# Beyond maintenance: Emerging discourses on waterway renewal in the Netherlands

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ABSTRACT

Across the western world, ageing waterworks have to be renewed, but interpretations on transport policies for renewal differ and are indistinct. Our aim is to grasp the competing discourses on the public management of Dutch waterway renewal in order to understand the different interpretations and how these influence waterway planning. The analysis demonstrates that a technical discourse, in which renewal is framed as sustaining the waterway network, currently prevails in the Netherlands. However, this discourse is increasingly complemented by a financial and functional discourse. These new discourses emphasise co-financing arrangements between public governments and the incorporation of new functionalities and trends into the outmoded waterways. As recent practices are altered by the new discourses, the established technical discourse decreases in importance, as does the central role for infrastructure operators. Instead, renewal becomes a strategic, political matter for transport policymakers, in which new waterway configurations are discussed. For producing legitimate future renewal practices, this article recommends that the connection between strategic policymakers and apolitical operators could be improved.

## 1. Introduction

Across the western world, inland waterways, one of the oldest means of transportation, have advanced into mature infrastructure networks, in which multiple ageing assets can be found. Sometimes already built in the early stages of the 20th century, assets, such as weirs, bridges, and navigation locks, have to be maintained well and, eventually, have to be renewed. Recent research has stressed the importance of strategic, functional considerations once infrastructure reaches its end-of-lifecycle (Frantzeskaki and Loorbach, 2010; Bolton and Foxon, 2015), but renewing infrastructure networks is typically the responsibility of waterway authorities responsible for the day-to-day operation (Willems et al., 2018). Operators responsible for a well-functioning waterway system will consider the renovation or replacement of waterworks if infrastructure is technically written off. In contrast, new strategic notions also consider the incorporation of new functionalities, both in terms of quantity (expansion or reduction of waterworks) and quality (incorporating additional functionalities complementary to the transportation aim, for instance related to ecology, recreation, and sustainability). These latter aspects are often regarded as part of political discussions that emerge when the construction of new infrastructure is considered. Given that the need for renewal will significantly increase in the upcoming decades (OECD,

2014a), the way in which waterway renewal is perceived and defined by policymakers is a crucial issue to understand if either the current waterway configuration is maintained, or new configurations are explored.

To date, different interpretations on the public management of waterway renewal seem to exist, which will lead to different renewal practices. To illustrate, the work on urban water infrastructures (Malekpour et al., 2015; Furlong et al., 2016) demonstrates how policy processes are driven by technical and rational views, leading to engineering-driven renewal approaches. In contrast, a body of literature emphasises that mainstreaming alternative functional requirements into existing infrastructure design processes, for example because of climate adaptation, requires the combination of goals and functions, linking climate change with other drivers of change (Huq and Reid, 2004; Gersonius et al., 2012). In order to grasp the prevailing, but indistinct views on both the root of waterway renewal and how to deal with this, discourse analysis is helpful. Several authors have demonstrated how discourses condition infrastructure planning practice (Richardson, 2001; Low et al., 2003, 2005; Tennøy, 2010; Pettersson, 2013). According to Flyvbjerg (1998), powerful actors define what is considered legitimate knowledge, which is seen in and communicated through discourses. Hajer and Versteeg (2005: 175) define discourse as "an ensemble of ideas, concepts and categories through which meaning

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is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices." Discourses, thus, favour particular planning practices (those that are in line with the prevailing discourse), while deviant practices might be marginalised. Actors will strive for hegemony in order to impose their discourse on others and, ultimately, to be able to define what is regarded truth (Flyvbjerg, 1998; Sharp and Richardson, 2001; Torfing, 2001). Discourses are therefore continuously contested, making them dynamic constructs. For the emerging issue of waterway renewal, discourse analysis can help to unravel how different (groups of) actors make sense of this phenomenon and to disclose power relations in waterway planning, which helps to understand who eventually defines how waterway renewal should be perceived and approached (Low et al., 2003; Hajer and Versteeg, 2005).

As a result, our aim is to identify the differing, and competing, discourses on waterway renewal and their implications for waterway planning and management. To this end, we look into how relevant actors involved in the planning and management for waterway renewal consider the issue of renewal, both from a practical and strategic perspective, and how they capitalise their perspective. For that reason, discourse analysis studies actors' language-in-use, for instance as seen in policies and practices. We research this in detail in a case study of the Dutch national inland waterway network, which is confronted with a major renewal challenge (Van der Vlist et al., 2015; Willems et al., 2016). Several initiatives to address this challenge have been initiated by the national government, for which € 1.4 billion has been set aside between now and 2030 (I&M, 2017). Our research question is therefore: *"How do current discourses on renewing waterway assets influence the renewal of waterway networks in the Dutch national inland waterway system?"* The identification of prevailing discourses will help policymakers in understanding the influence of dominant actors on renewal practice, and provides them with clues how to effectuate different practices.

Our article consists of the following sections. The second, theoretical section discusses the potential of discourse analysis for understanding the current ways in which waterway renewal is interpreted, how these interpretations are embedded in wider transport policy discourses, and how they affect renewal practices. The third section presents the methodology, including an introduction to our case study of the national waterways in the Netherlands. The fourth section presents the empirical findings, i.e. the current interpretations on renewal, and their implications on transport policy practice. The fifth and final section presents the overall conclusions.

## 2. Discourse analysis in infrastructure planning

According to Richardson (2001), dominant discourses define the rationality of infrastructure planning in practice (see also Flyvbjerg, 1998; Tennøy, 2010). This makes it useful to analyse infrastructure planning in terms of its discourses in order to understand why specific planning approaches are practiced (Low et al., 2003: 94). Dominant discourses in infrastructure planning tend to be influenced by technical thinking and neoclassical economics (Owens, 1995; Næss, 2015). Water infrastructure planning therefore also sticks to an objective and rational process (Furlong et al., 2016). Recent advances in waterway planning practice, which integrate waterways with surrounding land use (Hijdra et al., 2014), are only partially applied, because they do not resonate well with the dominant discourse (Brown and Farrelly, 2009). Understanding dominant discourses is therefore crucial for examining what is considered legitimate knowledge for waterway planning, and hence why certain practices are favoured.

A discursive perspective stresses individuals' capacity to organise and categorise, which accumulates into mental schemata or models (Hajer and Laws, 2006). Groups of individuals and organisations will develop shared discourses to structure interpersonal relationships (Giddens, 1984). As schemata of reference, discourses condition actors

in their interactions and can thus be seen as "*constitutive* of institutions" (Mayr, 2015: 755, emphasis in original). Institutions are general rules of conduct (Salet, 2002), which are enacted in and represented through discourses (Hajer, 1995).

With its focus on interaction, discourse analysis has become a concern of linguistics and can therefore be regarded the study of language-in-use (Hastings, 1999; Wetherell et al., 2001). In general, discourse analysis is positioned as a social constructionist account of seeing the world in which language does not simply mirror reality in how the world can be viewed, but rather mirrors prevailing discourses (Sharp and Richardson, 2001; Hajer and Versteeg, 2005). Discourse analysis presumes that multiple, socially constructed realities exist, which results in the ambition to understand the meaning-making process that underlies the construction of discourses. As a consequence, discourse analysis concerns "the way in which society makes sense of a certain phenomenon" (Hajer and Versteeg, 2005: 176).

In this study, we use a Foucauldian discursive approach in which discourses are seen *in* texts rather than *as* texts (Hajer, 1995; Flyvbjerg, 1998; Sharp and Richardson, 2001). Foucauldian approaches explicitly connect the concepts of power, rationality, and truth: how powerful actors manage to define truth (Flyvbjerg, 1998; Richardson, 2001). Whereas textually-oriented discursive approaches use discourse as "a devise for making linguistic sense of organisations and organisational phenomena", Foucauldian approaches include the socio-institutional context in which discourses are seen as a reflection of dominant actors (Alvesson and Karreman, 2000: 1127). As a consequence, Michel Foucault's methodology for studying such power/knowledge networks – known as genealogy – considers not only texts, but also rhetoric and practices to explore how dominant discourses are articulated (Carabine, 2001; Sharp and Richardson, 2001). To illustrate, the notion of waterway renewal can be seen in how people talk about it (language-in-use) and how it is enacted in shared practices across organisations (such as public norms).

Actors will compete for hegemony in defining waterway renewal. Their discourses are thus continuously contested by other actors (Giddens, 1984; Torfing, 2001). Indeed, as Hajer and Versteeg (2005) state, a discourse never solidifies. Consequently, actors will try to reconstitute discourses once they believe established discourses are not legitimate anymore (March and Olsen, 1989). New developments such as the rise of ageing waterworks or changing societal demands may question the appropriateness of dominant discourses. At the same time, discourses are said to bring predictability and stability, operating as conditioning factors in interactions (Low et al., 2005). This makes them susceptible for self-reinforcement. DiMaggio and Powell (1983) refer in that regard to "institutional isomorphism" – the tendency of actors to comply with institutional norms. Powerful actors will therefore aspire to maintain the status quo, trying to downplay or incorporate emerging discourses in order to prevent undermining their position and what is considered legitimate.

Given the focus on power, discourses can be analysed by looking at what is (not) said by whom and in which context (Hajer, 1995; Carabine, 2001). The central elements of discourses – the "variables" that allow for analysing discourses – are the structures and patterns in a discussion, in which three elements can be distinguished: institutionally embedded (1) storylines and (2) practices, which are shared by (3) specific discourse coalitions (Table 1; Hajer, 1995, 2006). Storylines are the outcome of interactive and reflexive positioning by actors, creating and sustaining a discursive order (Davies and Harré, 1990). They are often presented as claims (what is truth) and organised around ideas, events, characters, and dilemmas. Together, storylines form a coherent narrative that also provides a guide for action (Low et al., 2003). Accordingly, storylines can be translated into specific practices, becoming organisational routines and mutually shared rules. These practices can be intangible (norms) and tangible (policies, formal institutional frameworks). At the same time, practices such as Cost Benefit Analysis shape storylines, because they support particular ways of making sense