

Playing by the rules? Analysing incremental urban developments

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ABSTRACT

Current urban developments are often considered outdated and static, and the argument follows that they should become more adaptive. In this paper, we argue that existing urban development are already adaptive and incremental. Given this flexibility in urban development, understanding changes in the so-called ‘rules of the game’ which structure and change collective action, is increasingly relevant. Gaining such insights advances the ability of planners to deal with perceived spatial problems. The aim of this paper is twofold. First, to develop an analytical framework for scrutinizing changes in rules in incremental urban developments and second, to test the analytical framework in a real-life incremental urban development. Building on Ostrom’s IAD Framework we develop an analytical framework that makes a distinction between formal and informal rules, connects sets of rules, actors and interaction patterns and provides a comparative, longitudinal perspective. The case of the Navy Yard in Amsterdam, the Netherlands is used in order to test the framework’s application, proving the relevance of investigating how rules in urban development change.

1. Introduction

Rational comprehensive planning approaches are often criticized for preserving the underlying social and spatial order in collective action aimed at urban development, rather than challenging or changing it. Several scholars (e.g. Moroni, 2010; Albrechts and Balducci, 2013; Horelli et al., 2015; Albrechts, 2015; Boelens and de Roo, 2016) argue that there is a tenacious weakness in recognizing and dealing with uncertainty, dynamics and complexity in these approaches. Accordingly, new planning approaches including adaptive planning (Innes and Booher, 1999; Savini et al., 2014), self-organization (Boonstra and Boelens, 2011; Partanen, 2015) or, particular to the Netherlands, ‘organic development strategies’¹; (Hajer, 2011; Rauws and de Roo, 2016) have been proposed. It has been claimed that these new planning approaches allow urban planning to move away from rational processes and plans with predefined outcomes (Hajer, 2011; Rauws and de Roo, 2016). These approaches, however, might not be so innovative. The idea of rational comprehensive planning is rooted in positivistic origins that had their primes in the 1960s and 1970s and have been criticized ever since (McLoughlin, 1969; Rittel and Webber, 1973; Janssen-Jansen and Lloyd, 2018). Many competing ideas have emerged in and influenced planning literature and practice. Though existing planning

practices still contain elements of rational comprehensive planning, current planning practices are more adaptive and incremental than is often assumed. Amidst shifts towards advocacy planning (Davidoff, 1965), deliberative planning (Forester, 1987) and collaborative planning (Healey, 2003), urban planning has already witnessed *adaptive* (the ability to adjust to changing circumstances and demands) and *incremental* (the idea of small steps and gradual changes instead of taking long-term fixed jumps) approaches (Lindblom, 1959; Douvere and Ehler, 2009²; Atkinson, 2011; Savini, 2016).

Even in the Netherlands, with its tradition of a strongly controlled planning system, the reality has never matched this reasoning. Even the reference to the so-called national blueprint plans of the 1950s and 1960s can be refuted in this respect. Though the Netherlands is regularly praised for preserving policy steadiness, these national plans have only been partly realised and with many deviations, despite the strong financial steering from the Dutch government. This has been enabled by the embedded flexibility, decision-making power and responsibility for land use planning at the local level, which is fixed in the 1965 Dutch Planning Law³ (for a detailed overview see Janssen-Jansen, 2016b). In the early 1990s, urban development in the Netherlands was pushed towards the private sector and has become even more adaptive since, with continuous deregulation in the urban planning domain

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¹ ‘Organic development strategies’ is the direct translation of the Dutch *organische gebiedsontwikkeling*. Taking the definition literally it refers to spontaneous urban development.

² Douvere and Ehler (2009, p. 78) already refer to incremental as traditional: “The traditional and incremental, permit-by-permit approach has been enhanced by a comprehensive planning approach that lays out a vision to be developed for an area.”

³ The 1965 Dutch Planning law was revised in 2008.

(Halleux et al., 2012; Evers, 2015).

Rebelling against rational comprehensive thinking by proposing ‘new’ planning approaches ignores adaptive and incremental progress in planning and results in a tendency to relabel already existing planning approaches. Relabelling gives an impression of innovation and change, but does not automatically reflect such change in practice. Real change within collective action aiming for urban development occurs within the so-called ‘rules of the game’. Rules are paramount institutions that guide collective action based on laws, regulations,⁴ norms and habits. The game refers to action and interaction within and between rules in collective action (Ostrom, 2005, 2013). The eventual urban development should be the outcome of the game. Within these games, rules are continuously produced, adapted and evolving, resulting in much more adaptive and incremental planning practices than often perceived.

In this paper, we thus argue for a shift in attention from rebelling against rational comprehensive thinking and proposing so-called new alternatives to, instead, focusing on the rules of the game (hereafter rules) that structure and change collective action in planning practices. The focus on rules, and the change thereof, is particularly relevant because planning is vastly influenced and constrained by formal and informal rules (North, 1990; Salet, 2002; Alexander, 2005; Moroni, 2010; Kim, 2011; Janssen-Jansen, 2016a; Salet, 2018). The change of these rules can be understood as either a deliberate alteration of rules or as a co-evolutionary process (Ostrom, 2013; Janssen-Jansen, 2016a). Planning practices cannot function without agreed-upon rules in collective action, making the understanding of rules—and the changing thereof—essential. Such rules provide insight into the right to make decisions and to take, sanction or reward actions and their impact on collective action in planning practices.

Improved understanding of these ‘new’ planning approaches, such as the above-mentioned ‘organic development strategies’, or ‘incremental urban development’ as we coin these approaches in this paper, requires a thorough investigation of existing and changing rules. The *plans* in incremental urban developments do not contain urban design principles but instead guide the development by themes or wide-ranging guidelines, contrary to plans with detailed predefined outcomes. The *process* refers to a wide range of public, private, civic and societal actors who negotiate and coordinate every step of an urban development project within a given development framework.

Currently, a gap exists in the literature concerning the specific rules that actors use in governing incremental urban developments and the way these developments adapt to meet the continuously changing needs of urban societies. Further insight into the rules improves the way governments and other actors deal with perceived spatial (strategic) problems or collective action problems. Gaining insight into how incremental urban developments work, how and why actors interact in a certain way and how decisions are made requires a framework to enable a systematic and detailed analysis of the rules. Our proposed analytical framework theoretically stems from Ostrom’s Institutional Analysis Development framework (Ostrom, 2005). The aim of this paper is thus twofold: (1) to propose an analytical framework for scrutinizing changes in rules in incremental urban development and (2) to apply and test the analytical framework in a real-life case study of an incremental urban development project.

2. Towards an analytical framework

Institutions are widely discussed in planning literature (Friedmann, 1987; Innes, 1995; Alexander, 2005; Buitelaar et al., 2007; Salet forthcoming). Yet, it is widely acknowledged that rules are produced and adapted and thus evolve in new contexts (March and Olsen, 1989; Moroni, 2010; Van Assche et al., 2014; Healey, 2018; Salet,

forthcoming). Several definitions of rules exist. In this paper, we follow the work of Max Black (1962), as mentioned in Ostrom (2005), to clarify the meaning of rules. Black distinguishes four definitions of the term *rules*: they point to laws, regulations, instructions and precepts (norms). The notion that rules can be more than formal, legal regulations is important here. This paper thus considers rules as prescriptions concerning actions, interactions and outcomes (Ostrom and Basurto, 2011) following from both formal and informal aspects of laws, regulations, norms and habits. We argue that combining both formal and informal rules and different types of rules is essential for understanding planning practices. Together these rules enable and constrain the way actors interact and decisions are made.

Only a handful of studies explicitly focus on how rules, and changes thereof, affect and determine urban development (Kim, 2011; Tan, 2013). The work of Elinor Ostrom represents an important theoretical starting point for analysing and classifying rules (Ostrom, 1990, 2005, 2013; see also Polski and Ostrom, 1999; Crawford and Ostrom, 2005; Ostrom and Basurto, 2011). Ostrom’s Institutional Analysis Development (IAD) framework proposes a structure for a systematic and detailed analysis of rules within collective action. As planning is a matter of collective action structured by sets of rules, this framework provides important fundamentals for analysing rules and changes thereof⁵ (Ostrom, 1990, 2005, 2013; see also Polski and Ostrom, 1999; McGinnis, 2011; Van den Hurk et al., 2014). The IAD framework is centred around the *action arena* in which a certain activity (*action situation*) and the actors who are involved in the activity (*actors*) result in patterns of *interactions* and *outcomes* (Ostrom, 2005, 2013; see also Smajgl et al., 2009; McGinnis, 2011). The structure of the action arena and the patterns of interactions (in our paper ‘the game’, visualised in Fig. 1 by the grey square) are determined by *exogenous variables*, such as biophysical conditions, attributes of the community and rules (see Fig. 1). In this paper, we focus our attention on the rules which govern the IAD framework. Spatial urban development is the outcome of the interaction.

In order to deeply analyse institutional arrangements, we use Ostrom’s taxonomy based on the following seven sets of rules (Crawford and Ostrom, 2005; Ostrom and Basurto, 2011). First, *position rules* (R1) determine the roles actors are assigned to, including, for example, the owner or user. The position regulates to what extent actors are authorized to inform actions, select actions from a series of alternatives or make decisions (Ostrom, 2005). Secondly, *demarcation rules*⁶ (R2) regulate which actor is qualified to enter or leave a position. Demarcation rules determine the conditions that are required to enter or leave a position, such as experience, age, citizenship or membership in a certain organisation (Ostrom, 2005; Smajgl et al., 2009; Van den Hurk et al., 2014). Thirdly, *decision-making rules*⁷ (R3) determine how decisions are made and by whom. A decision-making rule determines, for example, to what extent decisions should be made by individual actors or by teams of actors (Ostrom, 2005; Smajgl et al., 2009). Fourthly, *choice rules* (R4) define which actors may or may not act in an action arena and how. For example, a choice rule specifies who may rent land or buildings or who may compose directives for an urban development. Fifthly, *information rules* (R5) refer to the amount and importance of information that is available to actors about the action situation and the other actors. Information rules specify actors’ goals, motives and strategies. Sixthly, *payoff rules* (R6) specify rewards or sanctions that are linked to certain actions taken or outcomes achieved. *Scope rules* (R7)

⁵ Initially, Ostrom applied her Institutional Analysis Development framework to analyse common pool resources (Ostrom, 1990; Ostrom, 2010; Ostrom and Basurto, 2011). More recently, the IAD framework has also been applied to other domains as planning and water management (Van der Cammen and De Klerk, 2012; Smajgl et al., 2009).

⁶ To prevent confusion within a planning context we refer to demarcation rules instead of boundary rules (Ostrom’s original term).

⁷ To prevent confusion within a planning context we refer to decision-making rules instead of aggregation rules (Ostrom’s original term).

⁴ Regulations in this regard refer to planning policy documents as land-use plans.

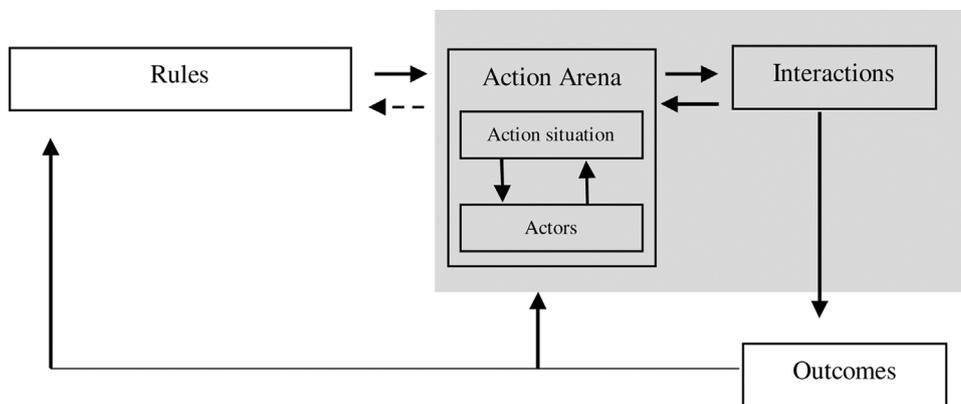


Fig. 1. Institutional Analysis and Development Framework. Source. Adapted from Ostrom, 2005; dashed arrow and grey square added by authors.

delimit the outcomes and “affect a known outcome variable that must, must not, or may be affected as a result of actions taken within the situation” (Ostrom, 2005, p. 208).

Hence, seven sets of rules structure the game, in other words guiding the action arena and interaction patterns. During the game (sets of) rules change over time, and these changes in turn affect other (sets of) rules. This shows the continuous interchange between rules within the game, affecting not only the outcomes but also the rules in themselves (visualised in Fig. 1 by the dashed arrow from the action arena to the exogenous variable rules). In planning, multiple sequentially connected action arenas exist, each with its own sets of rules (Ostrom, 2005). Dynamics in other action arenas may also influence sets of rules in a particular action arena, as well as unforeseen events, sudden shifts or times of stability. However, for the purpose of this paper, we exclude these *outside influences* on rules’ change and limit our analysis to the dynamics of a particular action arena.

2.1. Adjusting the IAD framework for urban planning

In order to precisely analyse incremental urban developments, we adjust the IAD framework in three ways. Firstly, we classify the seven sets of rules based on formality and informality. Although Ostrom mentions the distinction between formal rules and informal rules, the IAD framework is often associated with formal games: “the framework enables us to compare work conducted in formal game-theoretical analyses” (Ostrom, 2013, p. 7). As mentioned before, for planning it is important to analyse formal and informal rules in order to understand collective action. Formal rules appertain to rules that are extracted from laws and regulations as policies and plans. Informal rules refer to rules that are shaped by norms and habits. The development and functioning of formal and informal rules can only be understood by the continuously mutual shaping capabilities of informalities and formalities. Formal rules can be designed into or gradually evolved from informal rules and vice versa (see the work of Buitelaar et al., 2007; Ostrom and Basurto, 2011; Van Assche et al., 2014). We, therefore, propose a distinction between formal rules, informal rules and rules that mix both elements.

Secondly, we adapt the framework by specifying how sets of rules structure the game by connecting sets of rules to actors, interaction patterns or outcomes. *Positions rules (R1), demarcation rules (R2), decision-making rules (R3), choice rules (R4) and information rules (R5)* primarily belong to actors. These rules condition actors, forming the basis for actors of whether action is undertaken or decisions are made. Of course, these sets of rules may change in the interaction process, changing the basis for actors. The *payoff rules (R6) and scope rules (R7)* are predominantly negotiated among actors concerning a specific action situation. Similarly, these two sets of rules are susceptible to change during interactions. Whereas six sets of rules (R1 to R6) delimit the process, the *scope rules (R7)* delimit the outcomes. Fig. 2 visualises the seven rules in an analytical framework for three actors in an urban

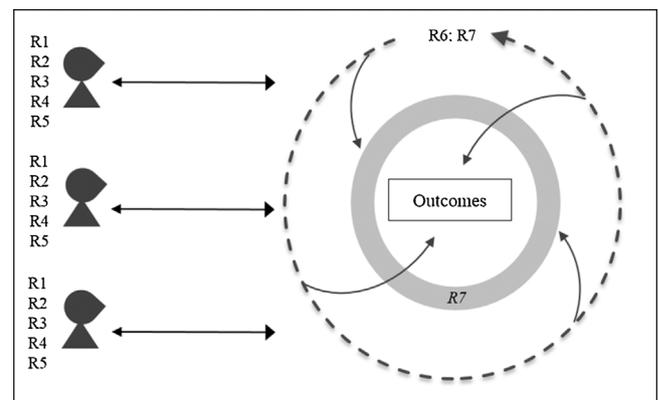


Fig. 2. An analytical framework for rule analysis. Source. Authors, 2017.

development project. Each actor is connected to five sets of rules (R1 to R5) that are susceptible to change. The dotted black arrow shows the interaction pattern in which *payoff rules (R6)* and *scope rules (R7)* are negotiated. The grey circle shows the delimiting condition of the *scope rules (R7)* on the outcomes.

Thirdly, we add a longitudinal perspective to the framework which allows us to recognize changes in rules. Institutional analysis frameworks are often criticized for assuming institutional settings to be static (Scharpf, 1997; Ostrom and Basurto, 2011). As Ostrom and Basurto (2011, p. 318) argue, “an important next step for enhancing the ability of the social sciences to unpack the complexity of the world consists of developing a cluster of tools for analysing dynamic situations, particularly institutional change, and mainly changes in rule systems.” Adding this longitudinal perspective is valuable for two reasons. First, as argued before, rules change continuously (Van Assche et al., 2014). Second, policy changes over time may influence the decision-making in incremental urban development. In order to recognize the change in rules and the effect of policy changes, the analysis should include at least two moments in time (T0, T1, Tn).

With these adaptations, we propose an analytical framework which allows for a systematic analysis of the dynamics of informal and formal rules in urban development (see Fig. 3). The longitudinal perspective is indicated through T0 and T1. The expected changes in rules in T1 are indicated by the *delta sign Δ*. All delta signs are *italicized*, in order to make clear that a rule, actor or outcome *might*, but doesn’t always, change. While the formality or informality of rules is omitted for the purpose of clarity, it is incorporated in the analysis.

3. Research design and methods

We use an illustrative case study of an incremental urban development project in the Netherlands, the Navy Yard Amsterdam, to test the

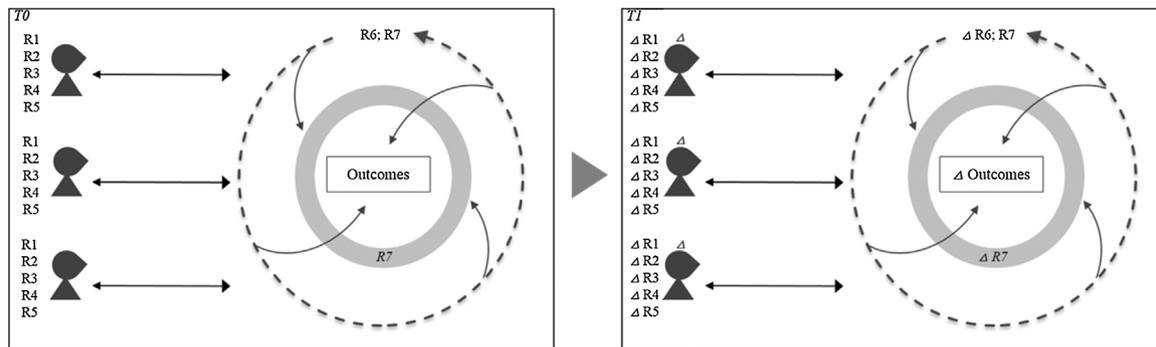


Fig. 3. Analytical framework for institutional change. Source. Authors, 2017.

applicability of our analytical framework (for case study design methods we refer to Yin, 2003). The case was selected based on two criteria. First, the case must be considered an incremental urban development and second, in order to perform a detailed analysis of the rules and their changes over time, the case must be ongoing. Based on these criteria we selected the Navy Yard Amsterdam, located in the Netherlands, a case which prior to this study has not been scientifically analysed.

The data collection consists of a triangulation of the methods of participatory observation, document analysis and semistructured interviews. Participatory observation provided in-depth understanding of the institutional arrangements and settings. The participatory observation covered the period from May 2016 to May 2017. For ethical integrity, all actors were informed about the study in advance (Majoor, 2017). In the early stage of participant observation, many varied workshops, meetings and conversations were attended to develop a sense of the kinds of events, settings and topics that are necessary to unravel the rules of the game. The period of immersion in the case as researcher lasted two months. Afterwards, to avoid the enticement of recording every detail and to safeguard the necessary distance for analytical purposes, the researcher was embedded for, on average, 1 day per week for another 10 months (Bryman, 2008; Majoor, 2017). In this time, she attended and documented various specific interactions, meetings and conversations. Observing the steering committee meetings (with members of Project Agency Navy Yard, Dutch Real Estate Company, Ministry of Defence and the municipality of Amsterdam), board meetings (with mayor, aldermen, Amsterdam centre district mayor and ministers) and workshops about spatial-legal conditions proved particularly meaningful to achieve a detailed understanding of sets of rules. These were particularly meaningful because these gatherings were attended by key actors, which evidenced that many decisions and actions concerning substantive and governance issues were taken in these gatherings. During the gatherings, the researcher wrote down detailed notes, including literal quotes. After each gathering the detailed notes were documented precisely, placed in time, categorized into sets of rules and labelled as formal, informal or containing both elements.

Additional data was gathered through a document analysis. The document analysis included major documents such as the project’s management agreement and the strategy report. The data was complemented by two semistructured interviews with key actors, such as the principal (director Agency Navy Yard) and the executives (project assistants Project Agency Navy Yard). The interviews were transcribed and recorded and used to (1) clarify issues that were not covered during meetings, (2) cross-check findings to limit researcher’s bias and (3) provide key actors the opportunity to add their own thoughts and comments (Bryman, 2008). The results of the analysis and interpretations thereof have been checked in an iterative process with a member of the Project Agency.

We conducted a qualitative analysis of the collected data by using

Table 1 Operationalization rules. Source. Authors, 2017, based on work of Ostrom, 2005.

Rules	Sets of Rules	Operators
Formal rules	Position (R1)	(1) Required
	Demarcation (R2)	(2) Forbidden
	Decision-making (R3)	(3) Permitted
	Choice (R4)	(4) Authorized
	Information (R5)	
	Payoff (R6)	
	Scope (R7)	
Informal rules	Position (R1)	(1) Should
	Demarcation (R2)	(2) Used to
	Decision-making (R3)	(3) Holds on to
	Choice (R4)	
	Information (R5)	
	Payoff (R6)	
	Scope (R7)	

the sets of rules as units of measurement. The operationalization of the sets of rules is shown in Table 1. For content recorded in laws, legal agreements and official policy documents, the rules are coded as formal. Additionally, we operationalized formal rules in operators as ‘required’, ‘forbidden’, ‘permitted’, ‘authorized’ or equivalents. To operationalize informal rules, we used the operators ‘should’, ‘used to’, ‘holds on to’ or equivalents to analyse norms, habits and routines (see work of Ostrom, 2005, 2013).⁸

The collected data was analysed in two time frames. The first time frame (T0) encompasses the period before 2014, during which the Dutch Ministry of Defence used the area privately for the military. The second time frame (T1) describes the period between 2014 and mid-2017 when the Project Agency maintained and incrementally re-developed one third of the area.

4. Navy Yard Amsterdam

The Navy Yard Amsterdam, located in the historic city centre of Amsterdam, is an area of about 15 ha situated at the waterfront of the IJ river. In 1655, the former Admiralty of Amsterdam claimed the area. During this period, the area was used to build warships to protect the Dutch East India Company (VOC). The Navy Yard Amsterdam (hereafter Navy Yard) was used for military purposes and activities and was, therefore, not open to the public, resulting in a mysterious area located in the heart of Amsterdam. Until recently, the Ministry of Defence was the only user of the Navy Yard (Ministry of Defence, 2015; Jansen and Pedrolì, 2016). Due to economic turmoil and budget cuts, the Dutch

⁸ As we conducted our data collection in Dutch, the operators for formal rules were *moeten, dienen, verbieden, eisen, toestaan dat* and equivalents. The following operators for informal rules were used: *gewend zijn aan, bekend zijn met* and equivalents.

National Government⁹ decided, as owner of the area, to consider alternative uses for the area from 2013 onward. The Dutch National Government decided to incrementally hand over the maintenance of approximately five hectares of the area between 2015 and mid-2018. On July 1 2018, the full 15 ha will be available for redevelopment. The National Government plans to sell the full 15 ha in the near future; the City of Amsterdam may offer a first bid.¹⁰ At the time of writing, about five hectares of the Navy Yard have been developed and made accessible; the former military uses have been relocated (Ministry of Defence, 2015; Jansen and Pedroli, 2016; Project Agency Marine Establishment, 2016). The development of the area occurs through incremental urban development. This development is managed by the Project Agency Navy Yard, an organisation set up through the Dutch National Government and the City of Amsterdam (Ministry of Defence, 2015; Project Agency Marine Establishment, 2016). The development of the Navy Yard adds to the waterfront redevelopment already occurring in the east and west docklands of the IJ river bank, which has continuously taken place for the past thirty years (Schuiling, 1996; Uffen, 2004; Kloosterman, 2009; McCarthy, 2012).

The strategy report of the Navy Yard of 2013 presents the guidelines for the development, defining three main ambitions for the Navy Yard: (1) becoming an innovative working space with international allure, (2) continuing to secure the maritime identity and (3) emphasizing the water that surrounds the area. Furthermore, the guidelines set the condition that the urban development occurs incrementally, without a predefined final image. Additionally, the development strategy states that the development should evolve gradually, and that the focus for the first few years should not be based on urban design principles or values (Ministry of Defence et al., 2013a, 2013b). The management agreement of the Navy Yard, which went into effect in 2013, is a juridical document that outlines authorizations between the City of Amsterdam and the Dutch National Government (Staatscourant, 2013).

5. Results: testing the framework

Our analytical framework was applied to the case of the Navy Yard (action situation) in order to explore its usefulness as a tool for analysing changes in rules. The case material is illustrative for testing the applicability of our framework. The aim of discussing the case is not to provide a full overview of actors, rules and possible changes in rules. Instead, we limit our focus to generic rules and four key actors: (1) the Ministry of Defence, (2) the Dutch National Real Estate Company, (3) the Project Agency Navy Yard, and (4) the City of Amsterdam, as owners, principals or executives of the incremental development.

5.1. Position and demarcation rules

The analysis begins with the *position and demarcation rules*. In the period before 2014 (T0), the Ministry of Defence (hereafter Ministry) used the Navy Yard for military purposes while the area was officially owned by the Dutch National Real Estate Agency. The area was officially closed, with the Dutch National Government (National Real Estate Company and the Ministry) being the only actor which held a position. As a result of national budget cuts, it was decided that the Ministry would slowly withdraw and eventually leave the area, therefore, giving up its position as user from 2014 onwards. In T1 (2014–2017), about one third of the area was publicly accessible while the other two thirds were strictly and privately used by the Ministry (National Real Estate Company, 2017; Ministry of Defence et al., 2013a; Staatscourant, 2013). In this period, the full area was still formally

owned by the Dutch National Real Estate Agency, but the maintenance of the area which was publicly accessible had been handed over to the Project Agency Navy Yard. Therefore, since the area was partly vacated by the Ministry during T1, other users entered the scenario. Commissioned by the Ministry, the National Real Estate Company and the City of Amsterdam were required to redevelop the Navy Yard.¹¹ Together, these three actors were required to set up a steering committee for negotiating the redevelopment of the Navy Yard. The *demarcation rules* state that both the Dutch National Government and the City of Amsterdam are permitted to appoint two members in the steering committee, in which both the National Government and the City of Amsterdam each have one vote. For the redevelopment of the Navy Yard, the National Government and the City of Amsterdam were required to install a Project Agency (named Project Agency Navy Yard) under the responsibility of an appointed director. As stated in the management agreement,¹² “the Project Agency Navy Yard is part of the City of Amsterdam organisation and will consist of at least a director who is jointly appointed by both the National Government and the City of Amsterdam” (Staatscourant, 2013, p. 7). The *position rules* changed particularly with respect to user positions. Although, in T1, the Ministry still used two thirds of the entire area, they were no longer the only actor with authority. The change in *demarcation rules* shows that the Dutch National Government was not the only actor that may enter or leave a position, and, therefore, lost its monopoly as an actor. Looking closely at the *positions* and *demarcation rules*, we conclude that both rules are exclusively formally described and changed.

5.2. Decision-making rules

Considering *decision-making rules*, the first period is well defined: the National Government was the single actor permitted to take decisions. With respect to T1, the decision-making rules are less taken for granted. According to formal rules, all decisions are required to be made in collaboration between the Project Agency, the City of Amsterdam and the National Government considering the strategy report and management agreement. The appointed steering committee is permitted to take all decisions concerning the use of the publicly accessible area and the redevelopment of the full area based on the mandate and the power of attorney that has been given by the four actors to the steering committee members. Unanimity in the steering committee is required, otherwise a board meeting is required. In T1, the steering committee was also required to decide about the longer-term redevelopment of all 15 ha of the Navy Yard Amsterdam for the period after mid-2018, resulting in some specific *decision-making rules*. Initially, the Project Agency is required to draft the guidelines for redevelopment. For this, the Project Agency director has the mandate to hire consultant- and research-agencies to assist. The guidelines are subsequently presented to and discussed with all members of the steering committee. If all steering committee members agree, the guidelines will be proposed to the board. If the board agrees, the City Council of Amsterdam is required to finalize the decision-making. By July 1 2018, a formal planning decision-making document, stating the guidelines for the final redevelopment of the Navy Yard, has to be proposed to the City Council of Amsterdam. In summary, the National Government is not the only actor authorized to make decisions, contrary to the situation in the first period. Remarkably, the National Government still possesses decision-making power in the second period, although the City of Amsterdam contains a higher degree of power. Furthermore, during the observations and document analysis, traces of informal *decision-making rules* were not found.

⁹ The Dutch Real Estate Company, as part of the Dutch National Government, is the official owner of the area.

¹⁰ It is likely the City of Amsterdam will buy the area, as they are in the position to offer a first bid. All expect the City of Amsterdam to buy the area.

¹¹ This contains the redevelopment of the publicly accessible area, but also the redevelopment of the full area after 2018.

¹² All quotes are translated and checked by a bilingual person.

5.3. Choice rules

Considering the formal choice rules, the Ministry was permitted to take all actions in the Navy Yard in the time period T0, while other actors were forbidden to take any action in the area. During T1, the Ministry was permitted to take all actions and is required to manage and maintain the land, buildings and water zones in the privately used area. Additionally, the Ministry was required to leave the publicly accessible area. Concerning other formal *choice rules* in T1, all actors are required to actively negotiate the redevelopment of the Navy Yard based on guidelines and appointments documented in the strategy report and management agreement. The Project Agency is permitted to take care of the daily circumstances and maintenance of the area within the limits of these guidelines and appointments. Furthermore, the Project Agency is required to report and justify its actions to the members of the steering committee and inform them about temporary uses. The National Government and the City of Amsterdam are, in turn, required to monitor the actions of the Project Agency. Both actors are authorized to reverse actions of the Project Agency. Considering the informal *choice rules*, three distinctive rules are worth mentioning. First, the City of Amsterdam and the National Government both mention that the strategy report and management agreement do not necessarily correspond with all current circumstances. Although formally agreed upon, both actors state that the redevelopment should accommodate current circumstances at best, questioning to what extent actions must be in conformity with the guidelines of the strategy report and management agreement or actions may deviate the guidelines. Combining this informal *choice rule* with the authority of the City of Amsterdam and National Government to reverse actions and the *decision-making rules*, the strategy report and management agreement can, in theory, be disregarded. Secondly, although the steering committee has decision-making powers concerning the use of the area, it is noticeable that the City of Amsterdam clearly holds on to its established planning procedures (well-known—typical Amsterdam—planning documents and approaches), which reaffirms its *primus inter pares* role in planning decisions. Thirdly, with respect to an informal *choice rule* in daily circumstances, the co-use of the sport fields and conference centre in the closed-off area is worth mentioning. The Ministry is formally required to allow co-use of the sport fields and conference centre, but by holding on to existing practices for its own purposes they construct informal barriers in such a way that co-use by the Project Agency is almost impossible. A member of the Project Agency mentions, “the event centre is continuously in use by the Ministry of Defence as they organize events for themselves and external parties”. Recapitulating, the formally and informally taken actions differ substantially between the two periods; again, the Ministry was not the sole party taking action at the Navy Yard.

5.4. Information rules

With respect to T0, the Ministry was the only actor that maintained information about the area, the uses and activities. Furthermore, any sharing of this information was forbidden. As for T1, all four actors have—to different degrees—information concerning the use of and the activities in the area. While the Project Agency had access to all of the available information concerning the redevelopment, they are required to inform the three other actors during steering committee meetings. Furthermore, the Project Agency is required to inform citizens of the adjacent neighbourhoods. Though only ‘informing’ is required, the Project Agency was convinced they should organize a citizen platform. In terms of informal *information rules*, the Ministry was accustomed to keeping available information about the closed-off area private. Other actors requested certain information (e.g. building characteristics) and visits to the closed-off Navy Yard in favour of the redevelopment. However, as the area is still closed-off, this occasionally results in informal barriers to plan visits or share information. Furthermore, by

sharing knowledge concerning the redevelopment, the City of Amsterdam and the National Government positively contribute to the urban development. From the Project Agency’s perspective, sharing information with and gathering input from business in the neighbourhood is highly valuable. Eventually, these informal consultations have resulted in a formal agreement with its ‘business neighbours’ about the collaboration. Concerning the information rules, much more information was shared during T1 as compared to T0, although information regarding the closed-off area was secretly dealt with despite the emergence of some restrictive barriers for the redevelopment of the Navy Yard. Observations in this study revealed the explicit effect of informal *information rules* on the redevelopment.

5.5. Pay-off rules

Concerning the *pay-off rules*, there were no formal sanctions or rewards in either T0 or T1.^{13,14} None of the formal documents contain constraints, penalties or coercions related to certain actions. During T1, a so-called ‘gentleman’s agreement’—an informal, non-enforceable agreement between parties in good faith—was in existence. Actors understood that the sharing of information gained in workshops or meetings, such as pictures of urban models, was not acceptable.

5.6. Scope rules

In T0 the *scope rules* were solely restricted to military uses and performances such as military education, recruitment and training. For T1, the fundamentals for the *scope rules* are formally documented in a strategy report in the form of guidelines. The National Government and the City of Amsterdam are required to respect and comply with these guidelines, unless otherwise agreed upon (see Section 4 for details). As stated in the strategy report (Ministry of Defence et al., 2013b, p. 3), “Most importantly, the Navy Yard offers a unique opportunity to create a new cultural and urban hub and yet to keep the hidden, mysterious and green character of the space.” The strategy report further states that functions such as housing, education, research, restaurants, green spaces and culture should be clustered. In the early years of the redevelopment, actors are required to focus on in-between uses and temporal initiatives that contribute to an innovative urban destination. The Project Agency formulated three main core values that strengthen the substantive guidelines of the strategy report, namely, innovation, interconnection and focus that underline themes such as sustainability, water, sport and movement. As of 2017, there is no actual zoning plan that determines specific land uses. The *scope rules* from T0, therefore, influenced the *scope rules* for T1 to a certain extent. Observations in this study showed that the informal dimension of *scope rules* is not necessarily noticeable in the official strategy report, but emerges instead during negotiation about the underlying values that strengthen *scope rules*.

5.7. Discussion

Many rule changes—both formal and informal—in the redevelopment of the Navy Yard can be recognized. During T0, the Dutch National Government was the only actor with a position to act and decide, and to control the sharing of information. With the introduction of the new policy, management agreement and strategy nota, all sets of rules were deliberately changed for the purpose of the redevelopment. Our analysis revealed these changes and, as mentioned before, our results have been checked through data triangulation (participant observation, document analysis, interviews). During T1, after the policy

¹³ For the purpose of this paper, we did not include the financial rewards or burdens as a result of the purchase of the area in the future.

¹⁴ We focused on external rewards or sanctions and, therefore, did not include salaries.

change, the number of actors—and their subsequent authorizing capacities—increased and subsequently the amount and diversity within the seven sets of rules multiplied. During the interaction process the sets of rules evolved. While formal *position rules* generally determine the roles actors are assigned to, the case of the Navy Yard revealed that the *choice rules* and *decision-making rules* dominate during the interaction process. According to the formal *decision-making rules*, the City of Amsterdam has the final say in the development of the Navy Yard. Surprisingly, the City of Amsterdam will then be the first party allowed to make a bid for the purchase of the full 15 ha. Furthermore, in this case, the formal *decision-making rules* may overrule the *choice rules*, because the City of Amsterdam and the National Government have the power to reverse actions by other actors and dissolve official documents. *Pay-off rules* are nearly absent in the Navy Yard case. The *scope rules* determine the outcomes to such an extent that the stated guidelines and values in the strategy report must be fulfilled. In practice, these ramifications imply the realization of different spatial outcomes. In the coming period, it is expected that more and more substantive scope rules will be negotiated, limiting the potential spatial outcomes at the Navy Yard.

6. Conclusions and suggestions for future research

This paper featured two central aims. First, the development of an analytical framework for scrutinizing changes in rules in incremental urban developments and second, to test the analytical framework in a real-life incremental urban development project. The application of the analytical framework, as seen in the development of the Navy Yard, reveals the value of this framework as an analytical tool for understanding (changes in) sets of rules during urban development. Since we scrutinized a single case study, generalization is out of question. However, the case does offer an improved understanding in analysing rules, and change thereof.

Indeed, as many scholars proved in earlier work, collective action is formed considerably through a variety of rules. Studying changes in rules in our case study has led to a richer understanding of how rules shape collective action and the subsequent outcomes. This further comports to work of scholars who have already acknowledged the influence of institutional change on urban development processes and outcomes (e.g. Alexander, 2005; Buitelaar et al., 2007; Moroni, 2010; Kim, 2011; Evers, 2015). Our applied framework reveals, however, the extremely valuable strength of the work of Elinor Ostrom in understanding rules. Scrutinizing Ostrom's sets of rules reaches beyond a simple application of rules: it enables us to extract particular impacts of sets of rules. Three main notions are worth emphasizing concisely in this regard: *the formal and informal dimension of rules, the hierarchy of rules and the effect of timing*.

First, our case study features the importance of formal and informal dimensions of rules for urban development, as already earlier acknowledged by several scholars (e.g. Buitelaar et al., 2007; Van Assche et al., 2014). The application of the framework, however, elucidates the *formal and informal dimensions* of rules, and can therefore explicitly reify in which sets of rules formal and informal dimensions can be found. In our illustrative case study, the informal dimension of rules is hardly noticeable in official documents, but emerges instead during interaction. The case study further reveals that *position rules, demarcation rules and decision-making rules* are primarily formally prescribed whereas *choice rules, information rules, pay-off rules and scope rules* contain both informal and formal dimensions. *Information rules* contain a particularly high degree of informality.

Second, the application of the framework reveals a *hierarchy in rules*. All sets of rules provide structure during collective action in this urban development. However, the degree to which a certain rule affects this urban development fluctuates. Our case study reveals that *scope rules and decision-making rules* strongly define, respectively, the outcome and interaction, while *pay-off rules* barely influence this urban development

so far. This observation shows that sets of rules shape each other reciprocally within hierarchies. This explicitly emphasizes the presence of power among institutions (Kim, 2011), and more significantly, how rules in this regard produce power among sets of rules.

Third, the application of the framework in terms of *timing* reveals that a change in rules may be prone to a certain phase or a deliberate policy change throughout the duration of an urban development project. Indeed, as already argued by other scholars, timing (e.g. when do rules change) has been an important elucidation for rule change (Buitelaar et al., 2007; Sorensen, 2015). Our case study shows that a deliberate policy change substantively changes all sets of rules, after which rule change actually occurs through an ongoing process of evolution and design. The application of the framework enables us to specifically determine when particular sets of rules change.

In conclusion, our analytical framework allows to specifically elucidate rules and change thereof. Furthermore, the application of the framework informs about particular impacts of sets of rules over time based on formality, hierarchy and timing. The results following the application of the framework in the case of the Navy Yard are not isolated. We suggest applying the framework in further research in order to reveal specific impacts of rules—and change thereof—over time in multiple case studies. In case more comparative research will be carried out, it might be possible to eventually identify patterned conditions that determine the particular impact of rules. Investigating these conditions is particular relevant to enrich Ostrom's typology. This specific focus on rules may also allow for the identification of which rule(s) result in collective action problems, such as deadlocks, advancing insights in how to potentially unlock such situations. This rule-perspective understanding offers lessons for urban planning and can contribute to policymaking and decision-making in urban development.

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