Originalveröffentlichung in: Sjoerd J. Kluiving, Erika B. Guttmann-Bond (Hg.), Landscape archaeology between art and science: From a multi- to an interdisciplinary approach (Landscape and heritage series; Landscape and heritage studies: Proceedings), Amsterdam 2012, S. 503-514; Online-Veröffentlichung auf Propylaeum-DOK (2024), DOI: https://doi.org/10.11588/propylaeumdok.00006124

6.4 'Landscape', 'environment' and a vision of interdisciplinarity

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KEYWORDS

environment, landscape, interdisciplinarity, history of archaeology, humanities, science

ABSTRACT

In this paper, presented at the end of the Amsterdam-LAC2010 conference, I felt obliged to react to the contributions delivered so far. Thus, I am starting with a few words on the term 'environment', which was first used at the beginning of the 20th century. Its use encapsulates an epistemological division between an individual being and its a-/biotic surroundings and therefore should be used for any research based on that fundamental division. Therefore, 'environmental archaeology' is the proper term for all those archaeological approaches based on scientific methods, as science in itself is rooted in the analytical division between humans and the world.

On the other hand, the word 'landscape' has a very old epistemology and history of meaning. In the Middle Ages its emphasis was on a politically defined body of people and, on a secondary level, on the land inhabited by them, i.e. it was the people who made the land. During early modern times the word acquired an additional aesthetic notion incorporating social imaginations of beauty and nature. Therefore – despite its quite shapeless use in actual academia – 'landscape archaeology' is a reasonable term for all research in the social construction of space.

This separation of 'environmental archaeology'and 'landscape archaeology' is not meant to perpetuate the grand divide between science and humanities. But this is an attempt to establish a clear-cut terminological clarification in order to enable an understanding of different disciplinary epistemologies as

a necessary component of interdisciplinary cooperation. While actual multidisciplinary work aims at an exchange of disciplinary results, I am presenting a model of interdisciplinarity, which takes into account the presuppositions of participating disciplines as well. This approach asks for greater consciousness of different epistemologies and it is with this aim that I am proposing a clear-cut terminology for 'environmental archaeology'and 'landscape archaeology'.

'LANDSCAPE' – A SEXY WORD?[1]

Nowadays the word 'landscape' is in. It obviously sounds sexy to archaeologists in 2010. Starting some years ago, there were a growing number of archaeological publications proudly bearing 'landscape' in their titles. Simultaneously the word 'environment' is losing its prominent position on the front page of archaeological books and papers. Does this reflect a new type of research, a new topic in archaeology – or is it just one of the fashionable sound bites of the new millenium? In my eyes there are some indications of this last suggestion; the word 'landscape' today at least partly acting as an envelope for anything. For example, looking at the papers and posters of the Amsterdam conference on 'landscape archaeology' there are presentations on quarternary geology, taphonomy, the microhistory of nature, deterministic and possibilistic approaches to the culture-nature dichotomy, the ecological impact of ancient economies, survey techniques, settlement structures, communication routes, the social dimension of space and phenomenology, and, finally, on the heritage aspect of how to deal with ancient landforms – to name only a few. Altogether this mixture looks quite disparate I wonder whether it really makes sense to summarise such different topics and methods by using the single term 'landscape archaeology'? Actually we seem to be back in 1996, when Robert Johnston observed: 'by allowing landscape to mean relatively anything and have all possible contextual value, it loosens all definition and effectively has no interpretative value.' (Johnston 1998, 317).

Of course, I would welcome 'landscape' as an umbrella term, a kind of unifying concept for many different strands of research to engage in a closer, interdisciplinary way of cooperation (Gramsch 2003; for a more precise unifying concept in landscape research cf. van der Valk &Bloemers 2006). I expect most of us will agree on the need for such interdisciplinarity when dealing with such a complex matter like the world in its historic dimension. However, looking at practice, most of the work in so-called 'landscape archaeology' is still predominantly mono-disciplinary, sometimes in more or less successful cooperation with another discipline, which more often is multi- than interdisciplinary (cf. Tress et al. 2003, 2006; Potthast 2011). But if we are going – and we are just at the beginning of going – to unify our research under one umbrella, and if we wish to avoid an incidental mixture of everything I think it will be an essential prerequisite of coherent cooperation to know the parts which we are going to unify. For the sake of such conscious clarification I do not see any benefits in the actual hyper-fluent use of the term 'landscape', but I am arguing for a more concise terminology as it was broadly in use half a decade ago: With the terms of 'landscape archaeology'and 'environmental archaeology' there are two distinct expressions, which by traditions of etymology, daily use and scholarly meaning are and should be much more than two sexy words.

ENVIRONMENT

Just over a century ago, in 1906, Alfred Schliz pointed out for the first time the highly significant correlation of settlements of early Neolithic Linearbandkeramik-culture and Loess-soils (Schliz 1906; cf. Friederich 2003). After World War I, Ernst Wahle, among others, quite deterministically stated that the structures of prehistoric settlement and culture were the results of natural conditions (Wahle 1915, 1920). He tried to show that prehistoric settlement down to the Bronze Age was strictly determined by the natural existence of the so-called *Steppenheide*, the most Western offspring of eastern European steppe-vegetation (Gradmann 1901; 1906). Somewhat later, in the early 1930s, Cyril Fox published his 'Personality of Britain' arguing for natural factors dividing Britain in two parts of lowland and highland Britain with two quite different cultural trajectories (Fox 1932). While a correlation of Linearbandkeramik and Loess-soils is still under discussion, Cyril Fox looks much too deterministic today and the *Steppenheide* theory has long been out of fashion (cf. Ellenberg 1963; Clark 1974, 43). These examples, however, show that an interrelation of nature and culture has been under discussion for a century or more, that it has been answered in different ways and that it is an interdisciplinary question from its very beginning.

From the 1950s onwards, the general question of any relation between nature and culture stayed alive. In German archaeology Herbert Jankuhn and his concept of '*Siedlungsarchäologie*' defined some kind of systematic approach arguing within the current deterministic and possibilistic modes of explanation of its time – though never stating that he was doing so. At the time this approach was generally focused on economic needs, technical skills and population dynamics influencing society's ability to interact with natural factors (Jankuhn 1952/1955; 1977).

In Anglo-American archaeology Lewis Binford and his processual approach began to understand prehistoric people and nature in new ways. In terms of theory this was a much more holistic approach than Jankuhn's '*Siedlungsarchäologie*', as Binford attempted to set out a totally new theoretical framework for archaeology as a whole. Now, archaeology was meant not only to describe, but to explain – especially it was designed to explain cultural change in an explicit and testable way (Binford 1962). Binford's interest in an interrelation of culture and nature was not very new at that time; especially his definition of culture as an extra-somatic adaptation to environment was well known (Moran 1990; Pantzer 1995, 6f., 20-24). However, Binford's focus on cultural change along with his definition of culture as a means of adaptation to changing natural factors focused archaeological research on environmental conditions and thrust them into the very centre of processual archaeology. Thus, some subsystems or factors at the intersection of culture and nature seemed to be of greater importance than others: technology, economy and population dynamics especially being the favourite subjects of New Archaeology. At the very least they owed their favourite role to New Archaeology's explicitly systemic framework of argumentation. These same factors were of special relevance to Jankuhn's *Siedlungsarchäologie* as well, but within a processual approach they gained a much greater importance, becoming the central screws of the system. Moreover, the methodological focus on empirical research and testable hypotheses furthered those components of the cultural system, which were countable and measurable: again, these being technology, material culture and some aspects of economy and population dynamics (Clarke 1978; Bernbeck 1997, 35-129; Johnson 1999, 12-84).

All of these approaches, regardless of *Siedlungsarchäologie* or processual archaeology, are aimed at categorically separating culture and humans from the world around. Thus, humans are analytically standing

outside, they are external observers of that globe called the world (Ingold 1993) (fig. 1). By regarding themselves as external observers, humans restrict the world to an objectively existing prediscursive container (physical space) with life happening within it. The world around becomes a stage on which the grand play of humankind as biological, economical, political and cultural beings develops. For decades and decades it was exactly this vision of human-world-interrelation which dominated the geographical perspective on the world, most clearly expressed by the model of geographical (and descriptive) layers developed by Alfred Hettner in 1927. Geographers being regarded as specialists of space, this model highly influenced neighbouring disciplines like archaeology as well.

This approach is not to be criticised in itself, as the separation of man and the world around is an analytical tool according to specific research interests. We should be aware, however, that all knowledge produced by this tool is valid only with respect to this categorial separation. This is especially true for all ecological thinking logically based on discriminating between beings and the world around them. In ecology the world around is called the 'environment', meaning the totality of all ecological factors influencing a species or a single being, while an ecosystem is a system which comprises all creatures and their environment as well as all interactions (cf. Odum 1975). In ecological thinking 'environment' is an objective, inter-individual term and, in its daily use, has more or less adopted the ecological meaning of the word (cf. Harvey 1993; Winiwarter 1994). This ecological meaning of environment, its categorial separation of beings and the world as well as its concentration on the natural parameters of the animate and inanimate world, more or less corresponds to the world around of *Siedlungsarchäologie* and processual archaeology. Thus in my view it makes good sense to call this line of research 'environmental archaeology'– as was usual until fairly recently: 'environmental archaeology' meaning any approach arguing within an ecological framework, focusing on environmentally relevant sub-systems and mainly based on scientific methods.

LANDSCAPE

I do not want to go into any of the well known details regarding the criticism of processual archaeology. Basically this critique rejects the aim of universal cultural laws and is designed to strengthen the hermeneutic model of the humanities against a supposedly reductionist deductive model of scientific reasoning (Hodder 1984; 1985). While the first point only addresses the question of why we do archaeological research at all, the second criticism is the really fundamental one: Criticising the deductive approach to be reductionism easily leads to the conclusion that empirical sciences are irrelevant for the study of human culture, while the hermeneutical approach may be regarded as unscholarly by scientists.

By first waging a fierce battle, then by building an Iron Curtain between processualists and post-processualists, followed by a deaf-mute disinterest in the other party, this criticism has finally culminated in the development of a bundle of post-processual archaeologies (Bernbeck 1997, 271ff.; Johnson 1999, 98-115). While quite different in many respects these archaeologies nevertheless have some points in common:

- All of them are based in an epistemological model of hermeneutics.
- All of them take a constructivist point of view, i.e. reality is not an empirical, objective entity, but socially constructed.

This focus on hermeneutics and constructivism has quite far-reaching consequences on the vision of humans and on the aims and methods of archaeology: Post-processual archaeologists concentrate on the individual and its perceptions of the world in its specific cultural context. Thus, the fields of ideology and religion, aesthetics and social structures especially – mainly neglected by processual archaeology – are now becoming the centre of interest.

While Binford claimed to research the whole of the cultural system with all its subsystems, and while post-processual archaeology renewed this holistic claim, both strands of archaeological research almost complementarily compare with each other.

Table 1

processual archaeology	*post-processual archaeology*
humans are passive	humans are active
culture adapts systemically to external stimuli (environment)	social rules are negotiated between actors
humans are subordinated to rules and aims of society	social structure is constructed by individuals
aim: cross-cultural generalisation	aim: cultural context
methods: science, systems theory	methods: humanities, hermeneutics, constructivism

Among other consequences this post-processual mode of thinking heavily touches upon the concept of space: space is no longer thinkable as a prediscursive container or a stage for the theatre of mankind, but now it is socially constructed and meaningful as well. Sociologist Martina Löw (2001, esp. 152ff.) has developed a convincing theory of constructed space, which, moreover, is practicable in archaeology. Löw starts by defining space as the relational arrangement of objects and humans in a place. Thus, space is formed by the practice of arranging objects and humans – called spacing – and by positioning symbolic markers to make this ensemble visible. To constitute space, however, it is necessary not only to position these constituents, but to synthesise them in a mental process as well, i.e. to perceive an arrangement as space. Such a synthesis follows cultural patterns of imagination (*Vorstellung*) and experience. Therefore, according to Löw, space is permanently constituted as well as changed by social practice. On the one hand space is structuring action, on the other hand space is simultaneously constituted by action and perception. Thus – to turn it theoretically – space is no longer a matter of ontology (a prediscursive container) but a matter of epistemology (a social construct).

Such a space socially constituted by humans is totally different from the concept of 'environment' with humans standing outside the world looking upon it as a globe, with a strict separation between culture and nature, humans and their environments. When humans create space themselves they become parts of their surroundings, they are not separated from or outside the world any longer, and the world changes from a globe to a lifeworld (Ingold 1993). In practice, research on the social construction of space is mostly focused on the actor and is therefore small-scale, while the 'global approach' normally covers a wider area. However, in this respect, the discrimination between these two spatial approaches has no epistemological implication on scale.

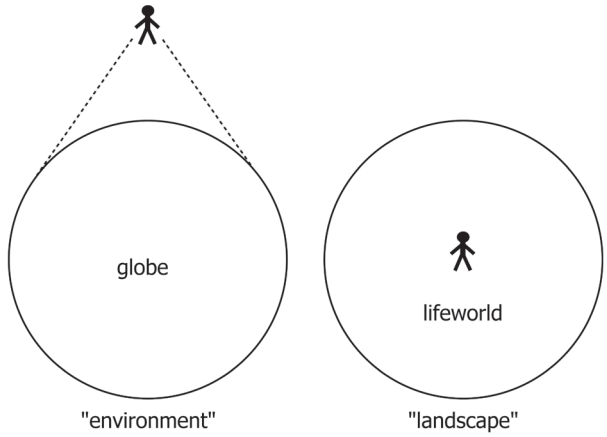


Figure 1. Humans and the world (after Ingold 1993 with modifications).

The word 'space' would be an option for this kind of life world, but it may provoke misunderstanding, as it is an appropriate term for physical space as well. Accordingly, I would suggest calling such kinds of socially constituted spaces 'landscapes'. However, as the contributions to the LAC 2010 in the beginning of this paper exemplify, 'landscape' in the academic community actually means everything and nothing and the word has followed very different histories of meaning in different disciplines (cf. Jones 2003; Cosgrove 2004; Meier 2006, 24f.; for the archaeological history of the term Darvill 2001; Gojda 2003, 40f.; for history and geography cf. Meinig 1979; Groth & Bressi 1997; for an example of a largely differing disciplinary use of the term with a specific natural meaning cf. the earth sciences in specific geomorphology: e.g. Migoń 2010). Thus, it makes little sense to refer to any specific disciplinary meaning of 'landscape' but to bear in mind that the word had a very strong etymological tradition before academics got their hands on it and, moreover, that it still enjoys a vivid afterlife in the common sense of the word. In this extra-academic etymological tradition of 'landscape', social, political and aesthetic aspects are especially emphasised throughout its history. To very briefly summarise the history of its meaning (cf. Müller 1977; Schenk 2001) the suffix 'scape' is derived from Germanic *skapjan* (> **skapi-*, **skapja-*, **skafti*), meaning 'to shape'; this is illustrated by Old-English *gisceap* meaning 'shape, form, composition' and Old Nordic *skap* meaning 'composition, condition, manner'. Stringently *landskapr* means the manner or fashion of a land, i.e. the practice of the people inhabiting an area. In Old German the oldest evidence of *lantscaf/ lantskepi* dates from around 830 meaning – like in Old English – a greater area or a region, which primarily is defined politically. Thus, in the early Middle Ages landscape does not essentially denote a physical space, but either the custom of a region or the area inhabited by a politically-defined body of people. This focus on the inhabitants of a land and especially on those of political influence dominates the meaning of *lantschaft* in Middle High German as well and it is still active today in some parts of north-western Germany (e.g. 'Ostfriesische Landschaft') or Switzerland (e.g. 'Basel Landschaft'). It took until early modern times that landscape's meaning of a political body increasingly shifted back on the area inhabited by that people.

Based on this newly gained relation to space the term *landschaft* started a new career during the 16th century (for a detailed analysis of the formative early modern use of the term cf. Drexler 2009). With the formation of landscape painting its meaning shifted to a picture showing a bucolic scene, meaning an en-

visioned detail of nature. Painter Hans Sachs (1494-1576) for example used the word *landschaft* to describe a panorama structured in fore- and background (Müller 1977, 9; cf. Groh & Groh 1991; Schramm 2008). In this specifically artistic sense of 'painting of a detail of nature' the word *landskip* was introduced into Dutch and English with its first evidence in 1598 (Schama 1995, esp. 18-21; Olwig 2002; Cosgrove 2004, 61). Thus, in the beginning of early modern times 'landscape' gains a pronounced artistic connotation, which it keeps for the future; from now on the term obviously makes an aesthetic statement and thus carries social imaginations of space. Altogether the etymology and history of meaning of the word 'landscape' in its earlier sense emphasises the idea that it is the people, who make up the land. In its later sense the word is more expressive of an (aesthetic) quality. At any rate, 'landscape' obviously encapsulates the social constructedness of space. It is this meaning, which is still active in the popular use of the word – regardless of all academic discussions and re-formations of its meaning. And it is this meaning to which the European Landscape Convention is affiliated, stating in its first article:

> '"Landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors' (http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm [accessed 12 March 2009]; cf. Déjeant-Pons 2002; Fairclough 2006).

The first part of this definition means an area first of all becomes a landscape through the perception of its people. There is no such thing as a natural landscape of and within itself – unless we take 'nature' as a cultural construct as well (cf. Eisel 1986; Radkau 1994; Cronon 1995; Meier 2006, 18-20). We are immediately reminded of Martina Löw's synthesising effort, which is necessary for the creation of space. With regard to the history of the term 'landscape', in my eyes 'landscape archaeology' is the proper term to refer to any academic approach which concentrates on the social construction of space.

A VISION OF INTERDISCIPLINARITY[2]

Processual and post-processual archaeologies, due to their theoretical framework and their tools, put their hands on quite different sub-systems of historic societies. But at first glance there seems to be no logical justification for dividing past societies along the frontiers created by modern epistemological tools. However, research is organised along historically-rooted disciplinary trails and these trails so far are our only ways of approaching the historic world. Combined research involving more than one discipline is useful when our interest in the past invokes a complex, close-to-holistic image of it, rather than one which requires unidisciplinary details. So far it is mainly multidisciplinary research with a number of disciplines working on what they believe to be the same topic each of them more or less acknowledging the results of the others (for terminology cf. Tress et al. 2003; 2006; Potthast 2011). This kind of vague research community undoubtedly has its benefits as it brings together different disciplines into a dialogue. However, it may be much too assertive to call these connections baulks or even bridges of interdisciplinarity, as quite often disciplinary results are combined by means of a book cover only. Interdisciplinarity in the proper sense of the word requires a jointly negotiated question and jointly designed close cooperation, which takes effect during the progress of work and which may include newly developed approaches and methods. Under these circumstances, closer inspection shows that many of these multidisciplinary baulks,

bridges and spines have deep cracks, especially those bridging the grand divide between the two cultures of science and humanities, while others on each side of this divide are more stable and established.

Reasons for these cracks are not caused by the object of our research, but by home-made problems, which are twofold, i.e. theoretical and social.

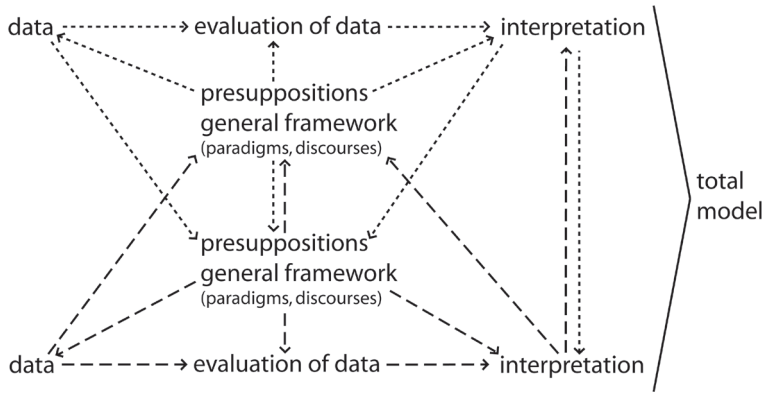
Academic differentiation in the last two centuries has produced a bulk of disciplinary rationalities – each discipline following its own presuppositions and obeying its own rules. Though, as Jürgen Mittelstraß emphasises, all of these disciplinary rationales are based in a single common academic rationality (Mittelstraß 1991; 1999), disciplinary practice is not oriented towards a common ground, but aims at developing a highly specialised toolkit to resolve highly differentiated disciplinary questions. Finally, we are now ending up with a set of different and partly exclusive theoretical frameworks and with a set of highly specialised methods, each of them engineered to deal with a specific aspect of past societies but which prove partially impossible to combine with other methods and theories. Additionally, none of them possess the potential to deal with past realities as a whole. This toolkit not only comprises a number of explicit methods and theories, but is more closely based on a great number of silent presuppositions which have proved useful or simply have been handed down from teachers to students over generations and thus have become canonical. At the usual level of multidisciplinarity results obtained by such toolkits are exchanged between disciplines, at best including some clarification about their methods and theories but remaining silent about such deeply rooted presuppositions. This kind of cooperation requires a considerable level of superficiality by its participants, as closer examination usually reveals that the methods and theories of different disciplines are based on very different and fairly inconsistent grounds. It also shows that the exchange of hypotheses and tests runs into self-fulfilling circular structures instead of hermeneutic spirals, and that the rationales of the participants are inconsistent, e.g. on basic points, what may be counted as an argument or what is needed to falsify a hypothesis.

Interdisciplinarity, therefore, necessarily has to communicate not only its results, but also the presuppositions and rationalities of the participating disciplines. It is for this reason that in the previous chapters I have made an attempt at the terminological clarification of 'environmental archaeology' and 'landscape archaeology' as the understanding of different epistemologies is furthered by a well defined terminology.

At the end of an interdisciplinary adventure all the sections of the disciplinary processes involved have to be consistent with each other. Interpretations of one discipline may provide feedback on the presuppositions of another discipline. It may even be that the data of one discipline may contradict the presuppositions of another and thus influence its interpretation. These interactions are alternating, resulting in a multicircular, intertwining structure best described as interdisciplinary hermeneutics. The final interdisciplinary results as well as the intermediate disciplinary results are approached by permanent communication and negotiation between the disciplines, including inductive as well as deductive elements. Given the permanent feedback loops and the intensive demand for communication and negotiation that is required by trying to conform to the desirable perspectives of true interdisciplinarity, I fear that a successful outcome for an interdisciplinary approach may be highly improbable.

Moreover, disciplines are social spaces of power as well. Therefore, interdisciplinarity not only needs a theoretical framework, but is subject to social conditions. Students – assuming they want to be successful in terms of employment – and researchers – assuming they want to be successful in terms of citations and

Figure 2. A model of interdisciplinarity.



funding – have to internalise disciplinary orders. Under these circumstances they need to correctly learn and practice disciplinary methods, especially as academic teachers and peers are in a position to enforce the truth and acceptance of disciplinary practices by excluding the disobedient from further participation in the academic field. Obedience to this disciplinary toolkit along with its presuppositions is deeply related to social position within the discipline (Bourdieu 1984; 2000). Even the mechanisms of exclusion themselves formally refer to the rightful obedience to theories and practices (and sometimes presuppositions), making the disciplinary toolkit the most powerful instrument of disciplinary discourse as it is the yardstick to judge true from false (Foucault 1966). This social practice is fundamentally thwarted by the pan-academic ideal of deep questioning. As in a postmodern world the act of questioning enables the questioner to deconstruct any presuppositions, methods and theories, it is vital to disciplinary discourse that basic and central aspects of disciplinary practice and its toolkit are excluded from such questioning. Actually it is quite easy to achieve such socialisation, as academic rewards are organised in an overwhelmingly disciplinary way (Weimann 2005).

Interdisciplinarity as sketched above, however, is challenging these disciplinary requisites. Interdisciplinarity demands that we question and transgress disciplinary borders by thoughts, words and deeds. It requires us to test the arguments of other disciplines against one's own material or to work on 'foreign' material with one's own methods. From the point of view of a disciplinary order of discourse interdisciplinarity asks for conscious blunder (cf. Winiwarter 2002, 210f.). Within a discipline such blunder is ignored at its best, but if things turn worse, it is honoured by trouncing. Therefore, successful interdisciplinarity primarily requires courage if you want to work in this desert of disciplinary vacancy. Secondly it requires openness in order to challenge disciplinary certainties and, thirdly, it requires high skills of negotiation. In short: interdisciplinarity is a specific form of academic social behaviour.

ACKNOWLEDGEMENTS

I am cordially thankful to Sjoerd Kluiving and to Guus Borger for valuable comments on this paper. Jude Jones and Matthew Johnson have been so kind to help me very much with the English version.

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NOTES

1 This chapter is a very short essence of my paper Meier 2009, which provides arguments and references in full detail.

2 This chapter shortly summarises the paper Meier & Tillessen 2011, which provides a more detailed argument and full references.