics,* 4 (1973), pp. 7. On p. 21 Holling states that when resilience is lost, this can 'trigger a sudden dramatic change and loss of structural integrity of the system'.

[603] Ibid., p. 14. Holling notes that 'the budworm forest community is highly unstable and it is because of this instability that it has an enormous resilience'. Ibid., p. 15; 'With these definitions in mind a system can be very resilient and still fluctuate greatly, i.e. have low stability', p. 17.

[604] C. S. Holling, 'Engineering Resilience versus Ecological Resilience', in *Engineering within Ecological Constraints*, ed. by Peter C. Schulze (Washington, DC: National Academy Press, 1996), p. 33.

attention to oppositions of efficiency and persistence,[605] constancy and change, and predictability and unpredictability.[606] Holling argues that designing ecosystems requires an emphasis not on the engineering, but on the ecological resilience that emphasizes instabilities.[607] Therefore, the amount of disturbance that can be sustained before a change in system control and structure occurs is much of a concern.[608]

Following from these definitions of 'social-ecological resilience',[609] considering people and nature as interdependent systems, resilience is defined as:

> The capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure and feedbacks, and therefore identity, that is, the capacity to change in order to maintain the same identity.[610]

Following Holling's development of 'ecological resilience' from 'engineering resilience', one further facet of resilience is favoured by a socio-ecological resilient system. The root of resilience in mechanics explains how a resilient steel beam survives the application of a force by 'resisting' it with strength (rigidity) and 'absorbing' it with deformation (ductility).[611] By comparison, a socio-ecological resilient system emphasizes the ability to 'absorb' disturbance and discourages the ability to 'resist' disturbance.

The concept of resilience has a high capacity to attract inter-disciplinary debate. In 1999, the Resilience Alliance was established as an international, multidisciplinary

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[605] 'The two contrasting aspects of stability — essentially one that focuses on maintaining efficiency of function (engineering resilience) and one that focuses on maintaining existence of function (ecological resilience) — are so fundamental that they can become alternative paradigms whose devotees reflect traditions of a discipline or of an attitude more than of a reality of nature'. In Holling, 'Engineering Resilience versus Ecological Resilience', p. 33.
[606] Holling, 'Resilience and Stability of Ecological Systems', p. 1.
[607] 'Instabilities can flip a system into another regime of behavior — that is, to another stability domain'. See Holling, 'Engineering Resilience versus Ecological Resilience', p. 33.
[608] Ibid., p. 33.
[609] C. Folke, Carpenter, S.R., Walker, B., Scheffer, M., Chapin, T., & Rockstrom, J., 'Resilience Thinking: Integrating Resilience, Adaptability and Transformability', *Ecology and Society*, 15.4 (2010), p. 20.
[610] Ibid.
[611] This is the quality of the resilient steel beam, see Alexander 'Resilience and disaster risk reduction', p. 2710.

research organization that explores the dynamics of social-ecological systems.[612] Over time, numerous research studies have been undertaken and theories developed of, about and around resilience in different fields. The concept thus aspires to describe mechanisms that seem equally applicable to the individual, society, nature, and technical systems.[613] A general and brief review shows that for ecosystem studies, resilience is often discussed in relation to stability, resistance, adaptability, and transformability (e.g., relationships between stability and resilience,[614] resilience and resistance in biodiversity,[615] and resilience thinking: integrating resilience, adaptability and transformability[616]). Resilience is grouped with, or consists of, resistance and recovery when the wellbeing of human or wildlife is disturbed (e.g. resistance, resilience and recovery,[617] resilience for coral reef conservation,[618] resilience over the lifespan: developmental perspectives on resistance, recovery, and transformation).[619] In wellbeing and psychology studies, disturbance/trauma becomes a factor that relates to resilience.[620] For climate change adaptation and

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[612] According to its website, the organizational approach of the Resilience Alliance involves three complementary strategies: (1) contributing toward theoretical advances in the dynamics of complex adaptive systems; (2) rigorous testing of theory through a variety of means, including: participatory approaches to regional case studies, adaptive management applications, model development, and the use of scenarios and other visioning tools; and (3) developing guidelines and principles that will enable others to assess the resilience of coupled human-natural systems and develop policy and management tools that support sustainable development. See <http://www.resilience.org/.>

[613] Dunn Cavelty, Myriam, Kaufmann, Mareile, Søby Kristensen, & Kristian (n.d.) 'Resilience and (in)security: Practices, subjects, temporalities', *Security Dialogue*, 46.1 (2015), pp. 3-14.

[614] Lei Dai, Kirill S. Korolev, and Jeff Gore, 'Relation between Stability and Resilience Determines the Performance of Early Warning Signals under Different Environmental Drivers', *Proceedings of the National Academy of Sciences*, 112.32 (2015), pp. 10056-61.

[615] Andrea S Downing, Egbert H. Van Nes, Wolf M. Mooij, Marten Scheffer, and Martin Solan, 'The Resilience and Resistance of an Ecosystem to a Collapse of Diversity (Resilience and Resistance in Biodiversity)' 7.9 (2012), E46135. This research emphasizes the need for multiple approaches to studying the functioning of ecosystems, as managing an ecosystem requires understanding not only of the threats to which it is vulnerable but also the pressures to which it appears resistant.

[616] C. Folke, Carpenter, S.R., Walker, B., Scheffer, M., Chapin, T., and Rockstrom, J., 'Resilience Thinking: Integrating Resilience, Adaptability and Transformability', *Ecology and Society,* 15.4 (2010), p. 20.

[617] Ashley Shade, Jordan S. Read, David G. Welkie, Timothy K. Kratz, Chin H. Wu, and Katherine D. McMahon, 'Resistance, Resilience and Recovery: Aquatic Bacterial Dynamics after Water Column Disturbance', *Environmental Microbiology,* 13.10 (2011), pp. 2752-67.

[618] Isabelle M Côté and Emily S. Darling, 'Rethinking Ecosystem Resilience in the Face of Climate Change', *PLoS Biology*, 8.7 (2010) <http://dx.doi.org/10.1371/journal.pbio.1000438>

[619] Ann S. Masten Wright, M. O. D., 'Resilience over the lifespan: Developmental perspectives on resistance, recovery, and transformation' In *Handbook of adult resilience,* ed. by J. W. Reich, A. J. Zautra, and J. S. Hall (New York, NY: Guilford Press, 2009), pp. 213-37.

[620] Cremeans-Smith, Julie K., Kenneth Greene, and Douglas L. Delahanty, 'Trauma History as a Resilience Factor for Patients Recovering from Total Knee Replacement Surgery', *Psychology &*

ecological conservation, resistance and recovery (two facets of resilience) can be two different strategies of management.[621] For environmental sciences such as engineering, planning and design, resistance and resilience could be different approaches/strategies in e.g. road planning in the floodplain.[622] In the field of disaster risk reduction, spatial planning plays an important role in influencing urban structures and strengthening resilience.[623] New academic fields have emerged around resilience, for instance resilience and mental health,[624] and resilience engineering.[625] These are some examples taken from thousands of research studies on resilience. They indicate how different academic fields speculate around the concept of resilience and endeavour to capture the complex processes, dynamics, and mechanisms that work across a range of engineering, biological, psychological, environmental, and socially resilient systems.

Health, (2014), pp.1-24. This research concludes that trauma history represents a source of resilience, rather than vulnerability, within the context of arthroplasty surgery.

[621] Côté and Darling, 'Rethinking Ecosystem Resilience'.

[622] Wim Douven, Joost Buurman, Lindsay Beevers, Henk Verheij, Marc Goichot, Ngoc Anh Nguyen, Hong Tien Truong, and Huynh Minh Ngoc, 'Resistance versus Resilience Approaches in Road Planning and Design in Delta Areas: Mekong Floodplains in Cambodia and Vietnam', *Journal of Environmental Planning and Management,* 55.10 (2012), pp. 1289-310. In this research on floodplain planning and design, 'the resistance strategy principally aims to prevent and regulate floods, which, as a result, can have a large impact on the natural floodplain dynamics. The resilience strategy aims to minimise the consequences of floods, but at the same time intends to maintain the natural floodplain dynamics as much as possible. The hypothesis behind the resilience strategy, in the context of this paper, is that, although the strategy might require higher initial investment in road development and/or rehabilitation, the longer-term costs in terms of road damage and ecological impacts will be lower'. The results illustrate that road planning and design in floodplains is a complicated task that requires an integrated approach.

[623] See Igor A. Kirillov, H. J. Pasman, North Atlantic Treaty Organization, Public Diplomacy Division, and SpringerLink, *Resilience of Cities to Terrorist and Other Threats Learning from 9/11 and Further Research Issues,* NATO Science for Peace and Security Series, Series C, Environmental Security (Dordrecht: Springer, 2008)

[624] Steven M. Southwick, Brett T. Litz, Dennis Charney, and Matthew J. Friedman, *Resilience and Mental Health: Challenges Across the Lifespan* (Cambridge: Cambridge University Press, 2011)

[625] Nii Attoh-Okine, *Resilience Engineering: Models and Analysis* (Cambridge: Cambridge University Press, 2016). According to the author, the book intends to achieve the following goals: (1) to develop a common explanation of resilience terminology as applied to civil infrastructure systems and energy (geological carbon sequestration); (2) to provide background information and an attempt to demonstrate that the main goal of sustainability is resilience; (3) to provide a systems framework for the analysis modelling of resilience in critical and interdependent infrastructures; (4) to provide a step-by-step approach of formulating the resilience of infrastructure and other energy systems; (5) to provide formulation of resilience engineering within the big data framework; and (6) to provide practical applications for planning and decision making for engineers, policy makers, and non-engineers alike.

5.1.3 Landscape Resilience

In theory, resilience can be applied to any phenomenon that involves shocks to a system.[626] It serves as an explanatory concept in various fields that deal with everyday stress and extremes. For human adaptation, environmental planning and design[627]are important tools to envision preferred futures.[628] 'Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.'[629] Alexander develops his design patterns based on the assumption that each pattern describes a problem, which occurs again and again in the environment, and then describes the core of the solution to that problem (section 3.2).

This brings us back to the beginning of this chapter, where we discuss the problems, the preferred future, the reality gap, and the adaptive process a system requires to reorganize itself from collapse (Ω) to start again (α). For Alexander, the patterns are adaptive, resilient, and follow the philosophy of GRADUAL STIFFENING (208). This is a principal pattern that serves as the foundation of all organic form and all successful buildings, a process in which details are fitted to the whole.[630] In the same line of thinking, Alexander states that the generation of resilient forms should go through an evolutionary process, which is termed the 'adaptive morphogenesis', through which a system is to be able to exhibit remarkable resilience in the face of chaotic disruptions in the environment.[631]

How do we picture a 'preferred future'? In 1990, the first World Congress of Local Governments for a Sustainable Future was held in response to the needs of local

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[626] Alexander, 'Resilience and disaster risk reduction', pp. 2707-16.

[627] Here the 'environmental planning and design' is used as an overarching term that addresses architectural history or design (interior or exterior), city or regional planning, landscape architecture history or design, environmental planning, construction science, cultural geography, or historic preservation. Aspects of sociology or psychology are also relevant to the studies.

[628] Steiner, Simmons, Gallagher, Ranganathan, and Robertson, 'The Ecological Imperative for Environmental Design and Planning', *Frontiers in Ecology and the Environment,* 11.7 (2013), pp. 355-61.

[629] H. Simon, *The Sciences of the Artificial*, Karl Taylor Compton lectures, 1968 (Cambridge: M.I.T. Press, 1996).

[630] Alexander, *Patterns*, p. 965.

[631] Michael W. Mehaffy and Nikos A. Salingaros, 'The Geometry of Resilience', in *Design for a Living Planet: Settlement, Science, & the Human Future* (Oregon: Sustasis Press, 2014).

authorities, cities, towns and counties that are taking on increasing responsibility as managers of both the local and global environment.[632] It seems that 'sustainability' was viewed as the preferred future at the end of the twentieth century, with a strong sense of environmental protection. Over time, in the twenty-first century, with a heightened sense of uncertainty and constant reminders of the world's unpredictability, it appears that resilience is replacing sustainability in the discourses addressing contemporary climate change issues.[633] In 2010 ICLEI (Local Governments for Sustainability),[634] the World Mayors Council on Climate Change and the City of Bonn, Germany, launched 'Resilient Cities 2010: the first World Congress on Cities and Adaptation to Climate Change'.[635] From then on ICLEI has served as a global platform for urban resilience and climate change adaptation.[636]

Other than climate change, security priorities have been particularly focused on cities because of their vulnerability as densely populated political, economic and cultural centres. After the 9/11 attacks in the USA, 2001, the concept of resilience was specifically used to cope with (in)security.[637] Security, and later resilience, has increasingly become 'a central organising metaphor within the (urban) policymaking process and in the expanding institutional framework of national security and

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[632] See Judy Walker, Implementing Agenda 21, ICLEI Acts in Response to UNCED, an article published on the United Nations web documentation <http://www.un-ngls.org/orf/documents/publications.en/agenda21/04.htm.> [Accessed 17 July 2018]

[633] See Simin Davoudi, 'Climate Risk and Security: New Meanings of 'the Environment' in the English Planning System', *European Planning Studies,* 20.1 (2012), pp. 49-69.

[634] ICLEI (International Council for Local Environmental Initiatives) was founded in 1990 by 200 local governments from 43 countries who convened for the first World Congress of Local Governments for a Sustainable Future at the United Nations headquarters in New York. Operations started in 1991 at the World Secretariat in Toronto, Canada, and the European Secretariat in Freiburg, Germany. ICLEI's first global programs were Local Agenda 21, a program promoting participatory governance and local sustainable development planning, and Cities for Climate Protection™ (CCP), the world's first and largest program supporting cities in climate action planning using a five milestone process including greenhouse gas emissions inventories to systematically reduce emissions.

[635] In 2012 the congress was renamed the Global Forum on Urban Resilience and Adaptation.

[636] See the website of the forum: <http://resilient-cities.iclei.org/resilient-cities-hub-site/about-the-global-forum/.>

[637] See Igor A. Kirillov, H. J. Pasman, North Atlantic Treaty Organization, Public Diplomacy Division, and SpringerLink, *Resilience of Cities to Terrorist and Other Threats Learning from 9/11 and Further Research Issues,* NATO Science for Peace and Security Series, Series C: Environmental Security (Dordrecht: Springer, 2008)

emergency preparedness'.[638] The September 2002 issue of *Landscape Architecture* magazine marked the first anniversary of the 2001 terrorist attacks on the World Trade Center with an issue on the role of landscape architects in designing more secure public spaces. Emerging in the UK in the early 2000s, predominantly as a policy responding to the threat of international terrorism, resilience has now proliferated as 'a policy metaphor for embedding "foresight", robustness and adaptability into a variety of place-making and increasingly local planning activities'.[639] The connection between security and landscape implied by the concept of resilience in the discourse of ecology, engineering and psychology is now accepted and now also found within the discourse of present day landscape architecture.[640] Now, in order to create resilient landscapes, planners and designers need to place a focus on processes dealing with disruption and enacting security practices. To this point, we see that the concept of security is highlighted in landscape resilience. The reality gap, however disappointing, is an opportunity for planning innovative ways toward the preferred future for a living system.

For landscape architecture that uses natural and cultural knowledge to guide action over a relatively large geographical area through the process of planning and design, resilience has to be not only a concept, but a real-world strategy that responds to the impacts of disasters.[641] According to the Resilient Design Institute, resilient design is defined as 'the intentional design of buildings, landscapes, communities, and regions in order to respond to natural and manmade disasters and disturbances — as well as long-term changes resulting from climate change — including sea level rise, increased frequency of heat waves, and regional drought'.[642] This definition concerns

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[638] Jon Coaffee, 'Rescaling and Responsibilising the Politics of Urban Resilience: From National Security to Local Place-Making', *Politics,* 33.4 (2013), pp. 240-52.
[639] Ibid., p. 241.
[640] For correlated subject such as 'Landscape Ecology', see Wu, J., & Hobbs, R, *Key Topics in Landscape Ecology* (Cambridge Studies in Landscape Ecology, 2007); 'Environmental Psychology', see Linda Steg, Agnes E. Van Den Berg, and Judith I. M. De Groot, *Environmental Psychology*: An Introduction (Chichester, West Sussex, and Malden, MA: Wiley-Blackwell, 2012); 'Landscape Engineering', see S. Strom, Nathan, K., and Woland, J., *Site engineering for landscape architects*, 5th edn (Hoboken, N.J.: John Wiley & Sons, 2009).
[641] Steiner et al., 'The ecological imperative', p. 355.
[642] 'Resilient Design Institute', Resilient Design Institute <http://www.resilientdesign.org/> [Accessed 7 June 2017]

both the spatial and temporal aspects of the problems of resilience. In order to bridge longer term sustainable development and shorter term crisis management in different spatial scales for common strategies,[643] novel conceptual linkages and forms of knowledge are needed for interdisciplinary co-operation towards multifunctional landscapes, which include both built environment and existing natural areas for stability and resilience.[644] Landscape architecture needs to deploy resistance to disturbance, the measure of the engineering resilience; to obtain the best knowledge regarding the magnitude of disturbance that can be absorbed;[645] and an ability to recover, to bounce back and return to a normal state taking into account the potential for being impacted towards a preferred future.

To sum up, how does landscape architecture view and practice resilience? Landscape architecture is a profession dealing with the increasingly complex relationship between the built and natural environments that is rooted in both engineering and ecology, in which both 'engineering resilience' and 'ecological resilience' are equally required. Through intentional design of buildings, landscapes, communities and regions, landscape architecture should construct and merge the dichotomy between rigid and ductile characteristics in order to create comprehensive strategies to respond to the problems. A multifunctional landscape can improve resilience by combining seemingly paradoxical concepts: efficiency with persistence, constancy with change, and predictability with unpredictability.[646] A resilient landscape promises a preferred future that is safe and sustainable.

There is still much to be learned about resilience in Ezekiel 40-48 considering warfare, epidemics and mortality in the ancient landscape of Ezekiel. In order to develop a framework portraying the mechanism of resilience as the central organising concept for depicting how the landscape systems responds to contemporary and future crises, I have selected three lines of inquiry. The first is to

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[643] See My Sellberg, Cathy Wilkinson, and Garry Peterson, 'Resilience Assessment: A Useful Approach to Navigate Urban Sustainability Challenges', *Ecology and Society,* 20.1 (2015), p. 43.
[644] This statement might have been based on Holling's resilience and stability dichotomy. See Steiner et al., 'The ecological imperative', p. 359.
[645] Holling, 'Engineering Resilience versus Ecological Resilience', p. 33.
[646] For the original argument in ecology, see Holling, 'Resilience and Stability of Ecological Systems', p. 1.

interpret the literary structure for the concept of resilience that can be revealed, and how it is revealed (the context); the second is to investigate the spatial patterns of the hazards in the various landscapes, as well as the temporal issues correlated with the space (the problem); and the third is to explain the possible ways to achieve resilience by improving the ability to resist and the ability to recover in the landscape (the solution). These three related themes (section 5.2-5.4) may cast some light upon our attempt to read Ezekiel 40-48 as an ancient conceptual design towards resilience.

5.2 Reading the Literary Structure as a Conceptual Model

5.2.1 Recognizing the Duality

This section will first introduce two biblical scholars' work to support the argument that a conceptual model comprising two lines of thought might be applicable for the planning of Ezekiel 40-48. Their work denotes a duality in the discourse of biblical literature, and each author's work resonates with Chapter 3 and Chapter 4 of this thesis respectively.

Chapter 3 illustrates that both the chiastic and the parallel structure of Ezekiel 40-48 are formed with a pair of corresponding design patterns. It opens a spatial dialogue between the urban and the rural, and between the walls and buildings and nature. In other words, both the chiastic and the parallel structure of Ezekiel 40-48 demonstrate the coexistence of the Zion and Eden landscape archetypes. Biblical scholar Jeremy Smoak notes that notions of 'building' and 'planting' have profound significance in the discourse of biblical literature. One important indication of this is the inner biblical discourse of a war-time curse, which constantly threatens ancient Israel with the failure of house building and fruit harvesting.[647] His study is helpful for my argument that, since the curse manifests the dual destruction of the city and its field, a dual strategy is needed to mitigate the curse's impact. This is where the Zion and Eden landscape archetypes collaborate in a strategic landscape vision. Given the literary structures that clearly demonstrate the city and the garden/field in the

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[647] The 'archetypal' curse is: 'You will build a house, but you will not live in it. You will plant a vineyard, but you will not harvest its fruit' (Deut. 28.30). See Jeremy D. Smoak, 'Building Houses and Planting Vineyards: The Early Inner-Biblical Discourse on an Ancient Israelite Wartime Curse', *Journal of Biblical Literature,* 127.1 (2008), p. 19.

landscape, Ezekiel 40-48 could be viewed as a plan to mitigate the problems of the dual destruction (building and planting; city and the field) due to warfare.

Chapter 4 demonstrates the Mesopotamian archetypal landscape patterns, and Ancient Israel's specific ways to develop the patterns based on the historical casemate walls and four-room house. Raymond C. Van Leeuwen, in 'Cosmos, Temple, House: Building and Wisdom in Ancient Mesopotamia and Israel', argues that both ancient Mesopotamia and Israel 'portrayed the world as a macrocosmic "house" — with its fields, waters, and variegated activities — to which temples and ordinary houses with their lands corresponded as microcosms'.[648] According to Van Leeuwen, both ancient Mesopotamia and Israel exhibit the builder's wisdom by systematically displaying the 'house building' and 'house filling/provisioning' in their landscape creation.[649] Here, another duality is noted. Van Leeuwen addresses the fact that the language of filling or provisioning is embodied in water supply and land management.[650] This observation resonates with the resilient characteristic this thesis argues. This chapter suggests that our modern day concept of 'resilience', which can be construed as a set of concepts or as the result of a binary process — resist and recover — may well resonate with such ancient builder's wisdom, and is a helpful way to conceptualize Ezekiel 40-48. Ezekiel 40-48 in the wider context of the book of Ezekiel is set in an environment that was frequently hostile and threatening. The hazards in Ezekiel 14.21, 'sword, famine, evil creatures and pestilence', are like their modern time counterparts of war, famine, ecological disservices, and contagious disease. Since 'resilience' is an explanatory concept that can be applied to any phenomenon that involves shocks to a system, it might be also useful for building up a conceptual model for ancient time multi-hazard strategy.

Building upon Chapter 3 and Chapter 4, this section argues that the literary structure of Ezekiel 40-48 presents a conceptual duality, which can be further developed into a model of resilience. The aim is to understand the significance of landscape

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[648] Raymond C. Van Leeuwen, 'Cosmos, Temple, House: Building and Wisdom in Ancient Mesopotamia and Israel', in *From the Foundations to the Crenellations: Essays on Temple Building in the Ancient Near East and Hebrew Bible*, ed. by Mark J. Boda, and Jamie R. Novotny (Münster: Ugarit-Verlag, 2010), p. 399.
[649] Ibid.
[650] Ibid., p. 400.

organization for mitigating the lived reality in ancient Israel, which can be discovered by observing the literary structures and the corresponding patterns.

In addition to the analysis of the form and function of the resilient landscape patterns, the coming sections also consider the function and significance of the (explicit and implicit) central placement of the theophany within those structures from the perspective of resilience.

5.2.2 Revealing Resilience

According to the Oxford English Dictionary, the definitions of 'resilient' include:[651]

1. (of a person or animal) able to withstand or recover quickly from difficult conditions.
2. (of a substance or object) able to recoil or spring back into shape after bending, stretching, or being compressed.

Konkel's thinking around the ideal future of Ezekiel 40-48 — that 'everything remains as it was' — reveals the characteristics of A RESILIENT CITY in a landscape with food, water, salt production and healing resources throughout the region for a landscape for life (Chapter 3). This section further argues that the structures of A RESILIENT CITY can be analysed as a pair of concepts — the ability to resist and the ability to recover — the two concepts that are helpful to demonstrate resilience.

For a resilient landscape to stand the test of time and hazards, both engineering resilience and ecological resilience are essential. The engineering resilience is significant for building up a strong hold of a city. The ecological resilience, on the other hand, is crucial for the city to withstand and recover from the disasters. Fig. 5.4 and Fig. 5.5 are diagrams showing how the ability to resist and the ability to recover could be gradually revealed to the viewers of the landscape and/or readers of the text when more and more problem-solving patterns are involved in the planning of the landscape. The upper half of each structure demonstrates the patterns that contribute to a rigid framework of protection. In the lower half, food, water and medicinal

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[651] 'Resilient – Definition of resilient in English by Oxford Dictionaries', *Oxford Dictionaries*, <https://en.oxforddictionaries.com/definition/resilient> [Accessed 13 September 2017]

resources are provided in the city and throughout the region (cf. section 3.2). The multifunctional landscape is constructed with many patterns. The patterns can be organized under the hierarchy of patterns within A RESILIENT CITY, which is made possible with small patterns and is supported by regional patterns such as HEALING RESOURCES THROUGHOUT THE REGION.

Fig. 5.4. A schematic diagram showing that the ability to resist and the ability to recover are enhanced in the landscape of Ezekiel 40-48 based on the literary structure 'the landscape of awe' in Chapter 3.
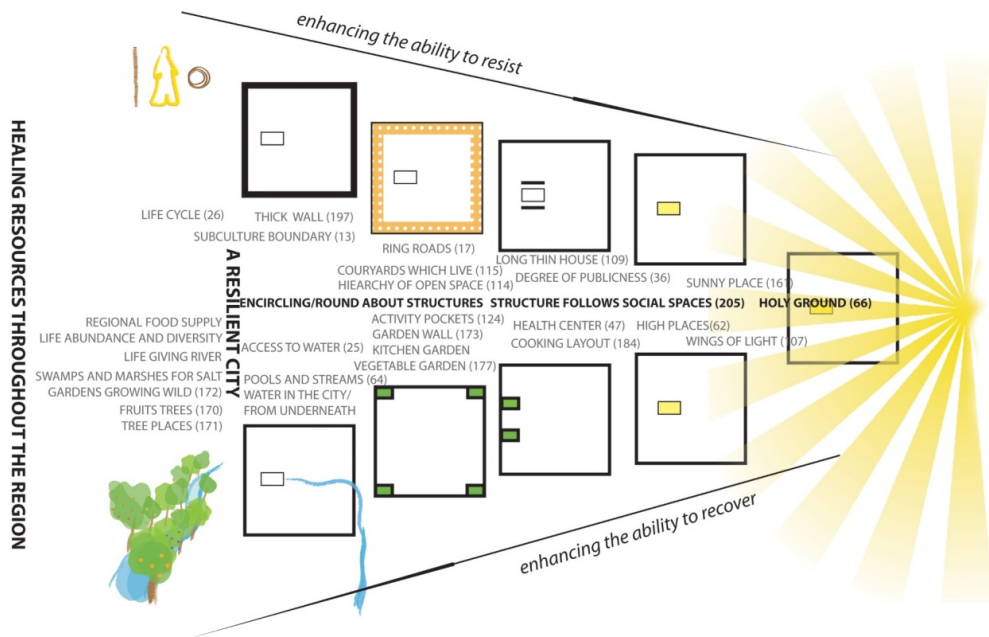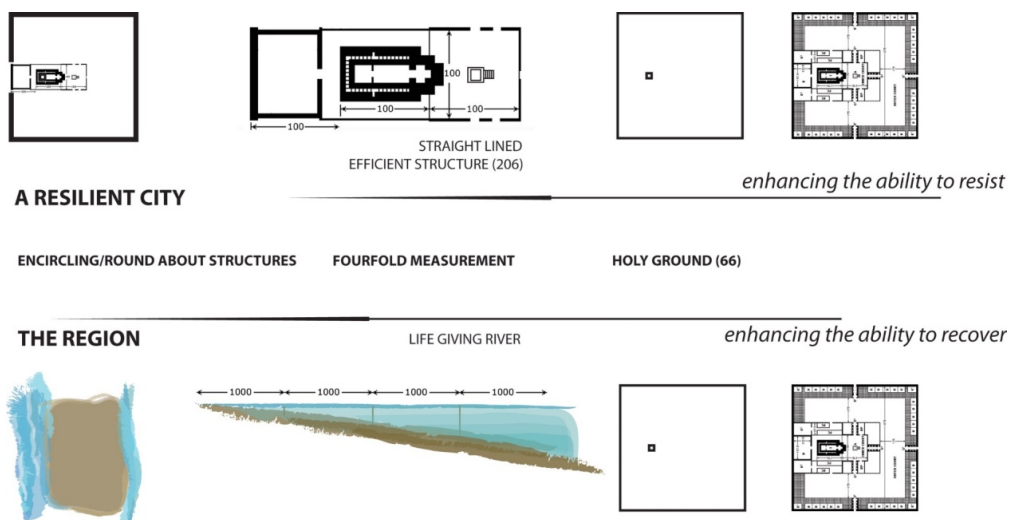

Fig. 5.5. A schematic diagram showing that the ability to resist and the ability to recover are enhanced in the landscape of Ezekiel 40-48 based on the literary structure 'the landscape of measurement' in Chapter 3.

Fig. 5.5 is drawn based on the parallel structure — the 'landscape of measurement' discussed in Chapter 3. This diagram also demonstrates a simple lesson in resilience by enhancing the ability to resist and the ability to recover. With each measurement, the patterns such as the HOLY GROUND, FOURFOLD MEASUREMENT are constructed to create A RESILIENT CITY within the region. Both diagrams demonstrate the city-region relationship. Biologist and urban planner Patrick Geddes said that 'it takes a whole region to make the city.' (cf. section 1.2)[652] The patterns across the regional and city scale reveal the bioregional scheme of Ezekiel 40-48. In an ecosystem with the presence of environmental hazards in mind, 'resistance' reacts to the magnitude of disturbance that causes a change in structure. 'Recovery', if measurable, can be understood as the speed of return to the original structure. These two are different but rarely distinguished concepts that fundamentally form resilience for an ecosystem to face hazards, and it could be instructive for us to understand the concept in Ezekiel.

Building resilience to disasters is important for the safety and wellbeing of a city. It is crucial for a city to have the ability to resist before it absorbs disturbance and to reorganize itself in the face of hazards that potentially cause disaster. According to the definition as it is currently used in disaster risk reduction, resilience is:

> The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.[653]

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[652] Catharine W. Thompson, 'Geddes, Zoos and the Valley Section', *Landscape Review,* 10.12 (2004), pp. 115-19.

[653] Terminology – 'Resilience', *UNISDR News* <https://www.unisdr.org/we/inform/terminology#letter-r> [accessed 28 May 2018]; UNISDR (United Nations International Strategy for Disaster Reduction) 'was established in 1999 as a dedicated secretariat to facilitate the implementation of the International Strategy for Disaster Reduction (ISDR). It is mandated by the United Nations General Assembly resolution (56/195), to serve as the focal point in the United Nations system for the coordination of disaster reduction and to ensure synergies among the disaster reduction activities of the United Nations system and regional organizations and activities in socio-economic and humanitarian fields. It is an organisational unit of the UN Secretariat and is led by the UN Special Representative of the Secretary-General for Disaster Risk Reduction (SRSG)'. See 'Who we are', *UNISDR News* <http://www.unisdr.org/who-we-are.> [Accessed 7 June 2017]

This definition might be by far the closest one to the concept of Ezekiel 40-48, which develops a resilient system that strategically empowers itself with the ability to both resist and recover. By building up a fortress temple city and developing a river system with secured water, food and healing resources, the concept of Ezekiel 40-48 is like a resilient steel beam that survives the application of a force by resisting it with rigidity (the walls) and absorbing it with ductility (the river).[654] We may conjecture that Ezekiel 40-48 is a landscape plan in the context of hazards and disaster risk reduction that considers engineering construction both for recovering an impacted ecosystem and its protection. In so doing, the plan creates a safe place by safeguarding the peace of the city and sustaining the life-giving ability of the whole land.

5.3 Identifying Spatial and Temporal Issues

The concept of 'resilience' sheds light on our understanding of the meanings of Ezekiel's landscape patterns. This section explains how the book of Ezekiel develops a conceptual framework of resilience by considering both the spatial and temporal issues to bridge longer term sustainable development and shorter term crisis management in order to create a plan ensuring future human security and wellbeing.

5.3.1 Spatial Domains: Four Hazards in Three/Two Spaces

In the book of Ezekiel, the distribution of hazards in the landscape is categorised spatially as: Far off/Near/In; Outside (Field)/Inside (City)

> Those far off shall die of pestilence; those nearby shall fall by the sword; and any who are left and are spared [besieged] shall die of famine. Thus I will spend my fury upon them. (Ezekiel 6.12, NRSV)

> The sword is outside, pestilence and famine are inside; those in the field die by the sword; those in the city — famine and pestilence devour them. (Ezekiel 7.15, NRSV)

> For thus says the Lord GOD: In addition, for my four evil judgment, sword, and famine, and evil creatures, and pestilence, when I send upon Jerusalem to cut off humans and animals from it (Ezekiel 14.21, my translation)

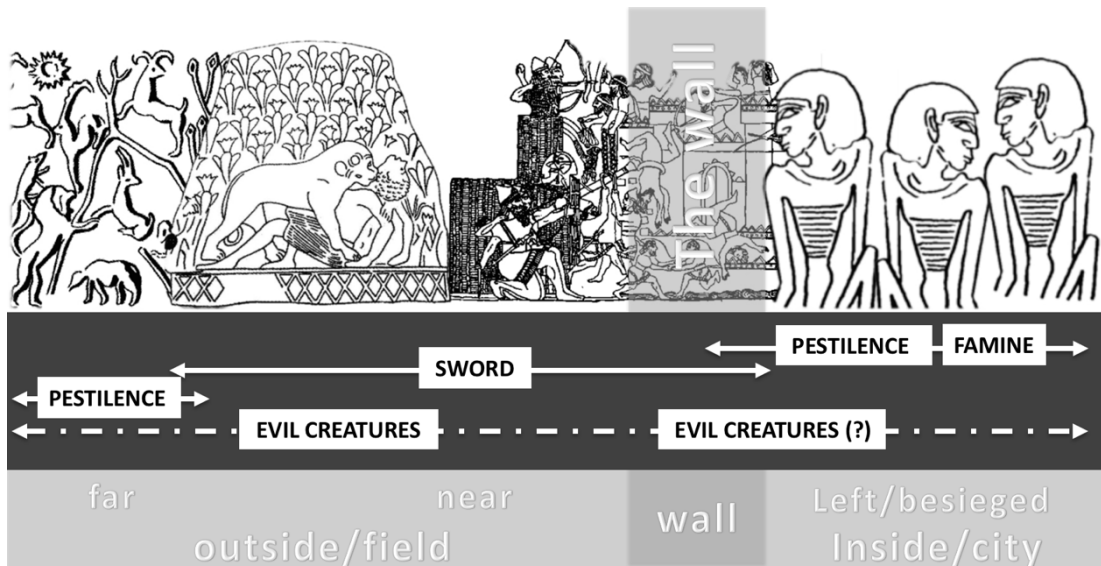[654] Alexander, 'Resilience and disaster risk reduction', p. 2710.

Fig. 5.6. A diagram attempts to demonstrate the spatial distribution of the disasters described in the book of Ezekiel. It should be noted that the images adapted here are used only symbolically. Source (from left to right): Keel, Fig. 59; Strawn 2005, Fig. 4.56; siege by the Assyrians (bible-history.com); redrawn after the famine scene from the Unas Causeway.

The disasters are distributed according to their spatial relationship with the city/wall. The description reveals a kind of tripartite or two-parts space-view of the living environment (Fig. 5.6). This spatial division might be substantial in the time of troubles. Accordingly, the landscape is divided into three categories based on their distance (from the city): far-off, near, and remaining/besieged (Ezekiel 6.12). In another system, the landscape is divided into two spatial categories according to the relationship to the city. The disaster sword happens 'outside', which might refer to the field, as is described in the same verse; and pestilence and famine happen 'inside', literally, 'in the house', might imply 'in the city' (Ezekiel 7.15). In the city, famine and pestilence considerations are much more of a concern. Famine is usually accompanied or followed by regional malnutrition, starvation, epidemic, and increased mortality. Jeremiah describes this situation in his prayer: 'If I go forth into the field, then behold the slain with the sword! and if I enter into the city, then behold them that are sick with famine!' (Jer. 14.18, KJV). Lamentations 5.9 describes the scarcity of food in the city and the risk associated with obtaining food from outside the city: 'We get our bread at the peril of our lives, because of the sword in the wilderness'. Gihon spring, the water supply of biblical Jerusalem, was

outside the city wall. This meant that, without a water supply facility, in times of war or siege Jerusalem's inhabitants had to risk their lives to obtain water.[655]

The area outside the wall is 'the field' that is not protected (Jer. 6.25; 14.18). This includes the countryside described as the 'unwalled village' that is without walls, bars, and gates (Ezekiel 38.11). Ezekiel 48.17 describes planning guidelines for a city that allow for the city having open land (suburbs)'.[656] The field is for crops. During the war, along with the wall and surrounding area, the fields become battlefields. Outside the city, the sword, pestilence and evil creatures are issues to be addressed. The 'evil creatures' might kill people (Ezekiel 5.17) and cause the land to become desolate (14.15). According to Jeremiah 5.6, 'everyone who goes out of them [the cities] shall be torn in pieces'. This indicates that the city walls serve as the boundaries separating human from life-threatening wildlife. However, it should be noted that in II Kings 17.24-27 there are lions' attacks among the new immigrants in the cities of Samaria. It is not clear to us how the lions 'broke in' the cities. The protective boundaries are important but surely are not seamless, especially if we consider other possible 'evil creatures' including the lions. An exhaustive list of these creatures may be found in the studies of physician and medical historian Phillip Norrie, who argues that it was the infectious disease epidemic that ended the bronze age in the Near East c. 1200 BCE. According to Norrie, the zoonoses — infectious diseases that can be transmitted from animals (both wild and domestic) to humans — were common. 'Animals such as bats, cats, cattle, dogs, fish, fleas, flies, geese, goats, horses, lice, mice, mosquitoes, pigs, rabbits, rats, rodents, sheep, snails, ticks and wolves were present in the Near East c. 1200 BCE [...] These animals caused many different zoonoses [...] Zoonoses such as bubonic plague, cholera, salmonellosis, typhus, encephalitis and tularaemia would be capable of spreading

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[655] 'Because of this problem, over the course of the Bronze Age and Iron Age, Jerusalem was equipped with three different water systems, which are now called Warren's Shaft, the Siloam Channel, and Hezekiah's Tunnel', see J. Magness, *The archaeology of the Holy Land: From the destruction of Solomon's Temple to the Muslim conquest* (Cambridge: Cambridge University Press, 2012), p. 34.
[656] For the countryside areas that are around or belong to the cities in the Old Testament, see Num. 21.25, 32.42; Deut. 3.5; Judge 1.27, 11.26; I Sam. 6.18; I Chr. 2.23, 4.33, 5.16; II Chr. 28.18; Neh. 11.25, 27, 28, 31.

over large areas and large populations, as well as lasting long enough to cause significant harm'.[657]

To this point, we have seen the significant role of the city wall in defining an area in relation to the hazards. The walls protect a city, town or other settlement from potential aggressors, such as the sword and evil creatures. However, people in the city may suffer from famine in times of war. The city wall makes the city a container of chaos in time of siege. Moreover, there are hazards that are not restrained by the boundary of the city. Pestilence, which can happen in far off places (6.12), as well as in the city (7.15), requires special attention. The boundary-breaking force of pestilence indicates the limitation of the physical protection of the wall, as well as the nature of the biological hazard, which is conveyed by biological vectors including exposure to pathogenic micro-organisms, toxins and bioactive substances.[658] 'A disease or a series of different diseases in different places would be rapid, would cross borders, would cause people to flee in mass migrations and would also cause people to abandon their city, leaving it intact and unscathed'.[659] This helps us understand Ezekiel 14.15 in which the evil creatures cause the land to become desolate.

Considering the boundary-breaking hazards, two strategies can be applied. First, the boundaries must be everywhere when threats are ubiquitous;[660]and, second, there is a requirement to prepare a ubiquitous healing force. In Ezekiel 40-48, layers of round about structures serve as boundaries everywhere to resist the invasion of hostile pestilence; and by planning the healing river, which runs out of the city as a boundary breaker (47.1), the need of recovery is met wherever the river goes (47.9). Other than pestilence, scarcity of food and water challenges resilience of the city. With the awareness of types of threats that cause loss of life, injury, illness or other

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[657] Philip Norrie, *A History of Disease in Ancient Times: More Lethal than War* (Cham: Palgrave Macmillan. 2016), pp. 10-11.
[658] For the definition of 'biological hazard', see UNISDR (United Nations International Strategy for Disaster Risk Reduction), 2009c, *UNISDR Terminology on Disaster Risk Reduction* (Geneva: UNISDR, 2009) <https://www.unisdr.org/we/inform/terminology> [Accessed 26 September 2016]
[659] Norrie, *A History of Disease in Ancient Times,* p.10.
[660] Yi-Fu Tuan, *Landscapes of Fear* (Oxford: Blackwell, 1980), p. 6.

health impacts, as well as with the knowledge of the spatial distribution of the hazards, it is possible to develop a new plan with functional structures that can cope with the problems by adding resilience to the city and the landscape.

5.3.2 Temporal Domains: Pre-event, Event, and Post-event[661]

We have recognised the spatial distribution of the hazards but we need to know more about the mechanism of the hazards that cause disaster, which exceeds the ability of the affected community or society to cope using its own resources, and eventually causes destruction. In considering the exposure to a hazard, the temporal domain of the hazard has to be examined. In this section the issues are explored according to the temporal domains of pre-event, event, and post-event. The 'event' refers to a hazard, or hazards, including the sword, famine, evil creatures and pestilence. Physical environments are involved in each phase with regard to the conditions of vulnerability that are present; and the capacity or measures to reduce or cope with the potential negative consequences are discussed accordingly.

5.3.2.1 Pre-event: Prophetic Early Warning System

> Thou also, son of man, take thee a tile, and lay it before thee, and pourtray upon it the city, even Jerusalem: And lay siege against it, and build a fort against it, and cast a mount against it; set the camp also against it, and set battering rams against it round about. Moreover take thou unto thee an iron pan, and set it for a wall of iron between thee and the city: and set thy face against it, and it shall be besieged, and thou shalt lay siege against it. This shall be a sign to the house of Israel. (Ezekiel 4.1-3, KJV)

Ezekiel is called by God to be 'a watchman unto the house of Israel', and to 'give them warning' (Ezekiel 3.17). When Ezekiel follows Yahweh's instruction, he is playing a vital part in the God-appointed defence of his nation, acting as an early-warning system detecting enemy activity. Ezekiel 4.1-3 points out the coming of

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[661] Injury epidemiologists divide analysis of health outcomes into the temporal domains of pre-event, event, and post-event, and further analyse outcomes according to the exposure variables of host, environment, and vehicle of injury (or type of force). In my view, this framework can also be applied conceptually to the analysis of war and defence policy in the book of Ezekiel. About the methodology and discussion on public health and defence policy, see John Grundy, Beverley-Ann Biggs, Peter Annear, and Seema Mihrshahi, 'A Conceptual Framework for Public Health Analysis of War and Defence Policy', *International Journal of Peace Studies,* 13.2 (2008), pp. 87-99.

siege warfare. 4.16-17 warns that people will 'eat bread by weight and with fearfulness' and will 'drink water by measure and in dismay', indicating water and food shortage and the psychological impact. 5.12 mentions the consequence that 'one third of you shall die of pestilence or be consumed by famine among you; one third shall fall by the sword around you; and one third I will scatter to every wind and will unsheathe the sword after them'. What are the likely impacts of the emergency, given a specific range of conflict scenarios? The following factors should be taken into consideration:[662]

- Potential for, and early detection of, conflict related food scarcity
- Potential for, and early detection of, disease outbreak and vulnerability
- Potential for, and early detection of, population movement

These factors call for preparedness for interventions that mitigate public health and security impact. The physical environment, including existing buildings, the infrastructure of the buildings and the landscape, is an influencing factor in the pre-event phase. Vulnerability of the city wall and food and water supplies should be taken into consideration. Ezekiel demonstrates awareness of possible construction failures of walls, such as walls that have 'breaches' (13.5) or have been 'daubed with untempered mortar' (13.10, 14); as well as the fact that Gihon spring is outside of the city wall, indicating a high vulnerability of the city wall and water supply system. Conveying accurate public information is one of the difficulties in the pre-event situation. Moreover, elements of the social environment such as baseline community trust, public acceptance of pre-event risk communication, and public awareness of large-scale threats, seem to be low in the time of Ezekiel. Ezekiel chapter 13 complains about the foolish (13.3) and misleading (13.10) prophets who say 'peace', when there is no peace (13.10). Therefore, the credibility of the early warning message might be undermined. It is important to outline a scenario (such as 5.3.1 Spatial Domains: Four Hazards in Three/Two Spaces) whereby prevention or harm minimization plans can be feasibly developed.

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[662] Michael Toole, Ronald Waldman and Anthony Zwi, 'Complex Emergencies', in *International Public Health*, ed. by Michael Merson, Robert Black and Anne Mills (Boston: Jones & Bartlett, 2006).

The idea of early warning and prevention is by definition the act or practice of stopping something bad from happening. It is conceptually equal to the concept of 'defence', the act of defending someone or something from attack; and 'resistance', which is the effort made to stop or to fight against someone or something as well as the ability to prevent something from having an effect.[663] The great numbers of prophecies in the book of Ezekiel concerning future hazards point to the significance of strengthening the ability to resist coming hazardous events.

5.3.2.2 Event: Conflict/Emergency

During the event of disease outbreak ('pestilence') and 'famine' or injury due to the 'sword' or 'evil creatures', treatment, decontamination and sheltering are important factors to consider. These events turned the landscape of peace into a landscape of fear. People 'eat bread by weight and with fearfulness' and 'drink water by measure and in dismay' (Ezekiel 4.16-17). 'The tongue of the infant sticks to the roof of its mouth for thirst [...]' Due to hunger, people's skin 'has shriveled on their bones', becoming 'as dry as wood' (Lamentations 4.4, 8). Evacuation, isolation and quarantine might be implemented at this phase. Crucial landscapes include: space for an emergency response clinic and operations; a water supply infrastructure to ensure clean and fresh water for drinking, washing, and healing; clinical surgery capacity and shelter availability; emergency access to the battlefield and medical supplies; and accessibility of transportation that influences the efficiency of medication and equipment delivery.

5.3.2.3 Post-event: Reconstruction/Restoration/Rehabilitation

Post-event involves immediate short-term mitigation and clean-up such as the decontamination of affected facilities, as well as long-term development including reconstruction, restoration, and rehabilitation. To reconstruct is to build (something damaged or destroyed) again. To restore is to give back (someone or something that was lost or taken): to return (someone or something). To rehabilitate is to bring

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[663] For the definitions of 'prevention', 'defence' and 'resistance', see Merriam-Webster online dictionary: <http://www.merriam-webster.com/dictionary.>

(someone or something) back to a normal, healthy condition after an illness and injury. This is by definition similar to 'recovery', which means to become healthy after an illness or injury or to return to a normal state after a period of difficulty.[664] These words reveal resilience as the idea of 'bouncing back' to normal that is rooted in the theory of mechanics.[665]

5.3.3 Summary

This section identifies issues in Ezekiel 40-48 based on both the spatial and temporal division of hazardous events in the overall narrative. Hazards are located using the city (wall) as a benchmark that is characteristic of the spatial logic used in the book of Ezekiel. Temporal division, which divides analysis of the outcomes into the temporal domains of pre-event, event, and post-event, is used for understanding the process of a landscape strategy that could be developed in Ezekiel to cope with hazards. The analysis in 5.3 suggests the need for a resilience framework consisting of resistance and recovery. The ability to resist — to prevent something from having an effect — is of special importance in the pre-event phase. The ability to recover — to rehabilitate to a healthy condition after illness and injury — is significant in the post-event phase. The city wall system serves as the major resisting role against the outside hostile force. The river that flows from underneath the temple serves as the major source of water, food and healing for recovery — inside and outside the city — wherever the 'pestilence' may go. By developing a strategic landscape plan to strengthen the entity with the ability to resist, it is possible to prevent the disasters from happening. Together with the ability to recover after being impacted, the landscape is empowered to be more resilient. From this perspective, Ezekiel 40-48 documents the expected consequences of the implementation (as a vision) that will enable the buildings and the landscape to resist/stand the test of hazards and remain functional to mitigate the hazards.

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[664] Ibid.
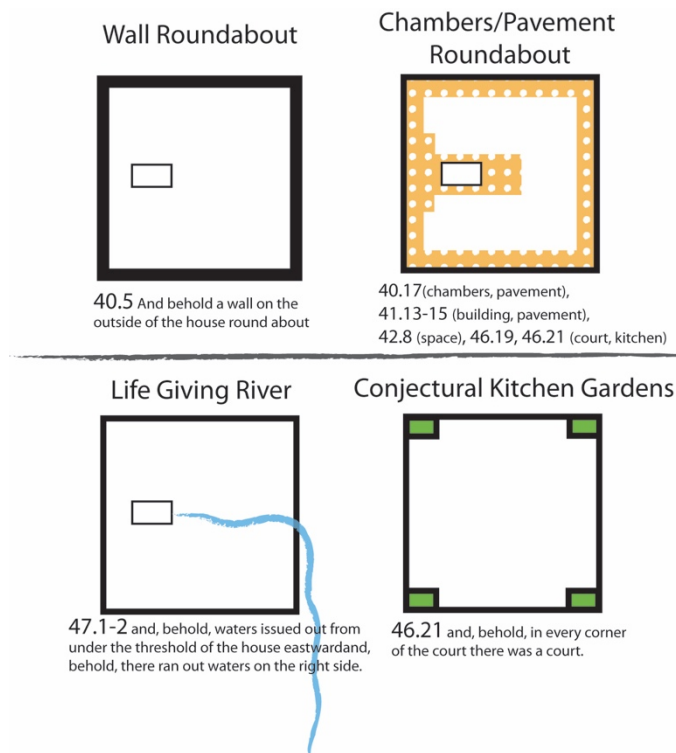[665] Manyena et al., 'Disaster resilience', pp. 417–24.

Fig. 5.7. A diagram showing the basic patterns that contribute to the resilience of the landscape.

Resilient landscapes are hugely important when it comes to health, safety and comfort within a city. If, during the siege, Jerusalem had had stronger barrier walls or emergency back-up walls, water and food supplies, and had generally been better designed to withstand siege, inhabitants would not have had to suffer the horror of national food and water security failure. No city can withstand long-lasting cruel siege, but if the water source is within the city, as planned in Ezekiel 47, consequences such as 'the tongue of the infant' sticking 'to the roof of its mouth for thirst' (Lamentations 4.4) could be possibly avoided. So how is resilience built into the landscape of Ezekiel 40-48?

After considering all possible and likely disaster scenarios — the spatial and temporal issues — to develop a plan ensuring future security and wellbeing, I would argue that both the ability to resist and the ability to recover contribute to resilience. Resistance and recovery can be used to form a framework of national security and emergency preparedness that ensures resilience across different scales from details of each space to the whole landscape. Fig. 5.7 shows the basic patterns that form the multifunctional landscape in Ezekiel. The next section attempts to demonstrate how the multifunctional landscape patterns could support achieving resilience.

5.4.1 The Ability to Resist

ENCIRCLING/ROUND ABOUT STRUCTURES (defence, storage, hygiene)

Builders and planners of ancient Israel needed to plan/design the city and the whole
landscape for major disasters. They also needed to create the structures to withstand
seismic activity and fire, as well as normal damage and public health issues that
come with thousands of people moving through the spaces in the landscape. In
Ezekiel, the resilient ENCIRCLING/ROUND ABOUT STRUCTURES are planned to
resist the hostile forces, meaning: to prevent injury and disease from happening.
These structures include the walls, kitchen garden, chambers, specialty flooring, a
long-lasting building and space envelope, and the interior wall guards. Applications
of lessons learned over time can better safeguard vulnerable structures in the
landscape, and are influencing factors that affect the vulnerability of a city.

5.4.1.1 *The wall*

In Fig 5.7 the upper two round about structures show the resilient character of the
landscape. 'And behold a wall on the outside of the house round about' (40.5) clearly
states the relation between the wall and the house/temple. The walls defend and
protect life from human and non-human threats. When a temple-city is under siege,
the defenders use the top of the wall as the fire-base.[666] Chambers around the
courtyard (40.17) are possibly part of the casemate wall system, and serve as
restaurants or resilient storage for food or other things, as well as resilient living
space (e.g., Rahab lived in the wall, Joshua 2.15).

5.4.1.2 *Kitchen Garden*

According to the spatial characteristics — walled, enclosed garden/court beside a
kitchen — as a conjecture, these courts sitting at four corners of the city (Ezekiel
46.22-23; Fig. 5.7) might be understood as places like the KITCHEN GARDEN[667]
surrounded by ENCIRCLING/ROUND ABOUT STRUCTURES: stone
walls/battlement. The conjectural kitchen courts/gardens are among the design

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[666] Yigael Yadin, *The Art of Warfare in Biblical Lands in the Light of Archaeological Discovery*
(London: Weidenfeld and Nicolson, 1963), pp. 1-24.
[667] Historically, the kitchen gardens are usually situated close to the kitchen and are enclosed by walls.

elements that contribute to the resilient and productive food-secure garden city. The kitchen gardens in ancient Near East are walled, irrigated spaces for vegetables and flavouring plants. They are located close to the kitchen, and are closely connected with garden orchard enclosures around the margin of the settlements.[668] The encircling 'stone wall' in Ezekiel 46.23, described as the 'battlement' or 'encampment' upon the wall in Song of Songs 8.9, exhibits four courts at the four corners of the city for resilient use. The kitchens in 46.23-24 and adjacent conjectural kitchen gardens, together with the round about chambers (40.17), could form an ENCIRCLING/ROUND ABOUT STRUCTURE multifunctional casemate wall system.[669] In order to ensure seasons of availability, and the convenience of having close at hand certain plants needed daily, the kitchen gardens must be supplied with ample water and provide protection from strong wind and animals.[670] This further helps us find the possible correlation between the kitchen/gardens (46.21) and the adjacent water flowing out from the temple (47.1-2). In Nehemiah 3.15 we can see that during the post-exilic restoration-period, the kitchen garden was systematically reconstructed with water supply:

> And Shallum son of Col-hozeh, ruler of the district of Mizpah, repaired the Fountain Gate; he rebuilt it and covered it and set up its doors, its bolts, and its bars; and he built the wall of the Pool of Shelah of the king's garden, as far as the stairs that go down from the City of David. (Nehemiah 3.15, NRSV)

In addition to the water and food supply system in the city, the greenbelts (KJV: 'suburbs', and NRSV: 'open land') that surround the city in Ezekiel exhibit a planned, self-contained landscape, containing proportionate areas of resilient use that combine military, residential, religious, and agricultural use of the space. Supplementary to the food system within the city, Ezekiel 48 plans the land use for food production at a regional level:

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[668] Helen Leach, 'On the Origins of Kitchen Gardening in the Ancient Near East', *Garden History,* 10.1 (1982), p. 10.

[669] A casemate consisted of two parallel walls with empty space between them. It was faster and cheaper to build, and afforded the inhabitants extra living space in crowded cities. During times of war, the space could be quickly filled with dirt and stones to create a thicker, solid defensive wall. See Chapter 4 for a discussion of the possible historical parallels of the landscape in Ezekiel 40-48.

[670] Leach, 'Kitchen Gardening in the Ancient Near East', p. 11.

Even though Ezekiel has planned for food production at a regional level, it is not clear to us about the source of food in time of war, when the fields outside the city are trashed. It seems that we can find solutions from the historical parallels. Section 4.3.2.1 (Fig. 4.20) demonstrates a conjectural model of the Levitic cities as the possible historical parallel to Ezekiel 40-48. It is likely that there are multiple boundaries/walls to protect the cities and the fields. When the war is still outside the outer wall, the field within the outer wall can still be harvested, and food can be stored in the inner/casemate walls for emergency. Lachish (Fig. 4.25) demonstrates an outer-and-inner defensive wall system. The fields and gardens inside and outside the cities should form a network of food production in time of war and peace. By building and planting, the landscape of Ezekiel becomes more self-sufficient and resilient to hazards even if the fields are trashed in time of war. During the exile, Jeremiah wrote a letter to encourage the exiled people in Babylon to remain living in hope through planting and building. They should 'build houses and live in them; plant gardens and eat what they produce' (Jeremiah 29.5). This shows an attempt to develop a food system through building and planting during the Babylonian captivity. In modern times, the urban designs of Ebenezer Howard and Raymond Unwin (England), and Frederic Law Olmsted, Henry Wright and Clarence S. Stein (North America) also address many aspects of the food system for a city and its landscape responding to different natural and social circumstances.[671] Their master plans are large and are beyond the capacity of my research, but are examples showing how, throughout history, communities are changing their landscape for a healthier, more resilient future.

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[671] M. Dubbeling, L. Bracalenti, and Lagorio, 'Participatory Design of Public Spaces for Urban Agriculture, Rosario, Argentina', *Open House International,* 34.2 (2009), p. 38.

5.4.1.3 *Specialty Flooring*

According to Faust, in the time of war, the pavements and corridors have to facilitate accessibility and efficient transportation. A paved peripheral street parallel to the temple-city wall provides free access to the wall. This is considered as a basic element in Iron Age city planning.[672] In Ezekiel 40-48, specifically, the temple compound including the temple building, holy chambers, the inner, outer court, outer chambers and walls seemed to be planned according to a similar principle. The paved area, with perhaps polished stones, functions as a public space for ease of transportation and better hygiene for public health as well as secured religious sanctity (section 4.1.2). When there was disease outbreak and injury due to war and famine, the pavement would provide emergency access to medical supplies and enhance the efficiency of medication and equipment delivery. The carefully displayed four-fold measurement pavement of special material (Ezekiel 41.13-15) is designed to surround the important buildings — the temple/house, and the holy building. The paved encircling courtyard and the chambers are patterned as is emphasized in the literary structure (40.17). Separation of structures with open space ('yard' in NRSV or 'separate place' in KJV) might be considered as specialty flooring (section 4.1.2; 4.2.1).

5.4.1.4 *Building and Space Envelope*

Durable building envelopes employ proper sealing and insulation at windows, door and roofs for protection and defence. The structural design of the window in Ezekiel is not yet clearly understood; however, the 'closed windows' (40.16, 41.16, 41.26, ASV/ERV), 'shuttered windows' (40.16, NASB), 'latticed windows' (41.16, 41.26, NASB), 'narrow windows' (40.16, 41.16, 41.26, KJV/NIV), 'beveled window' (40.16, 41.16, 41.26, NKJV), 'recessed windows' (40.16, 41.26, NRSV), 'windows with recessed frames' (41.16, NRSV), and 'windows were covered' (41.16, KJV/NRSV) may imply a highly insulated double-triple pane or recession for adequate moisture, heat and dust protection. As in Stephanie Dalley's description of the palace in the ancient Near East, the window openings may have contained a

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[672] Faust, 'Accessibility, Defence and Town Planning in Iron Age Israel', pp. 297-317.

panel of lattice-work. Sometimes the panels were solid, though carved with the pattern of a window grille, allowing no light or air to pass through, so as to bar demons of disease and pollution.[673]

From ancient to modern times, doors and entrance points need to be especially durable as they are the most trafficked areas. Robust entrances with thresholds and pavement effectively stop dirt, water and foreign contaminants (see Chapter 4). Ezekiel 41.16-17 can be understood as the description of the building envelope that makes a space enduring (see 4.1.2. The Patterns).

The building envelope is defined as 'The outer surface of a building',[674] which includes the window, the door and the interior wall guards, resists to air, water, heat, light, noise transfer, and protects the wall from moving objects. Besides the tangible building envelope, an imaginary shape of the space and building — the space envelope — indicating its maximum volume with respect to zoning regulations, is characteristic in the planning of Ezekiel. FOURFOLD MEASUREMENT of the temple area exhibits the tightness of the space envelope. A grid system in Ezekiel 41.13-15 seems to be applied as a principle by adopting some kind of layering and folding-unfolding planning process. The 'process of unfolding' is interpreted by Alexander as a 'process of creating life', as living structures grow in a step-wise fashion (section 3.2).[675] The parallel FOURFOLD MEASUREMENT of the length and depth of the river exhibits a standardizing process as the angel unfolds the measuring line (47.3-5). The systematic dimensions make it easier to copy, regulate, and to order the space with constancy. Mathematical order creates beauty in the landscape and ease to maintain or irrigate. Both the folding-unfolding process of measuring the building and river landscape concludes with a complex sense of the unapproachable,

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[673] Stephanie Dalley, *The Mystery of the Hanging Garden of Babylon: An Elusive World Wonder Traced* (Oxford: Oxford Univ.; 2013), p. 142.
[674] Nick Jelley, 'Building Envelope', *A Dictionary of Energy Science* (Oxford, Oxford University Press, 2017), in *Oxford Reference Online* <http://www.oxfordreference.com/> [accessed 6 July 2018]
[675] 'The Process of Creating Life' is the theme of the second book of *The Nature of Order. See* Alexander, *The Nature of Order: An Essay on the Art of Building and the Nature of the Universe*, Center for Environmental Structure Series, vol. 10 (Berkeley, Calif.: Center for Environmental Structure, 2002)

something unknown, a boundary, security or ultimate control; with an awareness that there is another world beyond whatever space we have encircled and made safe. Even Ezekiel might have had the urge toward adventure — to swim in a river that could not be crossed (47.5). A long-lasting low maintenance strategy is also planned, as no gold, silver and lavish decorations are applied in the temple and furniture is minimal. Ezekiel 40-48 never mentions cypress or cedars of Lebanon, which would indicate royal construction activity.[676] Minimized luxury may imply necessity and practicality being applied in the design.

5.4.2 The Ability to Recover

The ability to recover, to rehabilitate to a healthy condition after illness and injury, is significant in the post-event phase. Wherever the river goes, the river brings the ability to recover, which may be characterised as a growing, daring, and adventurous process.

WATER FROM UNDERNEATH, FRUIT TREE, LIFE GIVING RIVER

Gihon was the ancient, intermittent spring that made human settlement possible in Jerusalem circa 700 BCE.[677] However, it was outside the city wall. Since allocation of water resources had been a key problem due to the war, 'a great many people were gathered, and they stopped all the springs and the wadi that flowed through the land, saying, "Why should the Assyrian kings come and find water in abundance?"' (II Kings 20.20) In order to withstand the war, King Hezekiah made the pool and the conduit and brought water into the city (II Chronicles 32.4). After exerting themselves with all these hydrological constructions, when there is a chance to plan a resilient landscape instead, it is seen as wise to (re)locate the water source to the safest spot within the city. In so doing, major hazards such as famine and pestilence could be mitigated by a secured water resource. Day-to-day stress that comes from environmental constraints, including limited or uneven precipitation that causes river

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[676] See II Samuel 5.11-12; II Chronicles 2.3, 7; I Kings 5.20; 6.36; also, Ezra 3:7

[677] A. Little, 'Israel's Water Ninja: How Israel Found Too Much Water', *Bloomberg.com* (Bloomberg, 2015), p. 4 in <https://www.bloomberg.com/news/articles/2015-01-08/takadu-helps-israel-be-a-most-efficient-water-manager>

flow to be intermittent (cf. Jeremiah 15.18, where the prophet mentions the waters that 'fail'), or high heat and alteration of temperature and humidity, could be also mitigated.

Here water issued out from under the threshold of the temple [house] (Ezekiel 47.1), suggesting spring water issuing from the rock or soil under the most protected space in the city. In this way, people would not have to risk their lives by obtaining water from outside the city. Running out of the city, the original water spring gradually grows into a large, natural flow of water that crosses an area of land and goes into an ocean. The river not only provides water, but irrigates the arid land, causing trees to grow and fruit, and to grow leaves for medicinal use. The water 'heals', and 'everything will live where the river goes'. The river provides a habitat for fish and aquatic fauna, keeps the swamps for salt, and allows the wetland to flourish. It moves forward to support different towns and cities, going down to the sterile land (Arabah), and purifies the sea eventually. The river and its riparian vegetation form greenbelts that reach out to places bringing sources of life and healing.

Because the pestilence is ubiquitous, the healing needs to be abundant, permeating all areas. By ensuring spring water for fresh water supply and healing resources in the city, as well as providing water, food and healing resources outside the city, the river shows a resilient character of provision for all over the whole landscape. The nature of the underground spring water and the spontaneous character of the river suggest a resilient form and function to heal and ensure wellbeing of life without human agency.

5.4.3 Summary

In order to be sustainable, Ezekiel 40-48 develops a resilient system that strategically empowers the landscape with both the ability to resist and to recover. The idea of combining two forces or two characteristics into one resonates with what Randolph T. Hester notes, that 'two excellencies make a singular resilience'.[678] In order to

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[678] Randolph Hester, *Design for Ecological Democracy* (Cambridge, Mass. London: MIT Press, 2006), p. 227.

resist, the landscape needs to be rigid by enhancing strength by constructing ENCIRCLING/ROUND ABOUT STRUCTURES including the KITCHEN GARDEN, the protected cooking and planting space, as we discussed in early chapters about the pattern language of the landscape. Meanwhile, in order to have the ability to recover, the landscape needs to be made ductile by a LIFE GIVING RIVER to provide HEALING RESOURCES THROUGHOUT THE REGION with a water source being protected from underground and within the wall. These are made clear in the pattern language of Ezekiel.

5.5 Operating Interior-Exterior, and Ulterior Landscape Resiliency

Ezekiel 40-48, as 'visions of God', is described as divine revelation. These chapters reveal ancient policy makers have responded to the problems. Yadin states that when Jerusalem is besieged, the offensive spirit of the men of Jerusalem, and the three foundations upon which Hezekiah bases his resistance, are the help of the Lord, the assistance of his ally Egypt, and his own strength.[679] In times of war, the attackers naturally do all they can to shake these foundations.[680]

Discussion up to this point has focused on how to empower a city to have its 'own strength'. This section explores another foundation King Hezekiah bases his resistance upon, 'the help of the Lord', by recognising what goes beyond the interior and exterior space. Alexander recognizes the patterns HOLY GROUND (66) and SACRED SITES (24),[681] which also concern the spiritual reality that is essential for a living landscape. The sacred space here follows Alexander's patterns DEGREE OF PUBLICNESS (36) and INTIMACY GRADIENT (127), which is realized as the book of Ezekiel's hierarchical worldview.[682] The aim of this section is to explain the spiritual centrality of the landscape that is found in the literary structure in Ezekiel.

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[679] Yadin, '*The art of warfare'*, p. 319.
[680] Ibid., p. 318.
[681] Alexander, *Patterns*, pp. 132-34. Note the definition of 'ulterior' by Merriam-Webster Dictionary: 'going beyond what is openly said or shown and especially what is proper'.
[682] Cook and Patton, 'Hierarchical', p. 1-23.

5.5.1 A Higher Purpose for Vexing Problems

Ezekiel and his fellow exiles were living in a time during which hazards including intentional attacks, natural disasters, and human-caused accidents had broken barriers and flooded the world. These are described as four deadly acts of judgment: the sword, famine, wild creatures, and pestilence that cut off humans and animals (Ezekiel 14.21). These problems — gradual or chronic stress, shocks, or combinations of major changes to multiple dimensions simultaneously — might have triggered the action to plan for change. Motivated to take action, prophetic writings might have articulated critiques to point out what was problematic in the existing situation and propose alternative visions. Physical and spiritual constructions are re-examined to check for reasons that cause failure. The prophet Ezekiel, as a priest

Fig. 5.8. A diagram showing the lexical parallels of the 'holy' and the 'glory' in the landscape.

himself (Ezekiel 1.3), has knowledge and interest in cultic matters that runs deep — from his detailed description of sin in the temple (Ezekiel 8.1-11.25) to his comprehensive depiction of the landscape in Ezekiel 40-48. In general, Ezekiel articulates his critiques in a precise manner. He cares about the quality of construction methods and details as well as the quality of faith. For instance, as mentioned, he points to the untempered mortar (NRSV: smear whitewash) that would cause collapse due to weather conditions (13.10-11) to call for a cautious attitude concerning the peace of the city.

He also seems to require an extra week of purification from corpse impurity before a priest can participate in the cult (Ezek. 44.25-27; cf. Num. 19.10-13). A stricter rule
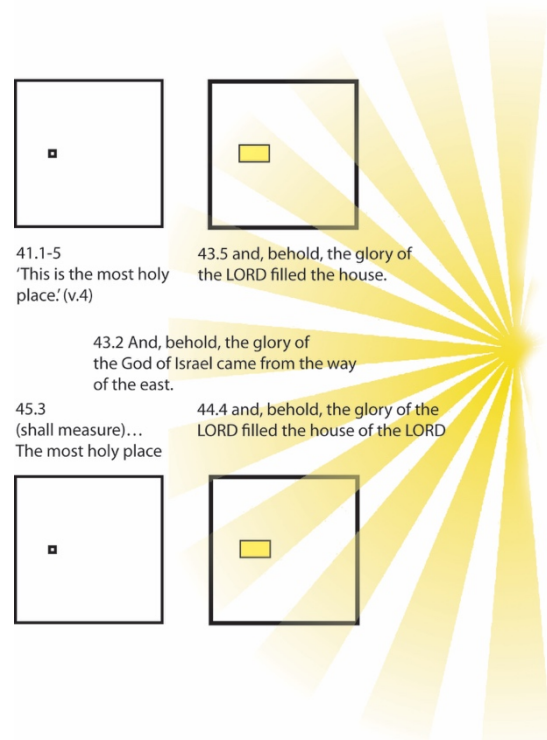
for forced isolation indicates a greater need to avoid infections and implies concerns about public health for a community that experiences disease outbreak. The temple that has been destroyed (perhaps, the temple that has just been rebuilt) is, in Ezekiel's estimation, inadequate.[683] A new plan in Ezekiel 40-48 suggests that the old/existing plan of the temple city and landscape might be incompetent for the task of maintaining the requisite holiness of God's residence. In order to close the reality gap (discussed in the introduction of this chapter), the old plan should be replaced. The awe-inspiring 'glory of the Lord' and the 'most holy place' in the landscape of measurement form 'a pattern of the patterns' in the sacred landscape. Fig 5.8 demonstrates that the 'glory' and the 'holy' correspond lexically and conceptually to each other. 'The most holy place' (41.4; 45.3) and 'glory of the Lord' (43.5; 44.4) create sacredness within the landscape of Ezekiel 40-48. The distinction and the parallel made between these two features create a theological construct that gives a great amount of flexibility and strength to the landscape as well as the theology. While the vision of the future contains within it a critique of the past, a vision of the physical landscape planning might contain within it a hope for a spiritual renewal. Strong proposes that 'the glory of the Lord' suggests the Lord enters into the battle, establishing a base camp, and going out into the field to fight chaos in all its forms.[684] The context of the divine battle sheds light on our understanding of the spiritual landscape as a base camp for the battlefield. The presence of the Lord in the form of his glory and holiness provides centrality and orientation to the landscape. It provides the community with the internal ability to persist, as well as the ability to recover as the healing river comes from underneath this sacred spot. With layers of protection for the sacred centre, the resilient landscape has the ability to resist, persist and recover without significant loss from illness, misfortune, attack, natural or social disaster, or other dramatic disturbance.[685] Alexander states that the sacredness of the physical world and the potential of the physical world for sacredness provides a

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[683] Jonathan Klawans, *Purity, Sacrifice, and the Temple: Symbolism and Supersessionism in the Study of Ancient Judaism* (Oxford: Oxford University Press, 2006), p. 96.
[684] John T. Strong, 'God's Kabod: The Presence of Yahweh in the Book of Ezekiel', in *The Book of Ezekiel: Theological and Anthropological Perspectives*, ed. by Margaret S. Odell and John T. Strong (Atlanta, GA: Society of Biblical Literature, 2000), pp. 69-95.
[685] Hester, *Ecological Democracy*, p. 139.

powerful and surprising path towards understanding the existence of God.[686] There is sacredness given to the everyday landscape — temple/city yards, public spaces and the whole landscape that are planned to withstand hazards as well as to last through day to day years of constant use. Moreover, sacredness fills enabling forms with order (measurement) and wonder (awe). These qualities provide the higher purpose that enables people to work together to resolve vexing problems. Sacred landscape now serves practical purposes as 'the designer transforms virtues and convictions that are formless into configurations in the landscape that communicate those values more expressively to the community'.[687]

5.5.2 Geometry of the Grand Boundaries

Fig. 5.9 is a conceptual comparison of the two sets of grand boundaries (40.3, 47.7; and 42.15-20, 47.15-20) depicted in the landscape of awe and measurement. Boundaries define the sacred and the profane; ensuring stability but at the same time expressing the resilient character of the landscape. Natural boundaries are a part of the sacred structure of the landscape. In Ezekiel, the river creates a boundary that Ezekiel cannot pass through. In 47.15-20, the Great Sea, the River Jordan, the Eastern Sea, from Tamar as far as the waters of Meribath-kadesh, and from there along the brook (to the Great
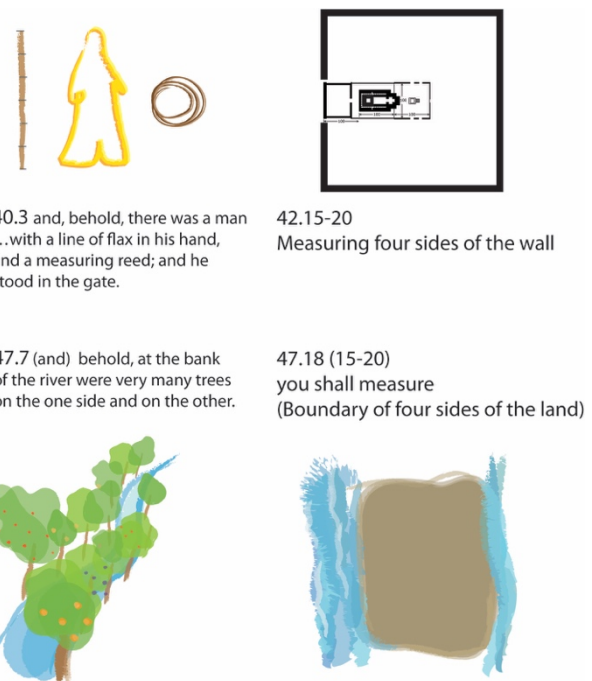
40.3 and, behold, there was a man …with a line of flax in his hand, and a measuring reed; and he stood in the gate.

42.15-20
Measuring four sides of the wall

47.7 (and) behold, at the bank of the river were very many trees on the one side and on the other.

47.18 (15-20)
you shall measure
(Boundary of four sides of the land)

Fig. 5.9. A diagram reveals the concept of the boundary that is manifested in different forms of landscape.

[686] Christopher Alexander, 'Making the garden: Christopher Alexander calls for a humane architecture that raises our eyes to God', *First Things: A Monthly Journal of Religion and Public Life,* 260 (2016), p. 23.
[687] Hester, *Ecological Democracy*, p. 135.

Sea), create the surrounding geometry. Creeks form edges reinforced by riparian vegetation and marshlands. These boundaries could provide identity, orientation and framework for mental constructs of a worldview.[688] They allow residents to comprehend their place. When the natural boundaries are strong enough to withstand chaos/hazards, and are arranged to maintain wellbeing of life, they can provide both engineering resilience (as the city wall) as well as ecological resilience (as the river) altogether.

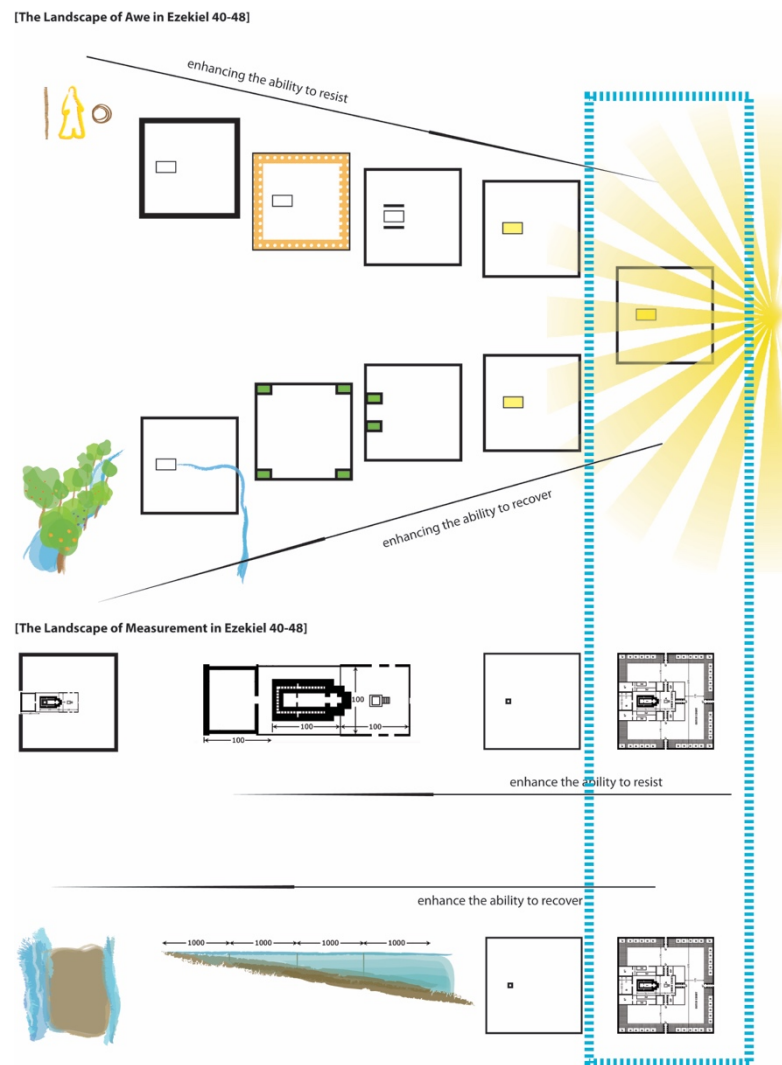5.6 Resilient Design as a Way to the Covenant of Wellbeing, a Covenant Forever

Fig. 5.10. A diagram that attempts to reveal the significance of the leading concepts of the 'law' in the form of the measurement and the pattern (marked in the blue box) when we view the two literary structures together.

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[688] Ibid., p. 130.

We have seen how Ezekiel 40-48 could serve as a resilient design for the problems outside and inside the city by bringing the urban and the rural landscape into cooperation with each other. By building and planting, the landscape is constructed with limited extent yet resilient forms. Both the stability and the ability to be life-giving are ensured by applying the protection of encircling structures such as the walls, the chambers and pavement, as well as water and food supply throughout the whole land. The holy space and the glory of God in the landscape bring a higher purpose to the plan for vexing problems in the battlefield of spiritual and physical reality. After analysing most of the application of concepts in the literary structures of the landscape in Ezekiel 40-48 from the perspective of resilient design, this section aims to understand the relatively more difficult part of the structures. Fig 5.10 illustrates the common 'head' or centre of the two literary structures: the landscape of awe and the landscape of measurement of landscape in Ezekiel 40-48.

In the journey of the landscape, Ezekiel experiences layers of awe and amazement, together with acts of measurement. Verse 43.12 sits at the centre of the landscape of amazement, exhibiting an overwhelming character when God says: 'Behold, this is the law of the house (תּוֹרַת הַבָּיִת, *tôrat habbāyit*)'. In the landscape of measurement, the upper half of the parallel progression starts from a cluster of measurements of the temple. The lower half begins with 43.10, a command of the Lord: 'And you, son of man, describe to the house of Israel the temple and its appearance and plan, that they may be ashamed of their iniquities, that they may (and let them) measure the pattern'. These 'heads' of the structures point out the distinction and correspondence between the Law of the Temple/House (43.12), the measurements (40.5-48) and the 'pattern' (תָּכְנִית, *toknît*) (43.10), a word rooted in the concept of measure as we have discussed in Chapter 3.

As a prophet who reveals prophecies regarding the destruction of Jerusalem and the restoration to the land of Israel, and as a priest who is familiar with the structure of the temple as it is supposed to be (based on his priesthood education), Ezekiel's existing knowledge interacts with the new landscape he has been presented with. The parallels between the Law (תּוֹרָה, *tôrâ*) and the measurement of the Pattern (תָּכְנִית,

toknît) present a knowledge-based procedure and order that considers the accomplishment of the plan. In 43.11, the Lord commands that if the people of Israel be ashamed of all that they have done, show them the form of the house, and the fashion, and the exits and entrance, and all the forms, and all the ordinances, and all the laws; and write it in their sight that they may keep the whole form and all the ordinances, and do them.

The expectation that the 'house' would be built is here implicit throughout 43.10-11, but the command is explicit in that last phrase: 'and do them'. However, this is all based on a proviso: providing they are ashamed. If they are not ashamed, then the 'house' will not be built. So, were they ashamed? We do not know. However, it seems that it is the hearts of the people that act as important criteria for the plan. Moshe Greenberg suggests that, as a restoration plan, Ezekiel 40-48 is to fulfil the promise in Ezekiel 37.24b-28:[689]

> They shall follow my rules and carefully obey my laws, and [so] dwell in the land that I gave to my servant Jacob. They shall dwell in it forever, with my servant David their chief forever. I will make for them a covenant of well-being, it shall be a covenant forever with them. And I will set my sanctuary in their midst forever. My tabernacle shall be over them. I will be their God and they shall be my people. And the nations shall know that I, YHWH, sanctify Israel, when my sanctuary is in their midst forever. (37.24b-28)

Recalling Greenberg, the five-fold repetition of 'forever', an important exilic theme, stresses the significant temporal achievement the restoration of Ezekiel 40-48 aims at. The covenant of wellbeing [*shalom*] (בְּרִית שָׁלוֹם, *bərît šālôm*)[690] is the covenant forever (בְּרִית עוֹלָם, *bərît ʿôlām*) (Ezekiel 37.26). According to Joyce, 'forever' in Ezekiel 37.24-28 is an important exilic theme, which can be referred to Gen 9.8-17 and Isaiah 54.9-10.[691] In Genesis 9.16, there is 'the covenant forever (בְּרִית עוֹלָם, *bərît ʿôlām*) between God and every living creature of all flesh that is on the earth'. In Isaiah 54.10, God's covenant of wellbeing is 'immovable'. The nature of the

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[689] Greenberg, 'Design', p. 181.
[690] According to BDB the meaning of *shalom* includes completeness, soundness, welfare, and peace.
[691] See Joyce, *Ezekiel*, p. 228.

covenant of wellbeing itself manifests resilience by combining the temporal ductility, which lasts 'forever' and the spatial 'immovable' rigidity.

There is another passage about the covenant of wellbeing in Ezekiel 34. According to Murray, it refers to peace between humans and animals. The meaning of wellbeing, *shalom*, is peace:[692]

> I will make them a covenant of peace (בְּרִית שָׁלוֹם),
> And will banish evil creatures (חַיָּה־רָעָה) from the land;
> That they may dwell in the desert in security (לָבֶטַח),
> And sleep in the forests. (Ezekiel 34.25)

From Ezekiel 34.25 we see the evil creatures, one of the four major hazards, is an issue being taken care of by the covenant. Just as modern resilient designs aim to help communities to become more resilient (e.g. more adaptable to future adverse events) and also sustainable (e.g. ensuring future generations can survive and thrive) over the long term, the ancient plan in Ezekiel 40-48 might have had the same hope in mind. If we take a closer look at the covenant of wellbeing [*shalom*], the structures of the landscape in Ezekiel 40-48 can be understood as a manifestation of the covenant. According to Batto:

> It is grounded in the idea of an original offense (rebellion) against the creator which led to an attempt to annihilate humankind. However, once divine rule was (re)established, humankind was not only spared, but all of creation also participated in the benefits of the new and more perfect order characterised by peace and harmony between creator and creation. This new order manifested itself in the cooperation of heaven and earth in producing paradisiac conditions.[693]

What Batto states about the covenant of peace can be a parallel for the landscape in Ezekiel when we overlap his statement to the literary structures analysed in Chapter 3. By superimposing the covenant of wellbeing onto the structures, Ezekiel 40-48 can be interpreted as a three-phase plan. The patterns of the temple — 'Law of the House' — manifest the divine rule. The ENCIRCLING/ROUND ABOUT STRUCTURES and FOURFOLD MEASUREMENT manifest the new and perfect

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[692] Robert Murray, *The Cosmic Covenant: Biblical Themes of Justice, Peace and the Integrity of Creation*, Heythrop Monographs, vol. 7 (London: Sheed & Ward, 1992), pp. 34, 38-40.
[693] Bernard F. Batto, 'The Covenant of Peace', *Catholic Biblical Quarterly,* 49.2 (1987), pp. 187-211.

order. The regional patterns including the LIFE GIVING RIVER would create paradisiac conditions on earth.

Fig. 5.11 demonstrates that the resilience in Ezekiel 40-48 serves as a way to make the covenant of wellbeing come true. In order to fulfil the ideal state of the vision, the hearts of people should be bent to observe the law of God in the form of the pattern and the measurement of the landscape. The divine rule needs to be (re)established, and both human and all created forms will benefit from a new and perfect order. This helps us to understand the application of the plan full of order, measurement, and structures that have a perfect layout. Eventually, when there is peace and harmony, the new order will show as the co-operation of heaven and earth.
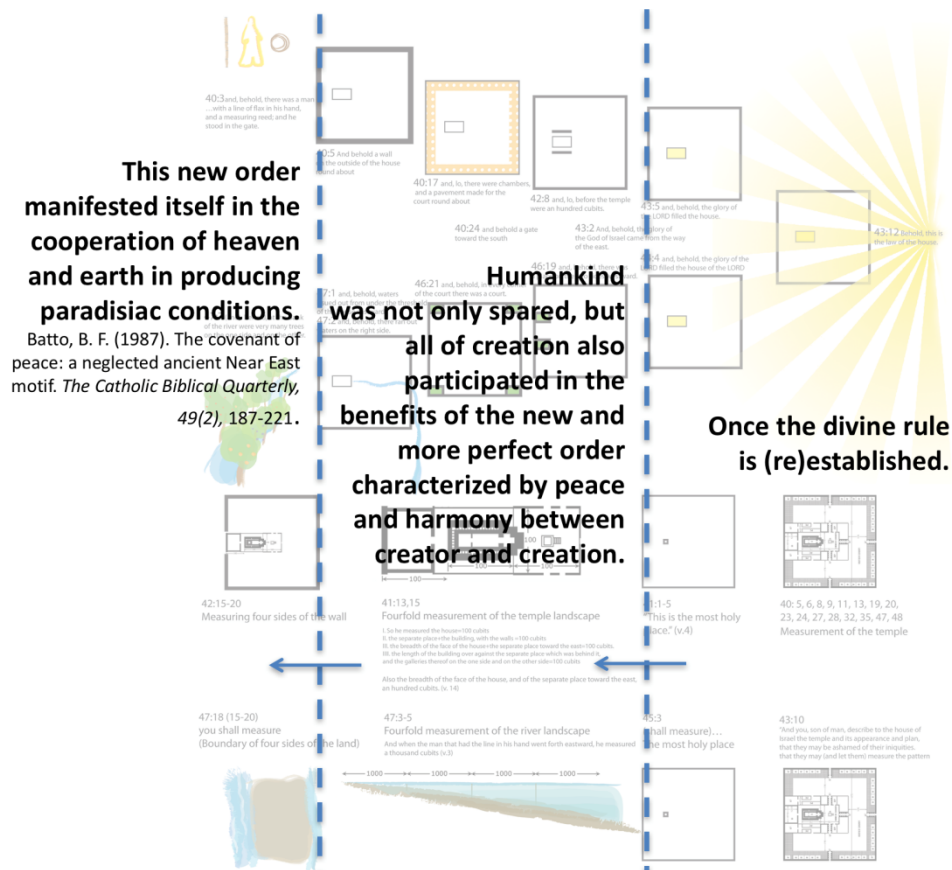

Fig. 5.11. A diagram that shows how the covenant of wellbeing could be understood if we read the landscape from the inside to the outside.

A new and perfect order between human and all created forms can be understood as a means to mitigate the problems of the 'evil creatures', and a way to the peace and

harmony among all the created. Murray states that the Bible contains two models thinking about humans and animals (living creatures): one paradisal, the other this-worldly and realistic. 'The first way uses the picture of peace *with* and *between* wild animals as a metaphor for cosmic and social peace; the second way sees peace *from* them as a practical aspect of desired *shalom*'.[694] Based on the concept of *shalom* in Ezekiel 40-48, a realistic paradise can be planned. In Ezekiel 47 we see trees for food and medicine. We see fish and fishermen. The habitable city is walled for keeping human and living creatures in harmonious order.

Ezekiel 40-48, as a plan, aims to guarantee the success of future restoration rooted not merely in the physical ruins but also the defeated human mind. As we have discussed in Chapter 3, the meaning of Ezekiel's תָּכְנִית (*toknît*, pattern, plan) involves the concept of equality. If 'The way of the Lord is not equal [is unfair]' (לֹא יִתָּכֵן דֶּרֶךְ אֲדֹנָי, *lōʾ yittākēn derek ʾădōnāy*) (Ezekiel 18.25, 29; 33.17, 20) is the common complaint in the ancient Israelite society, in 43.10, God's commandment: 'let them measure the pattern/plan' (וּמָדְדוּ אֶת־תָּכְנִית, *ûmādədû ʾet-toknît*) might be viewed as a way of justification by demonstrating 'equality' with the geometry of the landscape, and linking to a proper knowledge of God and his covenant.

To this point this thesis suggests that Ezekiel 40-48 should be read as a landscape of the covenant of wellbeing [*shalom*], which summarises themes of post-exilic restoration theology.[695] A system, community or society needs to be empowered with the ability to resist, absorb, persist, accommodate to and recover from the effects of a hazard in a timely and efficient manner.[696] What is deeply embedded in the mind of the exilic/post-exilic community might be the desire to maintain the status of *shalom* that can last forever. The concept of resilience helps us understand how the plan works to create a realistic paradise through the preservation and restoration of the physical and spiritual essentiality.

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[694] For Murray's argument of the covenant of peace and post-exilic restoration theology, see Murray, *The Cosmic Covenant*, pp. 27-43.
[695] Ibid., 40.
[696] Terminology – 'Resilience', *UNISDR News* <https://www.unisdr.org/we/inform/terminology#letter-r> [accessed 28 May 2018]

5.7 Conclusion

This chapter examines Ezekiel 40-48 as an ancient landscape plan for hazards and disaster risk reduction. Regardless of the great range and complexity of present day scholarship around the concept of resilience, Ezekiel 40-48 demonstrates a simpler way to structure the concept. Both the chiastic structure of 'the landscape of awe' and the parallel structure of 'the landscape of measurement' exhibit two corresponding ideas — resistance and recovery — to form one singular concept of resilience. From this perspective, the plan gives consideration to recovering an impacted ecosystem and protecting it by means of landscape architecture that is rooted in ecology and engineering. The aim of the plan is resiliency: to create a safe place by safeguarding the peace of the city and sustaining wellbeing by providing life-giving ability to the whole land. In order to achieve its goals, both ecological resilience and engineering resilience are needed in the planning process. Indeed, the plan presents both the quality of 'engineering resilience' (efficiency, constancy, predictability) by walling and by building up rigid systems to resist the threats and 'ecological resilience' (persistence, change, unpredictability) by recognising the power of the river with its unlimited life-giving ability to recover and by setting up marshlands and riparian vegetation for mineral and food production.[697] Considering the innate quality of the landscape, it can be closely related to mechanics in terms of its inherent rigidity and ductility that furnishes a sort of analogy for us to follow by characterising the resilient landscape.

Considering the presence of the hazards in the historical context of Ezekiel 40-48, disaster risk reduction may help us better define the meaning of resilience. When we think of the process of hazards causing harm or damage to a system and taking life, it is properly modern ecosystem resilience (e.g. in the face of climate change), and epidemiology/public health of war and defence policy, which consider the process of resisting and recovering, that can provide a better model for demonstrating the concept of resilience for Ezekiel. After all, the presence of the Lord is the ultimate source of power to guard, to sanctify, to resist the hazards, and to give life. Through

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[697] For the original argument in ecology see Holling, 'Engineering Resilience versus Ecological Resilience', p. 33.

self-awareness of human imperfection reflected and inspired by the perfection of the plan, and only by following the rules and carefully obeying the law of God, the whole plan can be announced and accomplished. By doing so, the resilient planning and design can really function as it is planned. As modern day resilient design works for sustainability, so Ezekiel 40-48 hopes to achieve its ultimate goal of fulfilling the covenant of wellbeing (*shalom*) for eternity.

CHAPTER 6: CONCLUSION

Although many of these visions remained imaginary and never found built expression [...] their significance extends in many other ways, in questioning reality, in influencing conceptions of space, in expressing desires for alternatives, in harbouring the seeds for other interventions.[698]

David Pinder

This thesis reads Ezekiel 40-48 as a plan by using the concept of landscape architecture as a lens through which to analyse the text and its construction. The text of Ezekiel 40-48 invites a spatial interpretation because it vividly links the land, city, temple, river and its ecosystem, all of which are planned and exhibited in a vision. The argument of this thesis is that Ezekiel 40-48 can be understood as an example of a kind of resilient landscape planning which plays an important role in influencing landscape structures in a way that cities are planned to be less vulnerable to multi-hazard threats.

6.1 *This study develops a conceptual model based on the concept of patterns and textual observation.*

In order to explore ways of conceptualizing the envisioned plan in Ezekiel 40-48, this thesis uses interdisciplinary approaches and theories by combining the methods of landscape architecture with a study of Hebrew literature. German biblical scholar Michael Konkel's work is important for my study because it opens a way to study the biblical text with a synchronic-diachronic combined approach, which encourages textual observation based on the final form of the text, but at the same time leaves room for historical resources, such as archaeological findings to step in for an overall analysis of the text.

Konkel suggests that disaster, healing and salvation are important motifs running through the whole book of Ezekiel. His view of the motifs resonates with the observation of this thesis. From the perspective of landscape architecture, this thesis

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[698] Pinder, *Visions of the City,* viii.

argues that certain patterns or landscape concepts are presented again and again as the audience reads along, giving a sense of significance and a rhythm to the landscape. In order to understand the meanings of the repeated patterns, Alexander's pattern language is considered as a principal concept because the patterns in his collection are presumed to be archetypal, and each pattern is viewed as a solution concerning a problem in the context. The pattern language identifies each pattern with a problem which occurs again and again in the environment, and then describes the core of the solution to that problem.

In so doing, the patterns allow us to re-visualize the landscape depicted in the text in ways that Western linear reading has not yet discovered. The Hebrew text is construable as a chiasm and a parallel structure. Each displays the landscape of awe and measurement accordingly.

The result shows that spatial patterns that emerge from the literary structures offer useful guidance for understanding the planning concept of the landscape. For instance, ENCIRCLING/ROUND ABOUT STRUCTURES, which create a sense of resistance, and the WATER FROM UNDERNEATH, which enhances the ability to recover, play out scenes of an awe-inspiring landscape that is displayed in a thematic chiasm — the use of bilateral symmetry about a central axis that leads the audience from outside towards inside and goes out again. On the other hand, the landscape of measurement is construed as a parallel structure, which demonstrates the measurement of the city and the measurement of the grand landscape side by side with a shift of scale. The fourfold measurement of the temple landscape (41.13-15) and the fourfold measurement of the river (47.3-5) reveal a sophisticated system of measurement using a step-wise process of unfolding. The concept of the fourfold measurement resonates with the ENCIRCLING/ROUND ABOUT STRUCTURES that create a casemate wall system, which is also a fourfold construction consisting of the wall (40.5), the chambers, the [courtyard] pavement (40.17) and the courts within the court (46.21).

6.2 Adding to existing studies, this study proposes that the landscape in Ezekiel 40-48 is described for both religious and pragmatic purpose. The planning concept in Ezekiel 40-48 was correlated to early Israelite town planning strategies.

Scholars of Ezekiel 40-48 have been devoted to bringing evidence from historical sources to Ezekiel's visionary temple. Comparing Ezekiel's temple with its ancient Near East counterparts reveals a shared concern. Mesopotamian and Greek landscape might have provided the author(s) of Ezekiel 40-48 sources of inspiration. It seems, however, that while linking the temple of Ezekiel 40-48 with its historical parallels seems generally valid, there are other significant elements of planning in the wider landscape that should be considered.

First, Ezekiel 40-48 should be considered as a whole piece of landscape since what is being described is a series of landscape features encompassing the regional and local level that complete one vision report.

Second, significant spatial patterns in Ezekiel 40-48 are similar to the patterns that feature in the Levitic town planning, as well as the Iron Age town planning, including the casemate wall system that was more fashionable in the kingdom of Judah, as well as a massive wall that was more popular in Israel. Both, according to Avraham Faust, share siege-inspired defence and accessibility to the city wall as common planning strategies. The ENCIRCLING/ROUND ABOUT STRUCTURES identified in Ezekiel 40-48 with its fourfold construction consisting of the wall (40.5), the chambers, the [courtyard] pavement (40.17) and the courts within the court (46.21) should be considered as a revision based on an existing 'customary plan', which views 'a central core, ring road, and outer belt structure integrated into the outer casemate wall' as 'a constructional unit'.[699] Archaeological evidence of the ancient plans sheds light on the understanding of the תָּכְנִית (*toknît*) in Ezekiel 43.10, 'let them measure the pattern תָּכְנִית (*toknît*)'; as well as what is described in Ezekiel 4.1, when Ezekiel is asked to take a brick and portray [cut] the city of Jerusalem on it. Ezekiel's plan might be similar to the תַּבְנִית (*tabnît*) of the tabernacle (Exodus

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[699] Yigal Shiloh, 'Elements in the Development of Town Planning in the Israelite City', pp. 43, 51.

25.9); and what David gave his son Solomon: the 'plan' תַּבְנִית (*tabnît*) of the temple (I Chronicles 28.11). The presence of a plan is evidenced.

Third, historical questions are relevant for my study of Ezekiel, despite the fact that this thesis is performing a final-form reading. My study shows that evidence of historical town planning helps us identify the possible function of the mysterious structures in Ezekiel 40-48. Bearing historical planning features in mind, the mysterious 'building' in Ezekiel 41.12 should be understood as the 'rear room' of the 'House of the Lord', in which the rear room is integrated into the system of fortifications based on the typical dwelling of the Iron Age town. On the other hand, since not much is known of the overall plan of ancient Jerusalem,[700] Ezekiel 40-48 might provide a model of what an ancient plan of Jerusalem may look like, assuming that Ezekiel 40-48 is a vision concerning Jerusalem.

Fourth, with the concept of planning, the water features also find their possible historical root. The ancient capital city Jerusalem, with its Gihon spring outside the city wall, has a long history of water management. The hydraulic constructions for secured water, casemate wall system and city street in Jerusalem and the secondary administrative city Beersheba demonstrate the planning philosophy of ancient Israel.[701] The evidence of these historical parallels suggests that Ezekiel 40-48 might have based its landscape planning upon its own historical town planning. With regards to differences and similarities, ancient planning focuses hazards that bring challenges to the resilience of the landscape.

6.3 *This study explores the manner in which a visionary landscape of a literary text creates a resilient response and provides solutions to problems in the history of ancient Israel through its deployment of landscape planning.*

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[700] Steven M. Ortiz, 'Urban City Planning in the Eighth Century: A Case Study of Recent Excavations at Tel Gezer (Reading between the Lines: Uzziah's Expansion and Tel Gezer)', *Review & Expositor,* 106.3 (2009), p. 369.
[701] Faust, 'Accessibility', p. 311.

Iron Age town planning sheds light on our understanding of the layout of the temple city and the functions of the patterns that this thesis identified. However, the landscape integration of Ezekiel 40-48 still needs to be considered. The literary structures leave room for multiple interpretations. One of the ways to understand the chiastic and the parallel structure of Ezekiel 40-48 is that these structures construed from the Hebrew text naturally shape the landscape features with two lines of corresponding sets of concepts, with the implementation of the wall and the water supply accordingly. This thesis further suggests understanding the corresponding ideas together because they belong to one literary structure in the first place. In so doing an even stronger concept that today is termed 'resilience' emerges. When understood as an ancient resilient landscape plan that encompasses rigidity and ductility, together with two processes, resistance and recovery, Ezekiel 40-48 reveals a way to create a resilient response and provide solutions to the problems — hazards that are described in the book of Ezekiel: the sword, famine, evil creatures, and pestilence. Bearing these problems in mind, ancient planners of the landscape of Ezekiel 40-48 might have envisioned the future landscape to be better attuned to extreme situations. The landscape plan reveals that what is ideal in the mechanism of landscape resilience in Ezekiel 40-48 concerns both engineering resilience that emphasizes efficiency and ecological resilience in the face of hazards. Building up a resistant and a healing landscape that leads to recovery mirrors our modern day concerns about the ecosystem in the face of climate change, disaster risk reduction, and the epidemiology/public health of war and defence policy. Therefore, this thesis suggests that Ezekiel 40-48 considers resilience with regards to disaster reduction in a manner that is similar to modern 'resilience' as defined by the United Nations Institute Strategies of Disaster Reduction: 'The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management'.[702] Highlighting the ability to resist and recover, Ezekiel

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[702] 'Terminology', *UNISDR Terminology on Disaster Risk Reduction* (Geneva: UNISDR, 2009) <https://www.unisdr.org/we/inform/terminology> [Accessed March 15, 2017]

40-48 exhibits a framework including the fundamental function of a landscape that is resilient to hazards.

6.4 *As present day resilient design aspires to sustainability, Ezekiel 40-48 hopes to embody the ultimate goal of the covenant of wellbeing [shalom] aiming for eternity. This linkage opens a way to use biblical scholarship to develop a landscape hermeneutic of contemporary relevance to landscape sciences and theology.*

John Barton states that the prophetic books are not concerned with humankind's exploitation of the natural world — the concern of present day environmentalists — but, rather, it is as much interpersonal ethics that is the main burden of the prophetic message.[703] This thesis, by studying a unique piece of written landscape in Ezekiel 40-48, argues that although the aim is not to provide guidance for modern environmental ethics, Ezekiel 40-48 is concerned with the environment with regard to landscape planning. The vision provides a coherent sense of the world ought-to-be in the time of Ezekiel 40-48 that helps us form the basis of an ecologically sensitive exegesis.[704] Moreover, the state of *shalom,* as the ancient goal of an envisioned landscape, provides a sophisticated example for present time studies of the landscape of wellbeing.

This thesis presents the concept of resilience in Ezekiel 40-48 as a plan embracing dual characteristics as both rigid and ductile to support the (static) resistance and the (dynamic) process of recovery. Ezekiel 40-48 plans a self-sufficient city that is resistant to wars with its capacity to ensure food and water security. The water issuing out from underneath the temple creates a riparian ecosystem that provides medicinal resources with a life-giving river running through the land to strengthen the ability to recover. The plan supports biblical scholar Moshe Greenberg's view that Ezekiel 40-48 fulfils the divine promises of 'the covenant of wellbeing', a covenant forever, in Ezekiel 37.24b-28.[705] Significantly, in Ezekiel 43.10-11 Ezekiel is told the procedure for the accomplishment of the plan: from outside (describe the temple to the house of Israel, and let them measure the pattern) to inside (and let

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[703] John Barton, 'Reading the Prophets from an Environmental Perspective', in *Ecological Hermeneutics: Biblical, Historical and Theological Perspectives*, ed. by D. Horrell, and University of Exeter (London: T & T Clark, 2010), pp. 46-55.
[704] Marlow, *Biblical Prophets*, p. 97.
[705] Greenberg, 'Design', p. 181.

them be ashamed of their iniquities), then going to outside (When they are ashamed of all that they have done, make known to them the plan of the temple). Following the literary landscape of awe in Ezekiel 40-48, from outside to inside of the city-temple, the audience goes through the landscape features which aim to strengthen security. Throughout the journey, the audience goes through the landscape features of preparing food and water, and healing, and builds up the ultimate sense of security with the Lord's presence. Based on Batto's view of the covenant of peace [*shalom*], from inside to outside of the temple-city, the landscape planning exhibits a tripartite process: 1. The divine rule (in the form of, or functions as): the law of the house, the plan, the glory of the Lord, the most holy place (41.4; 45.3); 2. A new and perfect order of the patterning: ENCIRCLING/ROUND ABOUT STRUCTURES, FOURFOLD MEASUREMENT; 3. the paradisiac condition: LIFE-GIVING RIVER, and HEALING RESOURCES THROUGHOUT THE REGION.

This thesis proposes to read Ezekiel 40-48 as an example of the 'habitable city' based on Davis's view of a city that fully integrates with its hinterland. The urban *shalom*, according to Davis, is the health of crops, people, and animals as an indivisible wholeness,[706] for which Jeremiah tells the Judeans exiled in Babylon to pray (Jeremiah 29.7). In Ezekiel's words, the Lord has rebuilt the ruined places, and replanted that which was desolate (Ezekiel 36.36). This thesis demonstrates that Ezekiel 40-48 manifests such hope for *shalom* by means of a carefully planned landscape.

In conclusion, the resilient design in Ezekiel 40-48 is instructive in that it suggests that if the central value is acknowledged and secured — as God and the prophet suggests it should be — levels of resilience that secure long-term conditions for sustaining safety and wellbeing are more likely to be achieved. Recognition of the concept of resilience justifies the novel design of the temple city landscape in ancient Israel where defensive structures and a life-giving infrastructure are implemented in a new vision. It also explains the precautionary approach to urban ecosystem services of wellbeing regarding water, food and natural healing resources; an approach that

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[706] Davis, *Scripture, Culture, and Agriculture,* p. 158.

combines the role of the prophetic 'early warning system' to warn of the coming hazards [judgement] with enhanced efforts to tackle key possible threats to the city and the whole landscape.

Ultimately, 'Ezekiel' literally means 'God strengthens'. Ezekiel 40-48 might manifest the meaning of strength when life is strengthened in the landscape of Ezekiel 40-48. The implications of Ezekiel 40-48 are many and diverse. At different times, the significance of the prophet's words extends to questioning reality, influencing conceptions of space, and expressing desires for alternatives. They reveal the great scope for interpretation and reflection inspired when the prophet and his readers encounter the profound visions of God.

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Appendix I

This table shows Alexander's pattern language that is recognized based on the interpretation of Ezekiel 40-48:

Patterns according to the hierarchical group in *A Pattern Language*: Alexander's patterns with their index numbers; and patterns created based on Ezekiel 40-48: marked with bold letters and '**(Ezek)**'	Description of the group in *A Pattern Language*	Conjectural occurrences in Ezekiel 40-48
TOWNS **(region-city-community)**		
INDEPENDENT REGIONS (1), **HEALING RESOURCES THROUGHOUT THE REGION (Ezek)**	*Regions (should be)...autonomous enough to be an independent sphere of culture.*	40.1-2.
THE DISTRIBUTION OF TOWNS (2), AGRICULTURE VALLEY (4), THE COUNTRY SIDE (7), **LIFE ABUNDANCE AND DIVERSITY, (LIFE GIVING RIVER), REGIONAL FOOD SUPPLY, SWAMPS AND MARSHES FOR SALT (Ezek)**	*Within each region work towards those regional policies which will protect the land and mark the limits of the cities.*	48.1-35
MOSAIC OF SUBCULTURES (8), MAGIC OF THE CITY (10), LOCAL TRANSPORT AREAS (11), **A RESILIENT CITY, WATER IN THE CITY/ FROM UNDERNEATH (Ezek)**	*Through city policies, encourage the piecemeal formation of those major structures which define the city.*	45.1-8; 47.13; 47.21-23; 48.1-35 40.3; 43.1-5; 47.1-12 40.17; 41.13-15
SUBCULTURE BOUNDARY (13), IDENTIFIABLE NEIGHBORHOOD (14), NEIBOUGHHOOD BOUNDARY (15),	*Build up these larger city patterns...physically identifiable places.*	45.1-8; 48.1-35
RING ROAD (17)	*Connecting communities.*	40.17; 41.13-15
PARALLEL ROADS (23), SACRED SITES (24), ACCESS TO WATER (25), LIFE CYCLE (26), **LIFE GIVING RIVER (Ezek)**	*Establish community and neighborhood policy to control the character of the local environment according to these fundamental principles.*	40.17; 41.13-15 42.1-14 (the holy chambers) 42.20; 43.21; 44.1-11; 45.1-10; 48.21 47.3-5, 10 40.4 (the son of man); 43.10 (the house of Israel); 47.12 (bring forth new fruits every month), 21(the strangers who shall beget children among you)

ECCENTRIC NUCLEUS (28), ACTIVITY NODES (30),	*Encourage the formation of local centers: in the neighborhood, the communities, and in between.*	40 (the gates); 40.39-42 (sacrifices); 40.44-45 (singers and priests); 41.22 (the table); 43.4 (holy of holies); 43.18 (the altar); 46.3 (the people of the land shall worship at the door of that gate)
DEGREE OF PUBLICNESS (36), ROW HOUSES (38),	*Around these centers, provide for the growth of housing in the form of clusters, based on face to face human groups.*	42.1-14 (the holy chambers) (the priest shall not go out of the holy place into the outer court without changing clothes); 44.2 (the east gate is shut); 44.9 (no uncircumcised shall enter the sanctuary),13 (the Levites…shall not come near unto the Lord)
WORK COMMUNITY (41), HEALTH CENTER (47), HOUSING IN BETWEEN (48)	*Between the house clusters, around the centers, and especially the boundaries between neighborhoods, encourage the formation of work communities.*	40.44-45 (singers and priests); 42.1-14 (the holy chambers between the temple and the outer court and chambers); 44.17-26 (shall teach the people to discern the clean and unclean)
LOOPED LOCAL ROADS (49), (GREEN STREETS (51)), MAIN GATEWAYS (53), ROAD CROSSING (54), RAISED WALK (55)	*Between the house clusters and work communities, allow the local road and path network to grow.*	40.17 (the pavement); 41.9-15 (And between the chambers was a breadth of twenty cubits round about the house on every side); 40.5-37 (main gateways); 46.9 (he that enters by the way of the north gate to worship shall go forth by the way of the south gate; and he that enters by the way of the south gate shall go forth by the way of the north gate); 41.8 (the house had a raised basement round about)
QUIET BACKS (59), ACCESIBLE GREEN (60), SMALL PUBLIC SQUARES (61), HIGH PLACES (62), POOLS AND STREAMS (64), HOLY GROUND (66),	*In the communities and neighbourhood provide public open land where people can relax, rub shoulders and renew themselves.*	41.12 (the building); 47.7 (trees along the river); 46.21-23 (the kitchen garden/court); 40.2 (a very high mountain); 43.13-17 (the altar); 47.1-12 (the temple river); 43.7 ('this is the place of My throne, and the place of the soles of My feet, where I will dwell…')
COMMON LAND (67), PUBLIC OUTDOOR ROOM (69), GRAVE SITES (70), (STILL WATER (71)), ANIMALS (74),	*In each house cluster and work community, provide the smaller bits of common land, to provide local versions of the same needs.*	40.17 (outer court, chambers and pavement); 46.21-23 (Common kitchen garden/courts); 45.18-46.15 (animal sacrifices); 47.9-10

		(all things be healed and live wherever the river goes)
THE FAMILY (75), HOUSE FOR ONE PERSON (78), YOUR OWN HOME (79)	*Within the framework of the common land, the clusters and the work communities, encourage transformation of the smallest independent social institutions: the families, work groups, and gathering places. First, the family:*	40.4 (the son of man); 43.10 (the house of Israel); 43.7 ('this is the place of My throne, and the place of the soles of My feet, where I will dwell…')
SELF-GOVERNING WORKSHOPS AND OFFICES (80), OFFICE CONNECTIONS (82),	*The workgroups, including all kinds of workgroups and offices and even children's learning groups.*	40.44-45 (singers and priests); 44.14 (Levites); 44.15 (sons of Zadok); 42.1-14 (the holy chambers)
STREET CAFÉ (88), CORNER GROCERY (89), TRAVELER'S INN (91), FOOD STANDS (93)	*The local shops and gathering places.*	40.17 (chambers in the outer court)
BUILDINGS **(building complex-nature of the site-framework of buildings and open space-gradients of space-inside and outside-each space)**		
BUILDING COMPLEX (95), NUMBERS OF STORIES (96), CIRCULATION REALMS (98), MAIN BUILDING (99), PEDESTRIAN STREET (100), FAMILY OF ENTRANCES (102); **HEIGHT AND DEPTH, GOING UP, THREE LEVELS, FOUR CORNERS, IN THE MIDST OF, EXITS (Ezek)**	*The first group of patterns helps to lay out the overall arrangement of a group of buildings: the height and number of these buildings, the entrances to the site…and lines of movement through the complex.*	40.2 (a structure like a city); 43.12 (the law of the house/temple); 41.6 (צְלָעוֹת, chamber/window/triglyph); 42.6 (holy chambers, three stories); 43.11 (going, coming, ordinances, law, forms); 41(the house/temple); 40.17 (pavement round about the court); 46.9 (between the north and south gate); 40.5-37 (the east, north, and south gate/inner and outer court)
SITE REPAIR (104), SOUTH FACING OUTDOORS (105), POSITIVE OUTDOOR SPACE (106), WINGS OF LIGHT (107), CONNECTED BUILDINGS (108), LONG THIN HOUSE (109), **SQUARED SPACES, (FOUR) DIRECTIONAL, FACING EAST (Ezek)**	*Fix the position of individual buildings on the site, within the complex, one by one, according to the nature of the site, the trees, the sun:* ***this is one of the most important moments in the language.***	40.2 (the structure like a city on the south); 40.17 (the outer court); 40.28 (the inner court); 41.10-11 (מְקוֹם הַמֻּנָּח, open space); 40.10, 21 (gate chambers); 40.17 (connected outer yard chambers); 42.1 (chambers, 100*50 cubits)
MAIN ENTRANCE (110), HALF-HIDDEN GARDEN (111), ENTRANCE TRANSITION (112), HIERARCHY OF OPEN SPACE (114), COURTYARDS WHICH LIVE (115), CASCADE OF ROOFS (116), SHELTERING ROOF (117);	*Within the buildings' wings, lay out the entrances, the gardens, courtyards, roofs and terraces: shape both the volume of the buildings and the volume of the space between the space at the same time (Roof:*	43.4, 44.2 (YHWH); 46.9 (people, prince: north and south gate); 44.3, 46.12 (prince: the eastern gate); 46.21 (corner courts); 46.2-3(the threshold); 40.17 (the outer court); 40.28 (the inner court);

(SERIES OF) ENCIRCLING/ROUND ABOUT STRUCTURES, FOURFOLD MEASUREMENT, STANDING FIGURE, THRESHOLD, SPECIAL PAVEMENT/OPEN SPACE/IN BETWEEN, NARROW/RECESSED OPENING, HOLY OF HOLIES, GATE HOUSE, KITCHEN GARDEN, SINGER AND GATE WATCHER'S ROOM (Ezek)	Fundamental sense of protection*)*	40.13(roof of the gatehouse); 41.8 (גֹּבַהּ, the height, round about) See Appendix II for a thorough biblical reference for the ENCIRCLING/ROUND ABOUT STRUCTURES
ARCADES (119), PATHWAYS AND GOALS (120), PATH SHAPE (121), BUILDING FRONTS (122), PEDESTRAIN DENSITY (123), ACTIVITY POCKETS (124),	*When the major parts of buildings and the outdoor areas have been given their rough shape, it is the right time to give more detailed attention to the paths and squares between the buildings.*	40.14-16 (posts round about the court, the gate, Meaning of Hebrew uncertain); 43.4, 44.2 (YHWH, from the east); 46.9 (people, prince: north and south); 44.3, 46.12 (prince: via the eastern gate); 46.2-3 (threshold); 40.48-49 (אֵלָם הַבַּיִת, the porch of the house); 40.17 (chambers round about the outer court could be busy); 46.9-10 (assembly in appointed time and space)
INTIMACY GRADIENT (127), INDOOR SUNLIGHT (128), COMMON AREAS AT THE HEART (129), ENTRANCE ROOM (130), THE FLOW THROUGH ROOMS (131), STAIRCASE AS A STAGE (133)	*Within the various wings of any one building, work out the fundamental gradients of space, and decide how the movement will connect the spaces in the gradients.*	40.31,34,37,49 (steps),45 (rooms for the singers/guarding priests); 40.48-41.4 (from the porch to the holy of holies); 40.17ff (outer court and inner court); 43.4-5 (the glory of the Lord came into the house and filled the house); 43.13-27 (the altar); 40.10 (the gate house), 40.48 (the porch), 41.1-2 (entrance room of the house); 40.48-41.4 (the flow through rooms of the house/temple); 43.17 (the stairs of the altar)
A ROOM OF ONES OWN (141), BULK STORAGE (145)	*Within the framework of the wings and their internal gradients of space and movement, define the most important areas and rooms. First, for a house;*	41.4 (holy of holies, God's own room); 41.12 (הַבִּנְיָן, the building at the west could be the storehouse, cf. 1 Chr. 26.17-18, *Asuppim* (אֲסֻפִּים, store house) and *Parbar* (פַּרְבָּר, open apartment) westward
COMMUNAL EATING (147), SMALL WORKGROUPS (148), A PLACE TO WAIT (150),	*Then the same for offices, workshops, and public buildings.*	40.17 (the chambers could be restaurants/places for the visitors); 40.45 (rooms

		for the singers/guarding priests); 46.2 (the prince waits at the מְזוּזַת, the recessed doorway)
SETTLED WORK (156), HOME WORKSHOP (157), OPEN STAIRS (158),	*Add those small outbuildings which must be slightly independent from the main structure, and put in the access from the upper stories to the street and gardens.*	40.45 (rooms for the singers/guarding priests); 42.1-14 (the chambers or cells with changing or dining rooms for the priests); 43.17 (the stairs of the altar)
LIGHT ON TWO SIDES OF EVERY ROOM (159), BUILDING EDGE (160), SUNNY PLACE (161), NORTH FACE (162), OPENING TO THE STREET (165), GALLERIES AROUND (166), CONNECTION TO THE EARTH (168),	*Prepare to knit the inside of the building to the outside, by treating the edge between the two as a place in its own right, and making human details there.*	40.16 (the round about windows); 40.17 (the round about chambers and pavement); 41.13-15 (buildings and the roads); 43.2 (the earth shines); 43.4 (the glory filled the house); 40.35-37 (the north gate); 40.44; 44.4; 46.9; 47.2 (the north gate); 42.1 (the way towards the north) (Cf. 8.5, people have made the image of jealousy in the north face in the court); 40.17 (the chambers facing the pavement, and as galleries around the courtyard); 41.5 (triglyph/roof structure around the house/temple); 40.17 (the glowing stone/pavement); 41.12-15 (the polishing/separate place)
(TERRACED SLOPE (169)), FRUIT TREES (170), TREE PLACES (171), GARDENS GROWING WILD (172), GARDEN WALL (173), VEGETABLE GARDEN (177),	*Decide on the arrangement of the gardens, and the places in the gardens;*	47.7,12 (fruit for food, leaf for healing); 47.6-12 (tree places, gardens growing wild); 46.22 (walled kitchen garden/court)
ALCOVES (179), WINDOW PLACE (180), THE FIRE (181), EATING ATMOSPHERE (182), WORKPLACE ENCLOSURE (183), COOKING LAYOUT (184), DRESSING ROOMS (189),	*Go back to the inside of the building and attach the necessary minor rooms and alcoves to complete the main rooms;*	40.16,25; 41.16 the window space consists of the threshold, the narrow/closed window and the recessed (Hebrew meaning uncertain) (הַסִּפִּים וְהַחַלּוֹנִים הָאֲטֻמוֹת וְהָאַתִּיקִים סָבִיב) 43.13-17 (the altar); 40.17 (the chambers/restaurant for the people), 44.3 (only the prince sits in and eat before the Lord), 46.1-15 (a freewill offering, either a burnt offering or offerings of wellbeing,

		etc), 44.29-30 (food for the priests); 45.9ff (measurement for the food should be just and right, and for atonement); The outer court and 40.47 inner court are workplace enclosure; 46.19-20 (kitchen for the priests); 46.21-24 (kitchen for the people); 42.1-14 (the chambers or cells with changing or dining rooms for the priests);
CEILING HEIGHT VARIETY (190), THE SHAPE OF INDDOR SPACE (191), WINDOWS OVERLOOKING LIFE (192), HALF OPEN WALL (193), INTERIOR WINDOWS (194),	*Fine tune the shape and size of rooms and alcoves to make them precise and buildable;*	41.5-8 (the triglyph, the layered roof structures); 40.47 the squared inner court; 41.2 (the nave, 40*20 cubits), 41.4 (holy of holies, a square 20*20 cubits); 40.16; 41.26 (the windows are closely connected with the palm tree and אֵלַמּוֹת, vestibule/arches, a hapax); the round about windows should be overlooking;
THICK WALLS (197), SUNNY COUNTER (199), SECRET PLACE (204)	*Give all the walls some depth, wherever there are to be alcoves, windows, shelves, closets or seats.*	41.9 (the thickness of the outer wall of the צֵלָע, roof beam structure is 5 cubits); 46.2-3 (the prince waits at the door facing east while the priests are preparing for the offering/food, could be a sunny counter); 41.13 (הַבִּנְיָן, 'the building' at the west end. The function of the building is not described in the text, leaving a sense of mystery.) Cf. BULK STORAGE (145)
CONSTRUCTION **(philosophy of structure-complete structural layout- main frame and its openings-indoor details)**		
STRUCTURE FOLLOWS SOCIAL SPACES (205), EFFICIENT STRUCTURE (206), GOOD MATERIALS (207), GRADUAL STIFFENING (208); **SPACE TO BEHOLD, SPACE TO MEASURE, SAME MEASURE, SYMMETRICAL DESIGN, STRAIGHT LINED,**	*before you lay out construction details, establish a philosophy of structure which will let the structure grow directly from your plans and your conception of the buildings; Principal patterns*	For Ezekiel, the philosophy of structure is seemingly determined in the early planning phase, which is similar with Alexander's STRUCTURES FOLLOWS SOCIAL SPACES (205). The overall straight-lined and

FOURFOLD MEASUREMENT (Ezek)		plain design, and the straight-lined movement (46.9-10) could be considered as EFFICIENT STRUCTURE (206); 40.17 and 41.9 (the specialty pavement); 40.42 (hewn stoned table); 43.22-25; 45.18,23; 46.4,6,13 (animals should be תָּמִים/complete, whole, entire, sound); 45.9-14 (wheat, barley, and oil should be justly measured); Ezekiel 40-48 in a sense is a plan that starts out loose and flimsy and leave room for final adaptations: GRADUAL STIFFENING (208); 41.16-18 (stiffened wall); 40.17; 41.12-15 (גְּזֵרָה)
ROOF LAYOUT (209), FLOOR AND CEILING LAYOUT (210), THICKENING THE OUTER WALLS (211)	*within this philosophy of structure, on the basis of the plans which you have made, work out the complete structural layout; this is the last thing you do on paper, before you actually start to build;*	40.13 (He measured then the gate from the roof of one little chamber to the roof of another); 40.17 (the casemate wall rooms are thickening the outer walls); 41.5-9 (the wall of the house/temple is 6 cubits. The encircling roof structures/triglyph has walls 5 cubits thick)
PERIMETER BEAMS (217), WALL MEMBRANE (218),	*start erecting the main frame according to the layout;*	41.5-6 (after measuring the wall, the triglyph, identified by Garfinkel, could be the PERIMETER BEAMS (217)); 41.5-9
NATURAL DOORS AND WINDOWS (221), DEEP REVEALS (223), FRAME AS THICKENED EDGES (225)	*within the main frame of the buildings, fix the exact positions for opening — the doors and the windows — and frame these openings;*	The house/temple and the priests' chambers have the potential to create NATURAL DOORS AND WINDOWS (221); 40.16; 41.16, 26 (the narrow/recessed window חַלּוֹנִים אֲטֻמוֹת and the palm tree); the recessed windows create DEEP REVEALS (223) for a smooth transition of daylight. These recessed openings (in both Solomon's temple/ I Kings 6.4 and Ezekiel 40.16; 41.16, 26 are FRAME AS THICKENED EDGES (225))

COLUMN PLACE (226), COLUMN CONNECTION (227), DUCT SPACE (229), RADIANT HEAT (230), (DOMER WINDOWS 231), ROOF CAPS (232),	*as you build the main frame and its openings, put in the following subsidiary patterns where they are appropriate;*	40.14, 16, 21, 24, 26, 29, 31, 34, 36, 37, 38, 48, 49 (Structures of the gate house: Posts/vestibule, אֵילִים, could form COLUMN PLACE (226), seems to associate with the court and the arches אֵלַמָּו, a hapax unique to Ezekiel. The columns are helpful to form arcades, galleries, porches, walkways, and outdoor rooms. Cf. OUTDOOR ROOM (69), ARCADES (119), GALERRY SURROUND (166). 47. 1-2 (The water from underneath the temple needs DUCT SPACE (229) on the ground to surface.) 43.1-5 (the radiant heat possibly from the glory of the Lord, and the earth reflects it) 41.5-8 (roof structures) Roof space, cf. (180)
SOFT INSIDE WALLS (235), FILTERED LIGHT (238),	*put in the surfaces and the indoor details;*	41.18-20, 25 (the wall and the door in the house is carved with cherubim and palm tree); 40.16; 41.16, 26 (the narrow/recessed window חַלּוֹנִים אֲטֻמוֹת and the palm tree)
ORNAMENT (249), POOLS OF LIGHT (252), THINGS FROM YOUR LIFE (253)	*complete the building with ornament and light and color and your own things.*	41.18-20, 25 (the wall and the door in the house is carved with cherubim and palm tree); and 40.16; 41.16, 26 (the narrow/recessed window חַלּוֹנִים אֲטֻמוֹת and the palm tree) can be considered as ORNAMENT (249) and THINGS FROM YOUR LIFE (253); 43.1-5 (the glory of the Lord)

Appendix II

This table shows expression that contains 'round about' (סָבִיב) and their function in Ezekiel 40-48.

		Space being surrounded	Round about structures	Measurement/Design	Function/Result
40	5	the temple area	(behold)a wall all around	the thickness of the wall, one reed; and the height, one reed	--
	14	the vestibule of the gateway	the court	--	--
	16	the gateway; the vestibule	windows		--
	17	the court	(behold) chambers and a pavement	thirty chambers fronted on the pavement	--
	25	the gateway; the vestibule (south)	windows round about	--	--
	29	the gateway; the vestibule (south)/unclear	windows round about	--	--
	30	--	vestibules round about	twenty-five cubits long and five cubits broad	--
	36	the north gate	windows round about	--	--
	43	Within the tables	Hooks*	a handbreadth long	--
41	5	The temple	the wall; the side chambers	six cubits thick (wall); four cubits (chambers)	--
	6	the wall of the temple	Offsets all around	--	to serve as supports for the side chambers, so that they should not be supported by the wall of the temple.
	7	The temple	offset	enlargement of the offset[e] from story to story round about the temple	--
	8	The temple	a raised platform round about	--	--
	10	the temple	chambers of the court round about the temple on every side	a breadth of twenty cubits round about the temple on every side	--

	11	the part of the platform that was left free	doors of the side chambers	the breadth of the part that was left free was five cubits round about	--
	12	The building that was facing the temple yard on the west side	the wall of the building	five cubits thick round about, and its length ninety cubits	--
	16	The nave of the temple and the inner room and the outer vestibule	windows with recessed*frames.	--	--
	16	Over against the threshold the temple was	panelled with wood round about	--	--
	17 -18	on all the walls round about in the inner room and the nave were	carved likenesses v.18 of cherubim and palm trees	v.18 a palm tree between cherub and cherub. Every cherub had two faces	--
	19	carved on the whole temple round about	--	the face of a man toward the palm tree on the one side, and the face of a young lion toward the palm tree on the other side.	--
42	15	the temple area	--	Being measured round about	--
	16	the east side	--	five hundred cubits, round about (adv.)	--
	17	the north side	--	five hundred cubits, round about (adv.)	--
	20	on the four sides	a wall	five hundred cubits long and five hundred cubits broad	to make a separation between the holy and the common.
43	12	upon the top of the mountain	the whole territory round about	the whole territory	This is the law of the temple…shall be most holy…Behold, this is the law of the temple.
	13	The altar	with a rim…around its edge	of one span	--
	17	The ledge (also shall be square), fourteen cubits long by fourteen broad,	with a rim around it	half a cubit broad (the rim),	The steps of the altar shall face east'.

	17	(The ledge)	The base round about	one cubit	--
	20	Altar Ledge	the rim round about;	--	thus you shall cleanse the altar and make atonement for it.
45	1	the land	--	twenty-five thousand cubits long and twenty thousand cubits broad;	you shall set apart for the Lord a portion of the land as a holy district…it shall be holy throughout its whole extent (all around).
	2	the sanctuary	open space	five hundred by five hundred cubits (the sanctuary); fifty cubits (open space)	--
46	23	On the inside, around each of the four courts	a row of masonry	--	--
		at the bottom of the rows	hearths	--	--
48	35	the city	(surrounded by the hinterland/country land; 48.17)	The circumference… eighteen thousand cubits	…the name of the city henceforth shall be, The Lord is there.