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Representations of the future in English language blogs on climate change



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ABSTRACT

This paper investigates how the notion of future is represented in a large corpus of English-language blogs related to climate change, with an overarching interest in exploring to what extent the perspectives of gloom-and-doom versus more positive perspectives of a sustainable society are represented. We address the following questions: (1) How are representations of the future expressed linguistically in public debates related to climate change? (2) What meanings do the representations convey? Our principal contribution is a set of nine meaning categories that characterize different representations of the future: the categories were derived by following a corpus-assisted discourse analysis approach. Within these categories, the large presence of characterisations related to sustainability, as well as frequent positive value-laden characterisations, are noteworthy. Representations reflect various perspectives of a future for humanity, for nature, and for countries as well as for economies. Further, we have found that when climate change is viewed as a threat, it is in relation to nature, humans and security, while it is seen as an opportunity for growth in business and industry. The results provide knowledge on how people conceive the possible impacts of global climate and environmental change within two broad perspectives of a "gloom-and-doom" versus a "bright" future. This may contribute to an improved basis for political decision making on measures in order to avoid dangerous consequences as well as to encourage engagement in the shift toward a low-carbon future. © 2014 Published by Elsevier Ltd.

1. Introduction

Studies undertaken on climate change communication have recently seen a large and pluridisciplinary development including the fields of media and communication science, political science, sociology, and psychology (e.g., Boykoff, 2011; Boykoff and Boykoff, 2004; Carvalho, 2005, 2007; Carvalho and Burgess, 2005; Doulton and Brown, 2009; Eide et al., 2010; Giddens, 2009; Hulme, 2009; Krosnick et al., 2006; Leiserowitz, 2006; Nerlich and Koteyko, 2009; Nisbet, 2009; Norgaard, 2006; Painter, 2011; Risbey, 2008; Schäfer and Schlichting, 2014; Schuldt et al., 2011; Weber, 2006). Such investigations are concerned with the contexts and framings in which language is used, and thus the discipline of linguistics has also become important in climate change discourse research (Nerlich et al., 2010). Linguistic studies with perspectives from the micro- to the macro-level (from word to text and context) have been undertaken on various materials such as scientific and policy reports, newspaper articles and social media (Dahl and Fløttum 2014; Fløttum, 2010, 2013; Fløttum and Dahl, 2011, 2012; Fløttum and Gjerstad, 2013a, 2013b; Grundmann and Krishnamurthy, 2010; Koteyko, 2010, 2012; Koteyko et al., 2010). The present paper will develop this linguistic and discursive tradition further with the aim of contributing to a richer understanding of how different perspectives on the future related to climate change are represented. We believe that the results of this study provide important knowledge about both the human and societal dimensions of climate change. Through the representations of the future, we access various conceptions of the impacts of climate change, which in their turn indicate perceived risks and threats and also possible solutions that people are willing to engage in. Further, the studied representations appear to indicate

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who or what people think of as victims or beneficiaries of on-going environmental and societal changes.

The relationships between the impacts of climate change, proposed political solutions to the challenges and the potential shape of future societies are of great societal importance. However, governance in general and climate policies in particular are all shaped and limited by text and talk, because what is not articulated cannot be acted on. Discourse creates, reproduces, challenges and excludes different representations of the world, thus forming the basis of decisions and actions. From this perspective, the study of climate change communication permits us to uncover some of the fundamental premises of climate and environmental change priorities and policies.

This observation motivates our investigation into what we consider to be a critical part of climate change communication: how the future is conceptualized, i.e. positively or negatively, for what and for whom (cf. Moser and Dilling, 2010). Even though the question of the future is raised in numerous public debates, its representations have so far received little attention. Thus, our interest lies around two main research questions: (1) How are representations of the future expressed linguistically in public debates related to climate change? (2) What meanings do the representations convey? In order to answer these questions, we undertake an exploratory corpus-assisted analysis of blog posts, focusing on patterns of words and semantic-pragmatic meanings.

The blogosphere is now a major site for large-scale and complex discourses about climate change issues, and it has been recognized as an "alternative site of scientific knowledge production" and a "site of knowledge contestation" (Sharman, 2014). Since the midnineties blogs (or weblogs) have emerged as an important medium where users can create and share personalized content on the Internet. In the late nineties, online tools emerged that made it easy to publish your own blog, and the number of blogs has increased rapidly since 2000 (Rettberg, 2008, p.7-12). As a medium, blogs are first and foremost characterized by interactivity, both through links to other blogs and web sites, as well as through readers' comments. The blog community that is formed through conversation, links and comments is known as the blogosphere (Bruns and Jacobs, 2006, p.5). Blogs have become an increasingly important forum for climate change issues, both from a scientific and political standpoint, and for environmentalist campaigners and climate skeptics alike.

Moreover, blogs and social media in general are widely available to the public, even more so than traditional media and particularly broadsheet media. Blogs are also used as a means of dissemination by climate scientists, albeit to a limited extent (see Trench, 2012). In sum, blogs offer unique possibilities for exchanging information on climate change, yet we do not at present have sufficient knowledge about the effects they have on public perceptions of climate issues. The study of language use, as in the current paper, should give important insights into framings used in the blogosphere, that should in turn be followed up with further analyses of networks and interactivity expressed through linking and comments.

Some studies of climate change representations have already recognized the need to address online communication in order to complement the extensive literature on representations in print media. However, the focus has tended to be on online communication in general rather than on social media which has only emerged as a research field quite recently (Kirilenko and Stepchenkova, 2014; Schäfer, 2012, p. 537; Schäfer and Schlichting, 2014; Sharman, 2014). With regards to the climate blogosphere, pioneering work includes studies of scientists' blogs (Trench, 2012) and the climate sceptical blogosphere (Sharman, 2014), from the perspective of science communication and social network analysis. In contrast, this paper studies a large and heterogeneous corpus taken from the English-language climate blogosphere, with a focus on language use, and more specifically the linguistic representation of notions of the future.

The framework of corpus linguistics which allows for the examination of large electronic collections of texts is now increasingly combined with discourse analysis (Baker et al., 2008; Partington, 2010). A key feature of corpus-assisted discourse analysis, which we adopt, is attention to context, i.e. both the situational parameters and the broader socio-political environment in which texts are embedded. For the analysis of blogs reported here, we used quantitative corpus linguistic techniques to identify frequent words and patterns of co-occurring words around them, as well as generating concordances to enable qualitative analysis. Specifically we analyze words and patterns relating to the future, selected from a list of the 1500 most frequent words in sentences that mention "climate change" and "global warming", in order to elucidate their contribution to meaning categories. This enables the study of the interplay between the micro-level of linguistic choice and the social processes of framing climate change issues, e.g. its causes, consequences, and existing as well as envisioned responses (Koteyko, 2010).

In Section 2 we describe further our material and methods. Then the main part of the paper (Section 3) is devoted to the analyses of the selected words and patterns, starting with meaning categories that are proposed on the basis of the *cotext* of the word "future" (i.e. the immediate surrounding text, within a full sentence). Then we develop these meaning categories by considering the cotext of a selection of words semantically related to "future". For the negative future perspective, we analyze "risk(s)", "danger(s)" and "threat(s)" and for the positive perspective we analyze "opportunity(ies)". This section concludes with a table representing a summary of the meaning categories mapped to topics and broader perspectives. In Section 4, we discuss the results and propose paths for further studies.

2. Materials and method

Our material is taken from the NTAP blog corpus (Salway et al., 2013) which comprises 1.5 m English-language blog posts from around 3000 blogs related to climate change, up to the middle of 2012; the vast majority of posts are from 2005 onwards, i.e. some 49,000 posts in 2005 rising annually to 300,000 in 2011.

This corpus was intended to comprise as many Englishlanguage blogs as possible that discuss any of a broad range of scientific, political and social issues pertaining to climate change; for both technical and methodological reasons it was considered unfeasible and undesirable to associate blogs with specific countries. It was created with an automated crawl process, starting from 20 hand-picked seed blogs that were deemed to reflect different positions and aspects of the climate debate. The crawl proceeded by following hyperlinks from these blogs to others, and so on. Key terms extracted from the seed blogs (e.g. "climate change", "climate science", "carbon dioxide", "emissions trading", "sea levels", etc.) were used to decide which further blogs were kept, based on topical relevance. When there were no more links to previously unseen blogs, a web search engine was used to find more seeds for continuing the crawl. It is difficult to make strong claims about the representativeness of such a blog corpus, since to do so would require knowledge of the entire blogosphere. However, we are confident that the wide-reaching nature of the crawl makes the NTAP corpus suitable for our exploratory analyses which are more concerned with characterizing meaning categories than quantitative comparisons. For the analysis presented in this paper we selected from this corpus all sentences containing "climate change" (209,107 sentences; 3.6 m words) and "global warming" (124,092 sentences; 3.0 m words). We believe that these Download English Version:

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