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# The confusing multiplicity of futures and the beguiling logic of history<sup>1</sup>

## Landscape studies – Landscape futures

In this paper I discuss two points:

- The claims for relevance to planning and management of the present and future cultural landscape often made by landscape studies that essentially deal with historic aspects of landscape development.
- The methodological similarities between studies of landscape futures and planning on the one hand and landscape studies on the other.

## The landscape discourse

According to the conceptual framework of a project just starting in Sweden, lead by environmental historian Sverker Sörlin, Umeå University, landscape research and conservation has been dominated by two discourses: the “environmental discourse” and the “antiquarian discourse”.<sup>2</sup> Both of these

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1. This paper is a revised version of the lecture »Framtidens förvirrande mångfald och historiens skenbara begriplighet«. With the permission of the organisers it is written in English since the lecture was largely made from »work in progress« in English.
  2. The term »discourse« carries several connotations. In order to qualify as a discourse a narrative must conform to the definition offered by Hajer: ...»an ensemble of ideas, concepts, and categories through which meaning is given to phenomena.« (Hajer 1993; p. 45).

have their scientific traditions, concepts and institutions but also ties to administrative institutions and instruments.<sup>3</sup>

Three observations can be made concerning the relationship of these two discourses to future landscapes and to planning and management:

- Claims of relevance are made with little clarity concerning the nature of this relevance; the underlying notions of planning and management of a cultural landscape are vague (Emmelin 1997c & 1998).
- An increasing number of Nordic and European landscape studies are undertaken in order to produce scenarios, with little documented information of what they conceive scenarios to be or demonstrated methodological background (Emmelin 1997a).
- The rhetorical claims for holism as a basis for relevance to planning and management (Emmelin 1997a).

All three point to a basically unclear relationship between “landscape discourses” and the “futures discourse”. In the terms of Svend Erik Larsen’s key-note address to this seminar the claims in cultural landscape studies and the landscape discourses are not connected with the futures discourse by any functional relationship or praxis; the relationship is abstract in the sense he uses the term. Put somewhat differently: an abstract “future state” is in a strange way both present and absent at the same time in the landscape discourses. It is present as an implied problem but methodologically absent, perhaps also conceptually.

## A linear past and a fan of futures

The methodological problem of scenarios and landscape futures has been described as shown in figure 1: a development from an earlier state to the present and a fan of futures (Emmelin 1982). This is in line with most modern discussions of scenario techniques (Godet, undated, Masini 1993). However

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3. See grant application to the Bank of Sweden Tercentenary Fund: Sverker Sörlin (ed.), *Landskapet som arena: vetenskapen, tekniken och miljön 1800 – 2000*, Institutionen för idéhistoria, Umeå universitet mfl.

this picture focuses on futures and simplifies the development up to the present: what is shown is the simple fact of developing from one state to another. The analytic problem of understanding why this development took place is however not as simple as the figure might imply. In fact the figure might be mistaken to be based on a simplistic notion of a determined development up to the present.

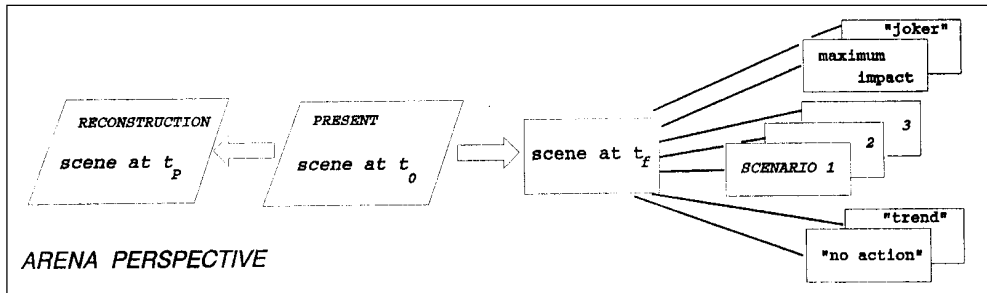


Figure 1. A model of landscape futures (Emmelin 1982).

Taking cues from Elton’s (1969) statement that “History is not the study of the past. It is the study of present traces of the past” and a discussion by Beckman (1990),<sup>4</sup> the kinship of landscape studies and futures can be illustrated as in figure 2. Futures studies do not deal with the future they deal with precursors to different futures. Understanding futures with the aid of scenario techniques is an exercise in following different lines of reasoning from a set of variable factors in the present. Some of these lines will logically be the lines of counter-factual reasoning of the historian. The need for counter-factual reasoning may be debated by historians, but it is a very practical necessity in that branch of futures which we normally term “environmental impact analysis”, where we compare an expected outcome of a particular line of development with what the state of the environment might be like without it (Emmelin 1997b). This comparison is the basis for value judgements which at times may have far-reaching economic, social or environmental consequences. What to the historian

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4. The Swedish title of this lecture is something of a *leitmotif* of Beckman’s fascinating study; he talks of the apparent logic seen with the hindsight of history.

may be an intellectual exercise is a central element in planning, often however only implicitly or present more as rhetoric than as a method and an explicit discussion.

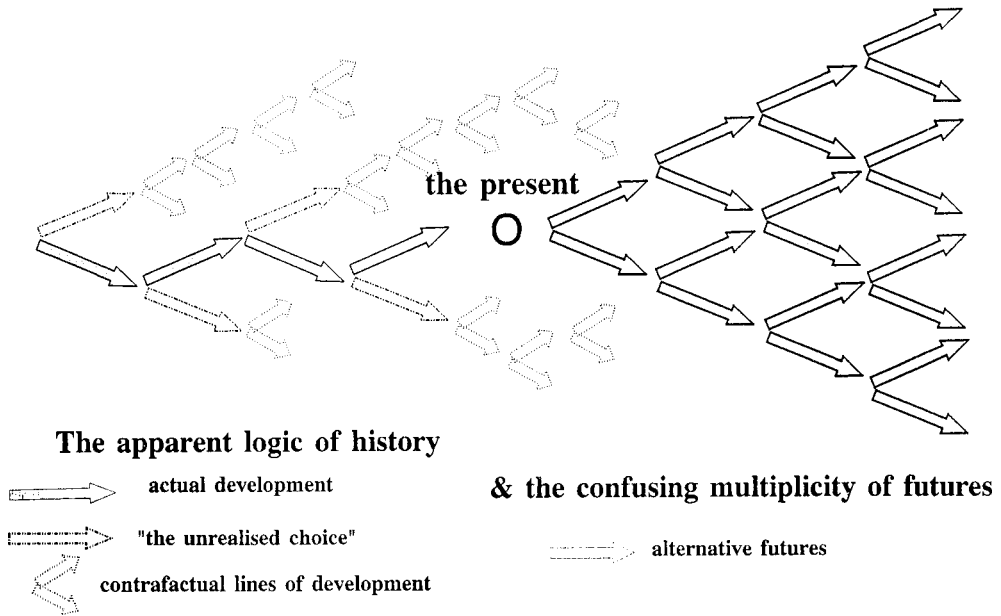


Figure 2. The apparent linearity of history and the multiplicity of futures.

In making a strong plea for multidisciplinary approaches to problems in history,<sup>5</sup> the Swedish historian Erik Lönnroth (1998) points to another similarity between landscape studies and futures. Different narratives concerning the development appear depending on what types of “present traces of the past” are used: coins, place names, written sources, archaeological remains, etc.

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5. I am referring here to the essay ‘Kaos eller samarbete. Synspunkter på forskning i Sveriges tidiga historia’, p. 317-326.

## The claims for relevance<sup>6</sup>

Before taking the discussion further let me digress somewhat concerning the nature of the claims for relevance to planning and management often made in landscape studies and in the two discourses hypothesised by Sörlin.

There are few examples of landscape studies in Sweden with systematic examination of alternative futures using scientific theories and data concerning the dynamics of landscape. However, as noted above, there are many landscape studies which claim to deal with or be relevant to planning and management. Since planning and management are essentially practical attempts to deal with or determine a future state of the landscape such studies thus claim relevance for a future. Examining cases of how landscape science claims to relate to planning and management of future landscapes four modes can be discerned, which can be characterised respectively as

- General intellectual claims
- Instrumental claims
- Deterministic
- Speculative

### *General intellectual claims*

These are based on the notion that we need to have historical knowledge in order to understand the present and the future. These claims are generally unrelated to specific problems or to the questions of prediction or other methods for exploring the future. We might term this a *humanistic attitude* rather than any specific claim concerning instrumental applicability produced by landscape studies. The notion that knowledge of the past is of general relevance to understanding the present and the future is of course a vast topic. More specifically in relation to landscape and artefacts it has been dealt with in an encyclopaedic fashion by Lowenthal (1985). In environmental conservation and management the past as norm or ideal has an interesting and complex role. Olwig (1995) discusses this for Danish landscapes. Emmelin (1997b) touches on some aspect specifically related to impact analysis, especially the common confusion between using the past as ideal and as base-line in the scientific sense.

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6. This section is based on Emmelin (1997a) and on an ongoing study.

### *Instrumental claims*

This group contains the more specific claim that archaeology, paleobotany, landscape history, cultural history of farming practices, etc. provide important instrumental knowledge for planning and management, especially regarding preservation and conservation. Often the claim is supported by no evidence or attempts to draw lessons from the material; this seems to be left to the administration. Where evidence is given it is usually circumstantial, in that few prescriptions or concrete cases of need for knowledge are quoted. The classic example of the scientific misunderstanding of the background of the grazed forest meadows in Sweden in the early parts of the 20th century (Emmelin 1983b) is often cited as showing the need for correct knowledge but the practical examples of recent use are few. The lack of empirical or even reasonably detailed circumstantial support for claims for instrumental use become problematic in such contexts as research programmes and symposia where the overt motive is to produce relevant knowledge. The notion that instrumental knowledge relevant to present industrial societies can be produced by studies of past agrarian management regimes is usually tied to the concept of “sustainability” and a presumed higher degree of sustainability of older management systems. This is interesting and slightly paradoxical in view of the importance of theories concerning “unsustainability” and “carrying capacity” as a driving force in economic, technological and cultural evolution (Boserup 1981; Welinder 1983; Berglund (ed.) 1991; Meyer & Turner 1994).

The most clear cut arguments for instrumental value seem to come from literature on management of specific, relict cultural landscapes or localities, such as the series of handbooks on management published by the Swedish EPA – see e.g. Ekstam & Forshed (1996).

Examples of claims for a combination of instrumental and normative use can be found in the architectural and landscape architectural literature (Lowenthal 1985). Confusion between “historically sound landscape design”, i.e. a normatively based design of a single landscape presumed to be authentic and scenario construction, i.e. the examination of alternative landscapes can also be found in the literature (Vervloet 1995).

### *Deterministic*

These take two distinct forms. The first is a form of scientific determinism, most frequent in the natural sciences and economics. The second is what might be called “intentional determinism”, i.e. the notion that the future landscape will be the product of planning. The natural science determinism is rarely articulated but rather implicit; thus it is often expressed as the “vague instrumental

claims” category. A striking example of the notion of a planned future will be given below.

### *Speculation*

The notion inspired by the natural sciences that the future, if not predictable, cannot be the object of structured scientific reasoning at times seems to lead to discarding all methodological restrictions and outright speculation. This is justified by reference to “creativity” as a reason for abandoning scientific method and structured reasoning.<sup>7</sup> The gradations from unstructured speculation to scientific method in futures studies have been discussed by Asplund (1978).<sup>8</sup>

### *Three notes on the claims*

In the context of the Danish strategic landscape research programme I think three points, all related to the linking of past, present and future, are especially worth taking note of.

Firstly, the time-gap between the past and the present which is usually noticeable in humanistic studies of landscape. Planning and management studies are normally carried out by political scientists and planners and other social scientists. The need for the historians trained in critical method towards sources is often sorely felt. However, historians seem to want to keep a safe distance to the present, in landscape studies preferring to study the roots of the conservation movement, for example, but rarely tying this to present problems and practice. The links seem to be implicit.

Secondly, the problem of applying to the present and the future instrumental knowledge of a particular period or mode of managing the landscape, using natural resources and organising society around this. Since the present landscape is in fact a mosaic of influences of extremely varying time spans and persistence such knowledge, fished out of earlier periods, needs to be related to modern practices.<sup>9</sup>

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7. See for example Bhalotra (1995).

8. Note, again, that I am not referring to literary futures, science fiction, etc. but to futures appearing in the guise of science or in an otherwise scientific context.

9. A specific example is discussed by Emmelin (1986): the use of a modest amount of commercial fertiliser in an otherwise relict management regime of a small farm was seen as a compromise adaptation to older methods of hay production. It could in fact be shown to be incompatible with both contemporary economic and energetic efficiency and with the conservation values of the older methods and landscape; the old and the new was mismatched rather than adapted to each other.

Thirdly, a lack of clarity regarding what has prognostic value in relation to vague concepts such as sustainable development. Older systems of resource management are often claimed to be “sustainable”, on vague grounds and with scant empirical evidence. Since “sustainable development” is one of the goals of much environmental and natural resource policy older methods and smaller scales are claimed to be relevant.

## A model for the futures discourse

In order to discuss further the possible analytic likeness between landscape studies and futures a simple model for the futures discourse seems necessary. This will be used to illustrate some of the points made above.

The point of departure for the discussion here is a model of the futures discourse (Emmelin 1995). Any systematic treatment of the future, be it a scientific prediction or a utopian vision, will contain three elements: a direct or implied description of *the present state* of the planning object, a description of *a future state* of the planning object and an *organising principle*, binding those two together. The organising principle can be regarded as a *narrative* binding the present and the future state together. The model can also be used to structure analysis of “the argumentative turn” along the “aristotelian” lines advocated by Kaplan (1993) focusing on the choice of elements for a “beginning” and the way in which the “middle” is constructed to achieve the “end”.

Figure 3 illustrates this discourse model. It is a discourse in the sense that not only does this model presuppose data but also methods and concepts for selecting data, constructing the two pictures and organising the narrative that binds them together.

Apart from setting out the three main elements of a futures discourse the model also illustrates three important principles. Firstly, the obvious fact that both pictures of present and future are representations where the selection of elements included is governed by some principle which may be more or less strictly and formally related to the organising principle binding the pictures together. The relationship between the organising principle and the selection of information or data included in the two pictures is one of several possible approaches to an evaluation of a futures discourse. Secondly, that there are contexts for both present and future that bear upon the representations, on the selection of information or data included and on the organising principle; one such common context in scenario writing is often expressed as “all other



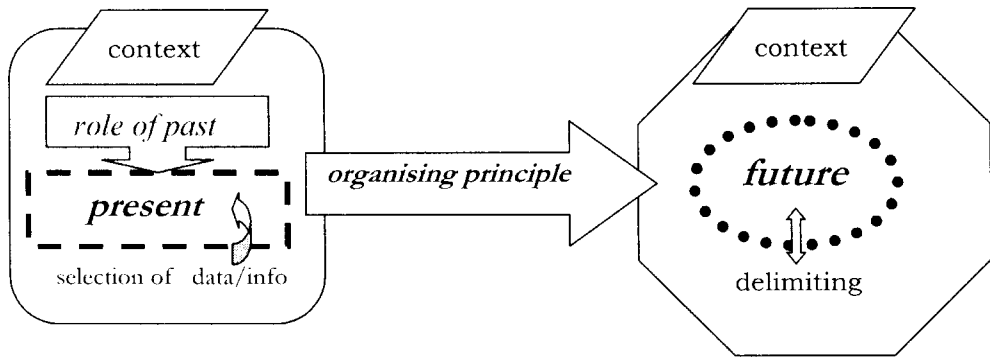


Figure 3. A model for the »futures discourse« (Modified after Emmelin 1995).

things equal” or “surprise free development”. Thirdly, that “the present” will always in some way refer to “a past” and this relationship will bear obvious relationships to the organising principle. This is evident when the organising principle is a simple trend extrapolation: the present and the past may be organised as a long process, a few points in time, etc.

Elements in the classification of types of futures may include the methods of the organising narrative, the modes of choosing the relevant data and information in the present, the mode of delimiting the relevant picture of a future. Ideally the description as a whole should not only describe the two pictures but also aspects of their context.

#### *Four ideal types of futures*

Based on this model four ideal types<sup>10</sup> – “prognosis”, “plan”, “vision” and “scenario” – can be distinguished. In practice they may in fact be both overlapping and confused. Prognostication in social and political contexts may entail little of the methodical generation of futures or be based on skewed selections of information about the present. The concept of “scenario”, even if defined precisely contains a wide range of approaches from trend extrapolations to normatively generated futures.<sup>11</sup>

10. In the »weberian sense« of models, not necessarily ideals to be realised or closely adhered to.

11. The word tends to be used even more loosely than the dictionary defines it »sequence of imagined events« – in that a brief snapshot of a future state, with little explanation of how it was reached is popularly often termed scenario.

**Prognosis.**<sup>12</sup> The central aspect of prognosis is the narrative in that not only the connection between present and future, but also the selection of data and salient features in the present is organised by a model, which generates the future. The core of the narrative may be mathematical or statistical, based on known or hypothesised laws or observed relationships, or in some other way systematic. The discourse is legitimised by the status of the relationships which generate the future state from the present.

**Plan.** The central and organising principle derives from the future state that the plan is to realise. This may be generated by a perception of a future, desired state or by a perception of problems in the present. The plan presupposes implementation and thus explicitly or implicitly the existence, sometimes the specification of, the instruments. It is the presence of these instruments that legitimises the discourse. Their strength and efficacy is what will determine the results of the planner's intention for a future reality.

**Vision.** Here the organising principle is also a perception of the future condition, which is described as desirable. The discourse deals with the ways in which this state could be reached, given a situation described as the present state. Unlike a plan the instruments may not be under the control of either planner or client. The object of the vision is therefore persuasion leading to consensus. The claims to verity of a vision lie in its persuasive power: the future state must appear as desirable and reachable; the consensus must appear to be likely.

**Scenario.** The term originates in the theatre; a scenario is "the complete plot of a play with details of scenes etc."<sup>13</sup> There are several approaches to scenario writing (Asplund 1978; Godet undated; Masini 1993). A scenario may start from the present state, extrapolating certain explicitly chosen features of the present – a trend scenario. It may work in a sequential fashion from the present exploring successive decision points – the exploratory forward scenario. It may

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12. I prefer the term »prognosis« to »prediction«. Although commonly used as a synonym the etymological root of prognosis in the Greek »gnosis« = »know« describes the intention and claim: »to know the future«. »Prediction« on the other hand is »to speak the future« (Latin »dicere«) which is what all four types do.

13. Concise Oxford Dictionary.

start with a constructed future that may be likely, utopian, dystopian or have any other feature contrasting or retaining the present state. The narrative works back-wards exploring the connectivity of future and present – back-casting (Robinson 1990).

The important uniting principle of all scenarios is that they are explorations of the logical type “if ...then” of the connection between a conceived future and a partial representation of the present. The sequential nature of the reasoning is essential to their verity: the pathways between present and future must be broken down to logical and consistent steps. The scenario claims neither to be the best representation nor a blue-print. Its claims to verity are explicitly conditional.

### *Claims for verity, validity and reliability*

Statements about the future cannot in any simple, scientific sense be true. Nevertheless they can lay claims to some “form of truth”. Behind the choice of methods lie intentions concerning the role they can play in the discourse about the future. Such intentions may not be explicit, or even obvious to those who use these methods, but they are embedded in professional norms, professional, organisational or scientific paradigms or in the discourse itself. The intentions may bear little resemblance to the actual use or to what is scientifically appropriate. Choice of term or method can have an important legitimising function, as is the case of the scientism of environmental administration (Emmelin 1993; Emmelin & Kleven 1999), or the more specific cases of scientific problem construction in environmental policy (Lash et. al. 1996; Wynne 1996) or in discourse coalitions around a certain environmental problem (Hajer 1993; 1995). In an ideal type classification it is the explicit intentions that must be used as a basis not their implicit or embedded intentions or the argumentative uses they are put to.

The intention of a *prognosis* is to present some form of “truth” concerning a future state. It may be conditional, hedged with statistical or qualitative reservations, nevertheless the intention is to present the best and most consistent prediction. The prognosis may be of variable validity or reliability in a scientific sense but it makes claims to validity in the sense of relevance to the problem or decision making or planning context.

The intention of the *plan* is to determine the future. As discussed above this may have a more or less solid foundation in instruments and power and in this lies its claims and test of verity.

The intention of the *vision* is consensus regarding a desirable future state. The policy relevance of the description of the future and the likelihood of consensus and coalition is the test.

The intention of the *scenario* is insight in a wide sense – the “*verstehen*” of hermeneutics. The consistency of the reasoning is the critical test. If unable to point to mechanisms that would produce the sequence of the narrative or historical precedence or analogy that makes it plausible then its claims are void. It is doubtful whether either claims or tests of scenarios could be applied except within its chosen perspective, i.e. consistency with its rationalist, idealist, implementation or other perspective.

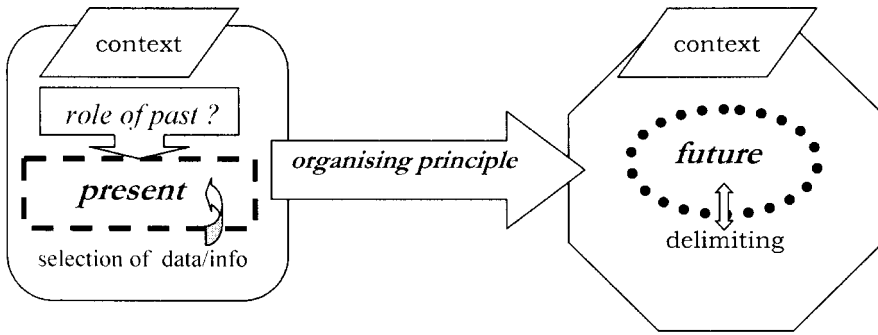
### *The absence of the present*

The model can be used to illustrate the point made concerning the absence of the present in Landscape discourse. Figure 4 shows variations on the model in figure 3 to illustrate this. In 4a the relationship between the past and the present is indicated. Is the present explained in terms of a development from the past or is it a description of a present state without a past? In the latter case there will be problems in picking out both the elements and the processes which are to organise the transformation of the present into a future. How is the narrative or organising principle to be justified? 4b illustrates the absence of a present. The past is discussed but with little connection to a clearly perceived present. In other words: the problem which the past is supposed to throw light on or provide instrumental knowledge of is not clearly stated.

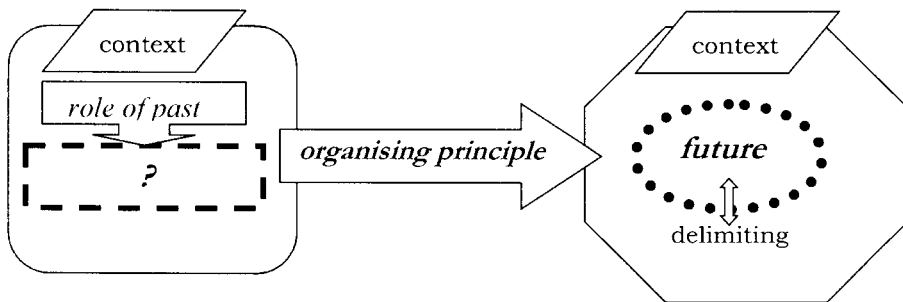
Finally figure 4c shows, in somewhat extreme form, what often seems to be the situation with regards to landscape studies and their claims to relevance. The distinction between a deplored present and a dystopian future is blurred. The present is more or less equated with the future. Detrimental changes in the landscape have already occurred and the future is simply a somewhat further deteriorated version of the present. Essentially then the landscape discourse has become entirely divorced from any systematic futures discourse. The problem of the past as reference base for the future always entails this risk.

### Handling the future: seeing the future as in principle different from the past

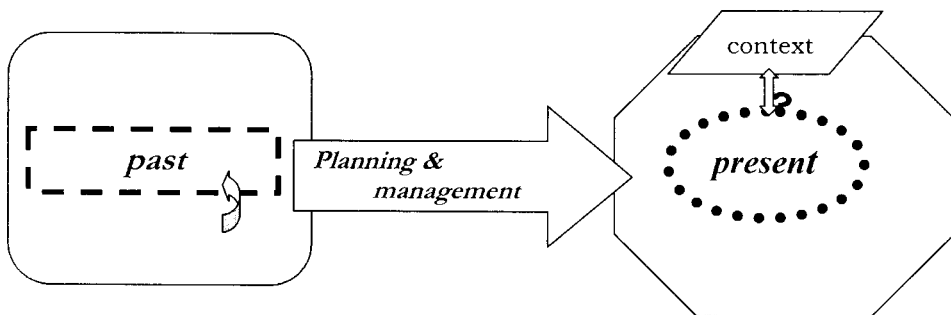
To illustrate the problems of not regarding the future and the past as essentially part of the same analytic scheme let me use one example from my ongoing study of “handling the future”. The example – treatment of the future in *The National Atlas of Sweden* – is drawn from geography where a clearer



4 a. The present as a function of the past. This influences the “organising principle”.



4 b. The past is analysed, the present implicit or not clearly differentiated from the past.



4 c. The present and the future merge into a perceived threat to a past landscape. The role of planning and management is to recreate the past rather than manage the future.

Figure 4. The influence of the landscape discourse on the futures discourse.

conception of the interaction of the natural and the societal could, *prima facie*, be expected (Holt Jensen 1990). The reason for looking at *The National Atlas of Sweden* is that it is a comprehensive presentation of many aspects of the geography of Sweden. In 17 volumes the academic disciplines within the broad framework of geography present a picture of the Swedish landscape in its widest sense, – physical geography, biogeography, agriculture, forestry, work and leisure, industry and infrastructure, etc. – its development and present status. Thus the handling of the future Swedish landscape may reasonably be seen as indicative of the dominant paradigmatic relationship to “futures”. There are roughly four ways in which “the future” is treated. A few volumes do not deal with futures or only very obliquely. One group, mainly those volumes dealing with the natural resources and physical geography, discuss the importance of environmental change and the role of natural resources in general terms. The treatment is brief. A third group – notably those dealing with economic geography – contains some form of “vision” by senior administrators, industrialists or politicians. The fourth group contains attempts at treating the future by scientists.

With some exceptions the future seems to be regarded as a matter not for science but for politics and administration or for literary speculation. It is surely indicative that the attempts at scientific treatment of the future are within demography and location geography where there is a long tradition of modelling and prediction (Holt-Jensen 1990).

In the context of this paper one volume merits further discussion. It is the one on cultural landscape and the built environment. Here the future landscape is treated in two different ways in two concluding chapters. One is a “vision” by the then Minister for planning. The other is a discussion of planning. It is this aspect which is interesting since it has a paradoxical relationship to much of the volume which it concludes. In summary, the volume can be said to illustrate how a complex combination of factors has shaped the Swedish cultural landscape up to the present. Planning plays no role in explaining the structure and function of the present or past landscape. In fact it is not even explicitly discussed as a factor which could have shaped or guided the processes that have formed the present landscape. Planning makes its appearance at the end, under the heading “Planning frame-work for future landscapes”. This chapter does begin with the history of Swedish town planning indicating that planning can and has shaped the urban centres. The chapter then goes on to claim that: “The cultural landscape and the development of the built-up areas is determined by the frames set by societal planning, especially the so-called physical planning. This aims at long term foresight in economising with natural resources and co-ordina-

tion of different types of land use for the needs of society.”<sup>14</sup> An extremely far-reaching claim for the scope and importance of physical planning in shaping future landscapes is thus made. This is further strengthened by the claims made for national physical planning and the role of the Natural Resources Act. The authors claim that it is the duty of the local authorities to follow the guide-lines given by the Act and of the regional planning authorities to ensure that it is done.

What in fact is outlined in this chapter is the intention of physical planning legislation and claims sometimes made for physical planning by the planning profession. The empirical problem of whether the Swedish landscape has been shaped by planning seems entirely divorced from the statements that planning sets the framework or even determines the future of the landscape. The relationship to the landscape thus becomes deeply paradoxical in this volume. The present landscape has been shaped by economic, social, technological and other forces with planning playing no identified role outside the centres of the old towns. The future landscape on the other hand will be shaped by planning. The perspective on forces shaping the landscape up to the present and the future is also paradoxical. The present, especially as discussed in the chapter on the 20th century, is explained in terms that must be considered largely materialist or functional. The future is intentional and the perspective given by the “vision” is idealist rather than rationalist or functionalist.

In summary, the 17 volumes give an impression that, with the exception of those fields of geography that have a tradition of prediction, the future is essentially a non-scientific concern, shaped by intentional acts such as planning or by “visions”. The problem of what guidance there is in understanding the present and the past is not explicitly dealt with. It is difficult to say whether this should be interpreted as ignoring the issue or leaving it open for others.

## Preferred Landscapes

A problem in regard to planning and management, which has not yet been raised is the lack of spatial coherence of landscape studies. Different

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14. My direct translation from the Swedish text, which aims at catching some of the critical Swedish concepts discussed further below, rather than elegance or conformity with correct English usage; cf »societal planning« which does not exist in English usage.

disciplines search for landscape examples to study from their particular point of view. This would seem to be a spatial variant of Lönnroth's (1998) challenge which called upon the bringing together of different approaches in order to tell a richer and hopefully more coherent story.

To discuss the problems of understanding a landscape it may be useful to see how different disciplines, paradigms and schools incline towards specialisation regarding problems and methods in addition to the landscapes under study. Results and data therefore become a function of and relevant to different types of landscapes. The joining together of knowledge from different studies may therefore be a problem also of representativity of different landscapes. The simple observation that not all landscapes are equally interesting to all disciplines can be used as a starting point for some reflections on this problem.

*Relict landscapes* where remains of earlier land cover are abundant and considered particularly indicative of land use are of obvious archaeological and historic interest. The problem of selective retention of certain types of structures and artefacts in marginal landscapes will tend to focus interest on certain landscapes rich in objects of study. The processes which conserve artefacts and structures and the uneven spatial distribution of knowledge of different types of artefacts and structures will focus interest and knowledge of certain types of landscapes.

Important understanding of the dynamics of the relationship between land use and land cover under different management regimes can come from relict landscapes. Cultural geography can provide numerous examples, such as the thorough studies by Christiansen and co-workers, of a small farm in Jutland, Emanuelsson's studies in Blekinge (1990) or the nutrition balances made by Olson in the Ystad project (Berglund 1991). Analysis in physical terms as in these studies can also be used to analyse conservation and management options (Emmelin 1986). Energy analysis can develop into a variation on economic, neoclassic analysis and determinism such as in the models of Odum (1971) and his Swedish school, in particular the so-called Gotland-study. In the case of this school the relevance problem of a natural science variant of historic analysis to futures crops up (Emmelin 1994 & 1983a).

The focus of ecology<sup>15</sup> on "*natural landscapes*"<sup>16</sup> i.e. landscapes with a

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15. In the strict sense of a biological discipline.

16. The term is used in spite of its lack of precision for its intuitively understandable quality; the lack of precision corresponds to the implied everyday use.



low or controllable degree of human intervention is easily understandable as a function of the preoccupation with the nomotetic in the natural sciences. Thus the predictive power of ecology is high with regards to processes that can either truly be considered to be “natural” or be transformed into natural processes by making the human factors into external inputs which are either given entities or – as in the global warming or population pressure on resources models – varied in accordance with a set of scenarios (Sage 1994). The relevance to cultural landscapes is the subject of much debate in landscape ecology.

The focus on an “*underlying landscape*” of the earth sciences is a special case of the focus on the natural. Olwig (1995) has criticised the “layer cake” model, i.e. the model of the landscapes of different disciplines superimposed on each other. This model has its origin in the earth sciences but has also been influential in e.g. German landscape science and planning and is frequently used in popular landscape texts. It depicts certain disciplines as more fundamental, essentially as a function of a time scale of influence. However, the claim to being fundamental is also literal in the earth sciences: their landscape as the foundation and substrate for the landscapes of all other disciplines and time periods. Even if one disagrees with the ideological dimension of Olwig’s critique one should be aware of the focus on different disciplines as separate and on the effects that this essentially reductionist approach to landscape has. Understanding of interactions and interwoven processes such as synergy, antagonism or feed back, at all scientific levels in the “layer cake”, is likely to be obscured by such a model. While the attitude towards such a model may be a matter of disciplinary tradition or preference the very real risk of simplistic reductionism should not be neglected in explaining development or determinism in futures inherent in the model.

There is an interesting combined effect of the paradigms of archaeology, earth science and ecology in that the modes of explanation and focus may be compatible. Archaeology, earth science and ecology and the related fields at the borders of the disciplines such as paleobotany and quaternary geology can work together in landscape projects. The social sciences fit less well into this co-operation. As one moves closer to the present the inadequacy of the ecological paradigm approach to describing and analysing more recent landscapes becomes a problem. The theoretical foundations and models of cultural landscape projects such as the “Ystad-project” leads to a focus on older landscapes.

An interest in “*planned landscapes*” is shared by several disciplines. Humanistic approaches to the influence of landscape ideals, ideology etc. will lead to a focus on what might be termed “*intentional landscapes*”, i.e. those planned landscapes where the influence of a single decision maker can most

clearly be discerned. The great parks or the landscapes of large estates as well as the monumental town plans are favourite objects. Such major landscape restructuring as the Swedish land reforms, the draining and cultivation of wetlands or the afforestation of the Danish heaths may be examples where a fruitful contrasting of the actions of individual entrepreneurs and planners with a societal context, between intentional “causation” and collective “conditions” can be made.<sup>17</sup>

A result of such a focus is the support that it may seem to give to a designing, rationalist conception of planning, i.e. planning as a project with a single decision maker fulfilling a clear set of goals. Although the humanist may uncover other motives and influences than “rational use”, indeed not least the limited and variable nature of what is at any time perceived as rational, the perception of landscape as a planned entity may receive support. This use of the results of studies of “intentional landscapes” is by no means the only possible or the most interesting. The point is simply that it fits into an architectural professional tradition. The importance of such humanistic research is, in the perspective of landscape futures, that it problematises concepts of rational use. Thus it is important as a challenge to mind sets in planning and management. It is also an important foundation for the concept of “style”, i.e. the aggregate mode of reacting to policy that is needed to handle the multitude of actor reactions to policy or exogenous influences (van der Ploeg 1995). Important critique of planning and management can also emanate from such research e.g. the critique of landscape restoration.

Planning and management must have regard for “intentional landscapes” in for example recreation, while at the same time perceiving the influence of landscapes as much more complex than what the concept of a “planned landscape” allows. Research into ideals and intentions reveal discrepancies between professional perception of a good landscape and those of various user groups (Koch & Søndergaard Jensen 1988; Vistad 1995, Hammitt & Cole 1987; Hammit et al 1993; Emmelin 1983b).

### *Types of explanation and geographic level*

The above is not a critique of the focus of different disciplines. The concentration on different landscapes is logical and necessary in order to utilise fully different

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17. For a discussion of the reasons why »the individual as actor« often gets defined out of social science and history see Beckman (1990).

theoretical and methodological approaches. The issue is discussed here because it raises the interesting and complex problem of representativity. The problems of “preferred landscapes” and the calls for holism can be further illustrated by a simple model of different types of landscape analysis proposed by Jones (1988). He has proposed a simple model of how different geographic levels might relate to different types of explanation of landscape change. This is well worth keeping in mind when trying to connect landscape studies at a certain level with explanation at other levels (Emmelin 1997a).

## To understand policy processes: chains of causes

The search for a unique cause of a particular line of development is problematic in more ways than simplistic refusals of reductionism or positivism in the elementary geographic debate may seem to indicate.<sup>18</sup> The similarity between the historians’ attempt to sort this problem out and the methods of futures is striking.

Futures can obviously learn from the historians’ discussion of “cause” in a non-deterministic sense. Marc Bloch (1992) notes on the one hand the need for searching for a unique cause and to distinguish that from the “conditions” i.e. the “nearly universal antecedents” that, while certainly necessary to causation, nevertheless are common to too many phenomena to deserve a special niche in the genealogy of any of them. We might however fall foul if they are regarded as constants in an historical analysis just as there is a need to scrutinise them closely for possibilities of long term change in futures; what can be regarded as constants will depend on the time frame of the analysis. While the average climate or the major features of the landscape may be “conditions” in an analysis over years or decades, land rise and climate change may affect landscapes profoundly in Scandinavia over periods of decades to centuries, with important effects on agriculture, land use etc. The constants of latitude and geology in history are the variables of the paleontologist.

On the other hand even disregarding these issues... “a graduated classification of causes ...cannot safely be elevated to an absolute. Reality offers us nearly

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18. For a readable – which much of the original debate itself is often not – overview of geographic debate see Holt-Jensen (1990).

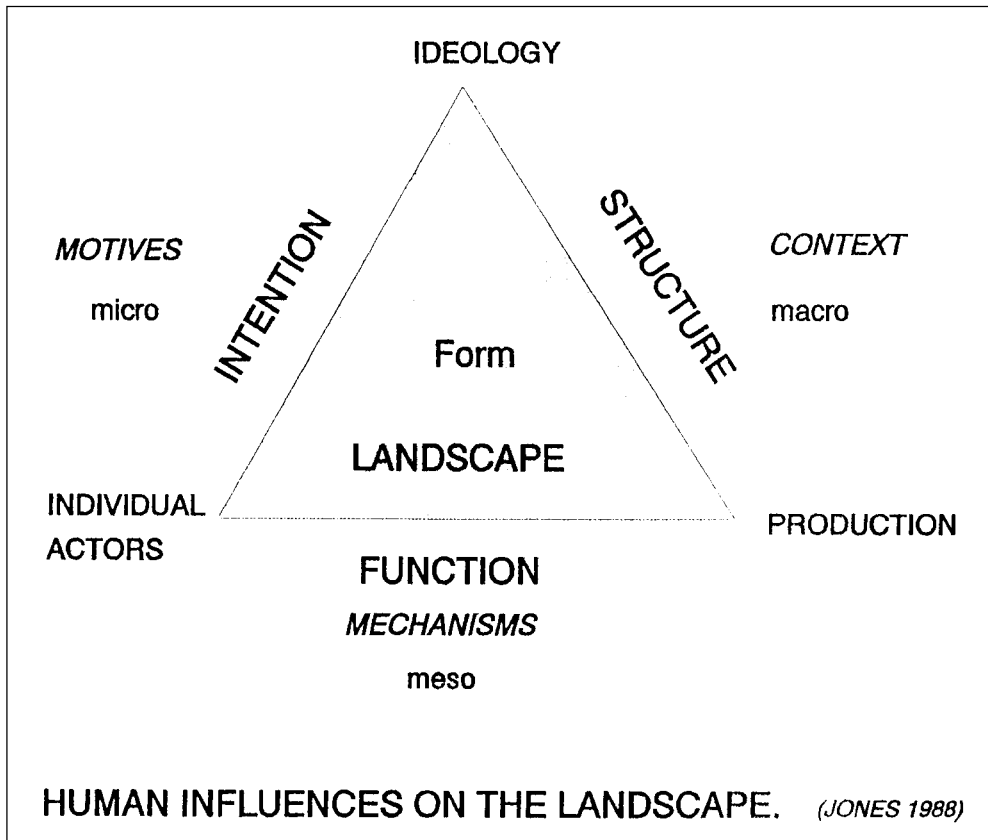


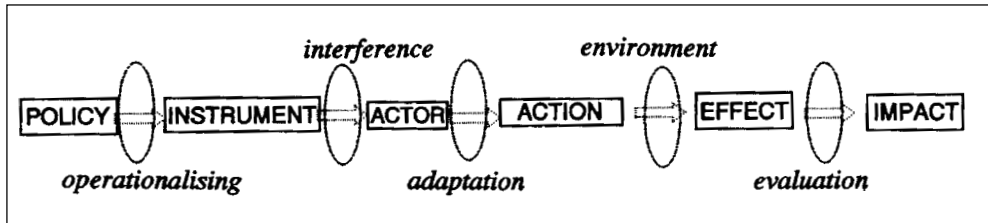
Figure 5. Different types of explanation of landscape change at different geographic levels.

infinite numbers of lines of forces which will converge together upon the same phenomenon. The choice we make among them may well be founded upon characteristics which, in practice, fully merit our attention; but it is always a choice. Notably there is something extremely arbitrary in the idea of a cause *par excellence*, as opposed to mere “conditions”.

One way of handling this problem is to operate with chains of causation, complemented by a set of “conditions”, or as I prefer to term them in scenario construction “contextual factors” (Emmelin 1997c). From policy science a simple model used to construct scenario chains of reasoning can be taken over for landscape analysis also. The simple, but often forgotten, idea behind this model is that policies or plans never have direct effects on the landscape. It shows the major steps in the translation of policy to an observed effect and an evaluated impact in the landscape. The “filters” are the point at which the

“contextual factors” of scenarios, those factors that Bloch terms “conditions”, will interfere to modify, enhance or lessen the impulses from one link in the chain upon the next.<sup>19</sup>

### Five filters between policy & impact



<i>operationalising</i>	design of instruments is influenced by many factors
<i>interference</i>	policy instruments interact with other policies and background
<i>adaptation</i>	actors may have several options to adapt or to resist action of policy
<i>environment</i>	effects are influenced by synergy/antagonism, ecological sensitivity
<i>evaluation</i>	are environmental effects considered significant; what importance?

Figure 6. A simple model for reasoning from policy to effect and impact (Emmelin 1997).

### Scenario techniques as a model

Let me round off this somewhat theoretical discussion with two examples where the reasoning from scenario exercises can illustrate some of the possible uses in landscape studies. The examples are chosen as illustrations of Jones’ model and the policy-impact chain. They are admittedly simple and consciously chosen as somewhat odd examples of landscape problems. I do not think that this should detract from their didactic value.

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19. Those who think that such a linear chain of reasoning is too simplistic and smacks too much of a mechanistic, natural science way of thinking might do well to read Eco’s biting comments on claims for non-linearity by Macluhan (Eco 1986).



### **A copse of conifers in the middle of a grazed field**

The copse shown in the picture is indicated on the map. The entire area around Kronotorp north and east of the roads is part of a large military training area. It is extensively grazed.

*The problem:* Why is this rectangular copse flung out in this area?



*Figure 7. A small copse of conifers in a large grazing area.*

The example can be used to illustrate approaches to matching a landscape feature, i.e. land cover with different types of explanation based on land use: there is not always a simple relationship between present land cover and present land use. The copse is in an extensively grazed military training area. Its present function is to provide shelter for cattle and for soldiers. However, it was planted before the land was taken over by the Army. What then was its function? In landscape ecological terms: is it a “remnant patch”, a “resource patch” or what? The soil of the field is very sandy. Indeed one of the reasons for the original Army training area is the marginality of the land. At the time of planting – the 1950’s – conversion of marginal agricultural land not in use into coniferous plantations was both mandatory and subsidised. Can we say that agricultural and forest policy accounts for the conversion? Is the “land cover” by conifers explained as the “land use” of forestry? No, in this case policy and economic incentives for forestry are “conditions” in Bloch’s terminology or contextual factors in the sense of “context” in figure 3 and 4. The immediate cause of the plantation is in fact strategic rationality of the farmer who owned the field. Payment for take-over by the Army was of course related to land value. A conifer plantation, while subsidised for its creation, was paid for at its value as forest land.

*The problem of getting what you plan for – does policy shape the landscape?*

The need to understand the chain from policy to effect and impact can be illustrated with examples from landscape planning and management. If goals are not explicit in the formulation of instruments the results may be far from what is desired or expected. This is very much conventional wisdom in policy analysis. However, in conservation and landscape management<sup>20</sup> the lack of explicit criteria has repeatedly lead to a mismatch between intention and result. Good examples are the attempts to control forest structure and species composition with legislation, first to preserve and ensure replanting of beech and later to ensure preservation of other deciduous tree species in Sweden in the face of a strong pressure to plant only spruce and fir by forest owners. Legislation banning the logging or demanding replanting with certain deciduous species could not ensure a diverse forest environment with a variation of species

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20. With the notable exception of landscape architecture and gardening where design and implementation are closely tied and the manager normally has a degree of control which ensures a reasonable match between intention and result.

and variable age structure. In fact the absence of any standards except a demand for certain species the legislation could not even ensure genetic diversity or the use of indigenous strains (Emmelin 1983b). The call for environmental standards and for indicators and indices in environmental policy can be seen as a result of this realisation.

Attempts to increase landscape diversity and biodiversity by channeling “set aside” into restoration of wetlands or planting of deciduous trees on marginal farmland carried out before Sweden’s entry into the EU have been criticised for producing “non ecological” results. Instead of “wetlands” land owners created duck ponds suitable for hunting. Figure 8 shows a typical planting financed by a grant for taking farmland out of production.

Haasund ascribes this failure mainly to a lack of information from conservation authorities. However the basic problem is a lack of operational criteria for what effects are desired. It is doubtful whether the results could have been dramatically different with better information in the absence of clearer goals. This assumes that regional conservation authorities could and would have withheld grants if landowners had not designed their measures differently. This is a highly doubtful assumption precisely because of the lack of operational criteria. Costs for more complex measures would have been higher and in the



*Figure 8. Deciduous planting on former farmland. Is this the increase in biodiversity and landscape diversity that the legislators intended?*



absence of criteria it is hard to argue for other measures than conventional pond creation or rational planting.

## Concluding remarks

My conclusions can be summed up in a few straightforward points concerning landscape studies:

- There is little evidence of knowledge of planning and management or awareness of planning theory. The implicit notions of planning and management seem to be vaguely rationalistic.
- An often unclear mix of descriptive, predictive and prescriptive ambitions. The claims to relevance seem to be vague but slightly immodest in the absence of recognition of planning and management as both professions and disciplines. The relevance of knowledge of the past is taken for granted rather than explicitly discussed.
- There is no clear relationship to the concept of futures and to the futures discourse. Awareness of methods and theory in the field of futures seems low or non-existent even when scenario methods are claimed to be used.
- Even when scenarios are constructed there is little attempt at the “hermeneutics of scenario methods” (Emmelin 1997a). There is little analytical approach to futures, which are mainly extrapolations of trends.
- The contrast between the disciplinary reality of approaches and the holistic rhetoric is at times striking.

It is my contention that greater attention to the implication of claims for relevance to planning and management, to the futures discourse, would help landscape studies to formulate better, more pertinent questions to substantiate claims for relevance. It is not answers to vague questions we lack but good questions to drive a form of “hermeneutics of landscape” (Emmelin 1997c; 1996).

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## Resumé

### ***Den forvirrende mangfoldighed af 'fremtider' og historiens lokkende logik***

To grundlæggende forhold mht. landskabsplanlægning bliver diskuteret i denne artikel. Det ene er at landskabsstudier, som primært beskæftiger sig med historiske aspekter af landskabsudviklingen, ofte hævder at have relevans for planlægning og administration af det nutidige og fremtidige kulturlandskab.

Det andet aspekt drejer sig om metodiske ligheder mellem undersøgelser af landskabs 'fremtider' og administration på den ene side og landskabsstudier på den anden.

Konklusionen er at der ikke er store tegn på kendskab til planlægning og administration eller opmærksomhed på planlægningsteorier i landskabsstudier. De implicite ideer om plan-

lægning og administration lader til at være løseligt rationalistiske. Et andet problem er at landskabsstuder ofte består af en uklar blanding af beskrivende, foreskrivende og hævdvundne ambitioner. Kravet om relevans er uforbindende men ubeskeden i lyset af fraværet af en anerkendelse af planlægning og administration som både professioner og discipliner. Relevansen af kendskab til historien bliver taget for givet snarere end diskuteret.

Der er intet klart forhold til begrebet 'fremtider' og diskursen om 'fremtider'. Kendskab til metoder og teori om 'fremtider' lader til at være meget begrænset eller ikke-eksisterende selv når man påstår at bruge scenarie-metoder.

Selv når scenarier bliver udarbejdet er der meget lidt forsøg på at opnå hermeneutikken ved scenarie-metoder (Emmelin 1997a). Der er kun lidt analytisk tilgang til 'fremtider' – disse er primært ekstrapolationer af tendenser.

Kontrasten mellem den disciplinære realitet ved tilgangen til studierne og den holistiske retorik er til tider slående.

Det er min påstand at større opmærksomhed på implikationen af påstanden om relevans i forhold til planlægning og administration til diskursen om 'fremtider' ville hjælpe landskabsstudier med at formulere bedre og mere rammende spørgsmål for at retfærdiggøre disse påstande. Det er ikke svar på vage spørgsmål vi mangler, men gode spørgsmål som kan videreføre en form for hermeneutik for landskabet.

