Energy Policy xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

Medial construction of energy landscapes in Germany☆

Günther Weiss

Institute for Geography and its Didactics, University of Cologne, Gronewaldstraße 2, Köln, Germany

ARTICLE INFO

Keywords:
Mass media
Landscape
Discourse

ABSTRACT

This paper reviews the German print media discussion of the relationship between "energy" and "landscape appearance" in general and"energy-landscapes" in particular, after the revision of German energy policy in 2011. When the landscape appearance is referred to within the scope of energy topics (without a firm conceptual link to an "energy landscape"), the debate tends to be dominated by statements proclaiming the destruction of landscape, primarily by wind turbines and wind parks. In the case of concrete energy landscapes referring to geographical units, these are frequently trade marks, in other words, proper nouns used for the purpose of establishing an image. It has become apparent that the term "energy landscape" is used, above all, as a metaphor for a complex organisational-technical-legal structure and for the transformation thereof. The overall conclusion is that the term "energy landscape" as a metaphor is more likely to be linked to the meaning of opportunity rather than threat, while in terms of defining a location within the landscape for new energy production plants, the notion of a threat clearly outweighs that of an opportunity.

1. Introduction

As forms of renewable energy increase in significance, the cultural landscape is also transforming. Alongside the established supply structure, consisting of a small number of large-scale power plants based on fossil fuel sources, on the one hand there is an emergence of new, decentralised energy supply plants using technologies such as wind turbines, photovoltaic systems, biomass, hydroelectric power, and geothermal energy, while on the other hand, the agricultural cultivation of energy sources such as corn or rapeseed, and new power distribution lines are also entering the scene. Elements, which have been shaped by aspects of the energy industry, are increasingly occurring in the landscape, and have led to a flourishing of the term "energy landscape". An energy landscape, in the broadest sense, means a section of the Earth's surface, noticeable influenced by facilities related to the production or transport of energy, mainly electricity. Due to this decentralisation of energy production, questions regarding the acceptance of these changes by citizens are playing an increasingly important role, as more and more people find themselves in the immediate vicinity of energy production and distribution sites. Consequently, it is of interest to explore which associations the citizens connect to the emergence of an "energy landscape" in their surroundings. However, the purpose here is not to examine the population's point of view, but rather to take a closer look at the perspective of the media as a carrier of perceptions. Transformations of the landscape can be observed in many places, yet their significance is not only assessed individually, but is socially pre-constructed by the media. Thus, those aiming to untangle the issue of the acceptance of those newly emerging landscapes, shaped by forms of renewable energy, must also ask themselves which connotations are provided in the media, and hence are transported into the public domain.

The first research question deals with the semantics of "energy landscape" in the media, understood here as a landscape generally influenced by energy production or distribution: Is it seen as threat or as an opportunity for a better future? The second question is, whether specific actors refer to a specific semantics of the relationship between landscape and energy. The third question is, if any development of these semantics can be observed during the recent years. This paper focuses on articles that appeared in the German print media during the period 2010–2016.

The concept of landscape and its meanings are relatively complicated. In his seminal study of the semantics of the concept of landscape – a concept which plays a significant part, particularly in German Geography – Hard (1970), worked on the basis of more than 200 interviews mainly with students who were asked for example to characterize landscape in a semantic differential, pick related words and define minimum elements of a (beautiful) landscape. Additionally he carried out a semantic analysis of literature and travel brochures. He identified three central meanings: Landscape as "paysage" (strong aesthetic and emotional components), as "région" (every part of the Earth's surface, characterised by morphology, vegetation and traces of human activity), and as artistic portrayal (reproduction with artistic

☆ *This article is part of a Virtual Special Issue entitled 'The collaborative "making" of Energy Landscapes'.*

E-mail address: g.weiss@uni-koeln.de.

http://dx.doi.org/10.1016/j.enpol.2017.06.031
Received 5 October 2016; Received in revised form 30 May 2017; Accepted 12 June 2017

means). Dominant among these is the meaning of “paysage”, combined with the attributes view, overview, beauty, closeness to nature, culture, diversity, uniformity, values, and experience. Complementing this, Gailing and Leibenath (2012), semantically analyzing scientific literature on landscape, identified a series of contexts of use with dichotomous meanings, which contain at their core the landscape as a segment of the Earth's surface endowed with a specific character and a uniform structure.

Though the appearance of decentralised renewable energy plants can be seen in many parts of the world, there is a specific discussion on that topic in Germany, due to the planned shutdown of all nuclear power plants and changes in energy policy at the national level as well as at the level of the German federal states (Bundesländer) (Nordensvärd and Urban, 2015). In Germany, the discussion of landscape with regard to the system of production and distribution of energy has developed, intensified and become increasingly differentiated since the late 1990s, driven primarily by the expansion of wind turbines. In the scientific sphere, it is possible to identify divergent approaches to addressing the relationship between landscape and plants for the production of (regenerative) forms of energy:

- Attempts to measure the degree of landscape change (e.g. Nohl, 2002), respectively to determine criteria for a socially acceptable design as a basis for planning (e.g. Meyerhoff et al., 2008). Landscape here was differentiated according to types, such as coastal areas, lowland, or mountain areas.
- Attempts to establish an landscape unaltered by renewable energies as belonging to the homeland and to denounce massive changes to the landscape, especially those caused by wind turbines, as a loss of homeland with harmful psychological consequences (e.g. Hasse, 1999). This landscape as part of people's perceived homeland is the everyday landscape with its normal proportions tranqility, small elements and balanced relations between nature and patterns of human use.
- Opinion research investigating the acceptance of plants for the production of renewable energy (e.g. Weise et al., 2005, Agentur für Erneuerbare Energien 2015). Opinion research is only concerned with the acceptance of renewable energy phenomena in the “neigbourhood”, neglecting their landscape appearance.
- Research on the reasons for the rejection or acceptance of energy production sites in the neighbourhood in Germany (e.g. Musall and Kuik, 2011, Rau et al., 2011) and international studies (e.g. Wüstenhagen et al., 2007, Devine-Wright, 2008, Van der Horst, 2008). The resulting significant determinants of acceptance identified are transparency of advantages and disadvantages, genuine opportunity of participation and co-determination for those affected, individual benefit, as well as the issue of procedural and distributive justice. Researchers investigated acceptance in different types of landscape (e.g. regions dominated by agriculture, industry, tourism), but economic patterns or the scenic appearance of the surroundings did not affect acceptance to a significant extent.
- Social-constructionist analysis of “landscape” as the result of individual perception, which is moulded by societal patterns of interpretation (e.g. Gailing and Leibenath, 2012; Leibenath and Otto, 2012; Micheel, 2012; Kühne, 2013). The results here revealed that there are heterogeneous concepts with regard to landscape in everyday life. The core concept of everyday practice is an Arcadian ideal of landscape; furthermore, landscape is linked to order, wellbeing and recreation (primary homeland landscape, similar to the “paysage” as defined by Hard, 1970). In addition, there are specific landscapes of experts, which might follow either a primarily ecological or a primarily aesthetic orientation (Kühne, 2013, 250–259). Within the social-constructivist understanding, the perception of a change to the landscape as “disfigurement” or “destruction” is not objective or invariantly given, but is historically contingent, dependent on habit, meaning, benefit and power.

Despite the intensified examination of energy in relation to landscape (cf. Anon, 2015), no firm concept of an “energy landscape” has crystallized in the realm of geographic research in Germany. The term is used sporadically and refers, in part, not to the real-life landscape, but rather to the organisational structure of energy supply and demand (cf. Becker et al., 2012: “Neue Energielandschaften - neue Akteure”). One exception is presented by Brühne and Tempel (2013). They define “energy landscape” as concentrated, landscape-shaping utilisation by one or more typically combined energy sources (p. 29) and endeavour to deliver a classification of “energy landscapes”. Ideas range from objectively beautiful landscapes which have to be protected against energy infrastructure, a scientifically identifiable balanced proportion of energy infrastructure for every type of landscape to the constructivist view that the acceptance of changes in the landscape is affected mainly by habituation and social discourse.

When Hard, 62, 79) (1970) considered compound words involving the term landscape, the notion of “energy landscape” does not arise in any of the sources he investigated and is not mentioned by any of the study participants. However, he points out that compound words including landscape are fixed neither in number nor in meaning. According to Hard, 74, 75) (1970), mankind's capacity to view a specific phenomenon as landscape, up and beyond the rules of use of the word landscape, is a feat of education brought about by art and literature, and thus by the media. In other words, media are able to generate and disseminate new “forms” and meanings of landscape, with the creative generation more likely to occur through artistic media (fictional books and paintings), and the circulation of these new forms more likely to be carried by mass media.

His article attempts to explore the semantics of the relatively young discussion of landscape influenced by energy production and distribution in general and the concept of an “energy landscape” in particular. It explores these semantics beyond the scientific sphere in everyday use, focusing in particular on the contexts in which it is used by whom. In view of the media function as portrait and motor of everyday use at the same time, the article draws upon the use of the concept in the German print media. The paper is structured as follows: The first part looks at the impact of the media on the dissemination of collective concepts within the context of the theory of discourse. Next, the methodology applied to the study is introduced, followed by a report describing the results.

2. The discourse surrounding the “Energy Landscape” and the role of the media

In the spirit of Michel Foucault's (2002) theory of discourse, the concept of “energy landscape” can be understood as part of a societal discourse. This means that certain narrator positions may or may not use the term in certain concepts and in a certain way. Consequently, the term can be conceived as part of a discursive formation, which determines, which object can be regarded as “energy landscape” and which statements about it are permissible. Within this theory “discourse” is not the same as “debate” but means a customary set of rules which determine what can be said about what subject or what event by whom at what occasion. According to the view of Hubbard et al. (2002), discourses are groups of statements, which pre-structure how people think about a topic, and how this way of thinking influences how they act. Individual statements can be perceived as interpretation patterns. These are stereotypical interpretations of reality, valid within social subgroups, including the normative aspect that defines who may or may not do what, under which circumstances (Honer, 1993, 103). A set of interpretation patterns is referred to as a frame, which contains definitions of typical events or objects. Gamson und Modigliani (1989, 2) label such sets of statements interpretative packages, the core of which is a central idea that endows the object or event with meaning. Because the purpose of public discussions as a struggle for the definition of truth is to gain a broad following for one interpretation