

Institutional Complexity in Swedish Built  
Environment Regulation

*Exploring the Interface with Industrialized House-Building*

Anders Viking

Timber Structures





# Institutional complexity in Swedish built environment regulation

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Anders Viking

Luleå University of Technology  
Department of Civil, Environmental and Natural Resources Engineering  
Division of Industrialized and Sustainable Construction

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*Anders Viking, Luleå, November 2017.*



**ABSTRACT**

The industrialized house-building movement has emerged as a response to recurring criticism of the construction sector. It seeks to emulate management practices prevalent in manufacturing industries, including the use of standardized work processes and building systems. This approach does, however, make industrialized house-building contractors susceptible to unpredictable variations. Swedish local planning authorities have a legal and democratic mandate to regulate the built environment within its borders and views variations between different municipalities as a desirable consequence of a functional local democratic system. Meanwhile, industrialized house-building contractors have highlighted variations in regulation of the built environment as obstructive to their intended methods of managing the building process. The aim of this thesis is to increase understanding of how local planning authorities make interpretations when regulating the built environment and how those interpretations influence industrialized house-building contractors and to, within the ongoing research process, identify theoretical perspectives suitable for describing tensions in the interface between industrialized house-building and local planning authorities. The theoretical frame of reference for this thesis consists of two major streams of organizational literature: organizational coordination, operationalized through the concept of coordination mechanisms, and neo-institutional theory, operationalized through institutional logics and institutional complexity. The overarching research strategy is best described as a case study approach investigating cases of institutional complexity in regulation of the Swedish built environment. The design consists of one multi-case study relying on interviews with representatives of industrialized house-building contractors and local planning authorities and one single-case study investigating a longitudinal land development process using a combination of interviews, direct observations and document analysis. Findings indicate that local planning authorities face institutional complexity stemming from three semi-compatible institutional logics that each prescribe different roles for planning practitioners and expectations for their behaviour. As some planning practitioners are more attuned to particular logics than others, it is

difficult to predict, for each given situation, which logic will be activated. Furthermore, findings indicate that institutional logics can be viewed as coordination mechanisms, thereby highlighting a fundamental tension between the coordination preferences of industrialized house-building contractors and local planning authorities. This tension causes a lack of accountability, predictability and common understanding resulting in an inability for industrialized house-building contractors and local planning authorities to coordinate their contributions in the planning and building process. The findings imply that industrialized house-building contractors and local planning authorities should attempt to acknowledge each other's participation in and contributions to the planning and building process. The findings also highlight the importance of interpretations for regulation of the built environment, which implies that not all sector-wide problems can or need be solved through legislative action.

## **SAMMANFATTNING**

Industriellt byggande har utvecklats som ett svar på återkommande kritik riktad mot byggsektorn. Rörelsen syftar till att emulera managementmetoder som vanligtvis används inom tillverkningsindustrier, så som användande av standardiserade arbetsprocesser och byggsystem. Detta tillvägagångssätt gör emellertid industriella byggtreprenörer känsliga för oförutsägbara variationer. Svenska kommunala planmyndigheter har ett juridiskt och demokratiskt mandat att reglera den bebyggda miljön inom kommunens gränser och betraktar skillnader i reglering mellan olika kommuner som en önskvärd konsekvens av ett fungerande lokalt demokratiskt system. Samtidigt har industriella byggtreprenörer pekat ut skillnader i reglering som ett hinder för deras planerade metoder för att hantera byggprocessen. Syftet med den här avhandlingen är att öka förståelsen för hur kommunala planmyndigheter gör tolkningar när de reglerar den bebyggda miljön och hur dessa tolkningar påverkar industriella byggtreprenörer, samt att, som en del av forskningsprocessen, identifiera teoretiska perspektiv som är lämpliga för att beskriva spänningarna i gränssnittet mellan industriella byggtreprenörer och kommunala planmyndigheter. Den teoretiska referensramen för den här avhandlingen består av två huvudströmmar inom organisationsteorin: organisatorisk samordning, operationaliserad som samordningsmekanismer, och neoinstitutionell teori, operationaliserad som institutionell logik och institutionell komplexitet. Den övergripande forskningsstrategin beskrivs bäst som en fallstudiemetodik tillämpad på institutionell komplexitet inom reglering av svensk bebyggd miljö. Forskningsdesignen består av en multi-fallstudie, som bygger på intervjuer med företrädare för industriella byggtreprenörer och kommunala planmyndigheter, och en en-fallstudie som undersöker en longitudinell markanvisningsprocess bestående av intervjuer, direkta observationer och dokumentanalys. Resultaten visar att när lokala planeringsmyndigheter reglerar den bebyggda miljön så ställs de inför institutionell komplexitet som härrör från tre semi-kompatibla institutionella logiker som vardera föreskriver olika roller och förväntade beteenden till planerare. Eftersom vissa planerare är mer lyhörda för vissa logiker än andra är det svårt att för

varje given situation förutse vilken logik de kommer att aktivera. Vidare visar resultaten att institutionella logiker kan betraktas som samordningsmekanismer och därmed belysa en underliggande spänning mellan industriella byggtreprenörer och kommunala planmyndigheter. Denna spänning orsakar brist på ansvarsfördelning, förutsägbarhet och gemensam förståelse, vilket leder till en oförmåga hos industriella byggtreprenörer och kommunala planmyndigheter att samordna sina bidrag inom ramen för plan- och byggprocessen. Resultatet antyder att industriella byggtreprenörer och kommunala planmyndigheter bör försöka vidkännas varandras bidrag till plan- och byggprocessen. Resultaten lyfter även fram vikten av tolkningar för reglering av den bebyggda miljön, vilket antyder att inte alla sektorsövergripande problem kan eller bör lösas genom lagändringar.

## APPENDED PAPERS

**Peer-reviewed journal and conference articles (Papers I-IV are appended to the thesis and referred to in the text by the corresponding Roman numerals)**

### **Paper I:**

Viking, A. and Lidelöw, S. (2015) “Exploring industrialized house-builders’ interpretations of local requirements using institutional logics”. *Construction Management and Economics*, 33(4-6), 484-494.

### **(Conference) Paper II:**

Viking, A. and Stehn, L. (2015) “Exploring Swedish local planning authorities’ perceptions of standardized housing construction”. In: Raidén, A. B. and Aboagye-Nimo, E. (Eds.) *Procs 31<sup>st</sup> Annual ARCOM Conference*, 7-9 September 2015, Lincoln, UK, Association of Researchers in Construction Management, 1053-1062.

### **Paper III:**

Viking, A. and Engström, S. “Using coordination mechanisms to explore tension between industrialized house-building contractors and local planning authorities”. Manuscript intended to be submitted for publication in *Scandinavian Journal of Management*.

### **Paper IV:**

Viking, A. “Institutional complexity and the role of planning practitioners: findings from a Swedish development process”. Manuscript intended to be submitted for publication in *Planning Theory & Practice*.

## **ADDITIONAL PUBLICATIONS**

### **Peer-reviewed conference articles:**

Viking, A. and Lidelöw, S. (2014) “Exploring industrialized house-builders’ perceptions of local requirement setting: an institutional logics perspective”. In: Raidén, A. B. and Aboagye-Nimo, E. (Eds.) *Procs 30<sup>th</sup> Annual ARCOM Conference*, 1-3 September 2014, Portsmouth, UK, Association of Researchers in Construction Management, 1133-1142.

### **Technical reports:**

Viking, A. (2014) “Industriella byggföretags syn på kommunalt kravställande” [Industrialized house-building companies’ perspective of local requirement setting]. Luleå University of Technology. ISBN: 978-91-7583-244-6.

Viking, A. (2014) “Föreslagna ändringar I plan- och byggprocessen – en workshopdokumentation” [Proposed changes to the planning and building process - a workshop documentation]. Luleå University of Technology. ISBN: 978-978-7583-247-0.

### **Articles in trade journals:**

Viking, A. (2014) “Byggkravsutredningen missar målet – industriella byggares syn på särkrav” [The construction requirement investigation misses the mark - industrialized house-builders’ view of local requirements]. *Samhällsbyggaren*, 6, 38-39.

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# 1 INTRODUCTION

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*In this chapter I will introduce the topic of this thesis and present relevant contextual information, culminating in the statement of an overall research aim. I will also outline the disposition of the thesis document.*

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## 1.1 Background

The construction industry has, across time, endured repeated and consistent criticism for being fragmented, which is thought to be the root cause of many of the industry's woes and ailments (Fellows and Liu, 2012; Alashwal and Fong, 2015) such as low productivity, schedule and cost overruns, and cost-driven and adversarial relationships between participating actors. The prevalence of construction subcontracting (Hartmann and Caerteling, 2010) leads to the splitting of specialist knowledge across multiple actors that seem to be unable to properly coordinate their contributions. The subcontracting approach enforces a vision of projects as: "a series of sequential and predominantly separate operations where the individual players have very little stake in the long-term success of the resulting building or structure and no commitment to it." (Briscoe and Dainty, 2005, p. 319). Most recently, the UK government sponsored Egan (1998) report concluded that clients, designers, main contractors and subcontractors all need to better integrate their processes and products by working as unified teams in order to deliver better value for money. Similar issues have also been identified in a number of other national industry reports across the world (c.f. Department of Industry, Science and Resources, 1999; Construction Industry Review Committee, 2001). Some construction researchers have responded to this latest wave of criticism by investigating novel ways to coordinate through relational contraction and multi-party contractual arrangements such as: partnering, alliancing, and integrated project delivery (Lahdenperä, 2012; Kumaraswamy et al., 2005). The overarching objective for these approaches has been to establish trust-based collaborative working environments so as to promote integration between members of project teams (Baiden et al., 2006).

Meanwhile, a growing number of construction researchers have begun to draw inspiration from management trends utilized in manufacturing industries. One prominent example is the introduction of supply chain management into the construction management literature. Some authors (e.g. Dainty et al., 2001), have focused on how more permanent relationships between supply chain actors enable a better environment for collaboration and integration, while others (e.g. Vrijhoef and Koskela, 2000) have focused on the enabling of logistical improvements in specific supply chains. Another example of a management idea originating in the manufacturing industry that was incorporated into the construction literature is that of lean production (Höök and Stehn, 2008; Gann, 1996). A common feature for these management ideas, which is unsurprising given that they originated from an industry where production volumes are high and variance is low, is that they enable and often rely on standardization of either processes or products as a primary mechanism for coordination. Similarly, new groups of construction practitioners that extensively apply these management ideas have emerged under a variety of names such as manufactured construction, offsite production, offsite construction, offsite manufacturing, industrialized building systems and modern methods of construction. In the UK construction sector offsite construction has been found to have many benefits over traditional modes of construction, including reduced delivery times, lower costs and improved quality (Goodier and Gibb, 2007; Blismas et al., 2006). Even so, uptake of offsite construction in the sector as a whole has been limited (Pan and Goodier, 2012; Taylor, 2010).

## **1.2 Industrialized house-building**

In Sweden, the construction sector received similar criticism regarding competition, quality and cost, but governmental investigations (SOU 2000:44; SOU 2002:115) also highlighted the importance of increased industrialization for remedying the reported shortcomings. Since then, has emerged a group of contractors, collectively known under the name *industrialized house-building* (Lessing et al., 2015). Organizationally, these contractors have been found to share key similarities with manufacturing companies (Gerth, 2008). Similarly, Unger (2006) especially argued the importance for industrialized

house-building contractors to have organizational structures that are compatible both with their production strategies and with their business strategies. Connections between production and business strategies need to be strong because industrialized house-building contractors elect to target specific homogenous customer segments in order to ensure the stable and predictable production conditions necessary to utilize a standardized production process (Brege et al., 2014; Lessing and Brege, 2015). As such, an industrialized house-building contractor's choice of production strategy is a strategic choice (Jansson et al., 2014) that limits its business strategy as well as the range of products it can offer to customers (Lessing et al., 2015; Johnsson, 2013). Jonsson and Rudberg (2014; 2015) present a matrix of available production strategies based on their degree of product standardization, ranging from pure standardization to pure customization (Lampel and Mintzberg, 1996), and their degree of offsite assembly, ranging from component manufacture and sub-assembly to modular building (Gibb, 2001), and argue that certain production strategies are more appropriate than others due to the way balance between productivity and flexibility is struck. However, regardless of their balance, all production strategies ultimately entail a strategic choice to improve efficiency and productivity at the expense of flexibility.

In general, the research attention directed towards industrialized house-building has primarily focused on engineering and production aspects, while relatively limited attention has been given to how industrialized house-building contractors organizationally relate to their surrounding environments. In fact, with the exception of Gerth (2008; 2013) and Unger (2006), relatively little is known about industrialized house-building from an organizational perspective. A few studies have, however, addressed the impact on industrialized house-building contractors from external conditions stemming from construction clients. For instance, Engström and Hedgren (2012) investigated clients' information-processing and decision-making approaches with regards to industrialized house-building. Similarly, Hedgren and Stehn (2014) have studied client barriers to adopting technical innovations, which they consider industrialized house-building to be. However, in recent governmental investigations (SOU 2012:86) the actions of local planning authorities have been highlighted as a significant source of

obstructive external conditions for industrialized house-building contractors. Recent findings by Viking and Lidelöw (2015) indicate that industrialized house-building contractors particularly struggle to predict and adapt to requirements that are set forth by Swedish local planning authorities as they regulate the built environment. According to the responding industrialized house-building representatives difficulties primarily arise when local planning authorities make interpretations of the regulatory framework as this can and does lead to different interpretations being made depending on the municipality and the individual planning practitioners involved.

### **1.3 Regulation of the Swedish built environment**

The Swedish governmental system, similarly to the other Nordic systems, is characterized by a high level of decentralized power and local autonomy (Sellers and Lindström, 2007). As such, Swedish municipalities enjoy a strong legal mandate to exercise public authority on a number of policy areas that, in non-Nordic governmental systems, are traditionally reserved for regional or even national government authorities. One example of this is the so called ‘municipal planning monopoly’ which grants municipalities near exclusive rights to regulate the built environment within its administrative borders. This mandate is clearly stated in the opening chapter of the Swedish Planning and Building Act (SFS 2010:900): “Planning the use of land and water areas in accordance with this Act is a municipal responsibility.” Consequently, it is nearly impossible to obtain permission to make alterations to the built environment without the expressed consent of the local planning authority. A number of international comparisons between different national planning systems (c.f. European Commission, 1997; Nadin and Stead, 2013; Nordberg, 2013) highlight the unique positions held by Swedish and other Nordic local authorities in that the formal regulatory framework heavily focuses regulatory power over the built environment on the local level of government.

The Swedish planning system consists of three formal levels: the Municipal Comprehensive Plan, the Detailed Development Plan and the Building Permit. Each Swedish municipality is tasked with maintaining and regularly reviewing a *Municipal Comprehensive Plan*

encompassing the entirety of the land and water within its administrative borders. The plan is not legally binding, but rather indicative of planned long-term development. *The Detailed Development Plan* is smaller, ranging anywhere from a single building to an entire development area, and more implementation oriented than the Municipal Comprehensive Plan. Historically, the Detailed Development Plan has been the medium through which most of the regulation of the built environment has been enforced, but the local planning authority can choose to make the plan more or less detailed (Kalbro et al., 2012) or, depending on the type of project and its conformity to the direction highlighted by the Municipal Comprehensive Plan, may elect to forgo detailed development planning all together. After a process of public consultation, Detailed Development Plans become legally binding and if changes occur to a project that cannot be accommodated within the existing Detailed Development Plan it must be revised. *Building Permits* are also legally binding, and limited to the size of a single building. Upon submission of a Building Permit application the local planning authority reviews and judges the application's compliance with the Swedish National Building Code (BFS 2011:6), Planning and Building Act, and any established Detailed Development Plans. In addition to the three formal levels, for any new development project, local planning authorities may negotiate a development agreement with developers. In situations where the municipality owns land upon which the development is planned the development agreements details the conditions under which the local planning authority is willing to transfer ownership of the land to the developer and, as such, development agreements too can become a medium used for regulating the built environment.

Nevertheless, planning theorist acknowledge that national planning contexts depend not only on the formal regulatory framework but also on the informal practices of those that interpret and apply the framework, commonly referred to as planning culture. (Booth, 2011). Different planning paradigms prescribe different roles and, by extension, different expectations for the behaviours and actions planning practitioners. Across time, the dominant planning paradigms have typically reflected broad political trends (Sager, 2005). During the

reconstruction time following World War II the then dominant synoptic planning paradigm portrayed planners as technical-economical experts whose main prerogative was to identify problems, weigh alternatives, and present rational solutions through regulation of the built environment. Similarly, the social unrest and strive for increased democratic participation during the 1960s and 1970s is mirrored in the transactive planning paradigm championed by John Friedmann (1973). The planning paradigm currently dominating Nordic planning, the communicative planning paradigm (Forester, 1989; Innes, 1995), which emphasizes the importance of dialogue and consensus building has increasingly come under attack from the neo-liberal New Public Management movement (Mäntysalo et al., 2011; Falleth et al., 2010). In essence, New Public Management, which attempts to make public service more business-like, constitutes an alternate logic to that of the communicative planning paradigm, which prescribes different types of behaviour and action for planning practitioners (Sager, 2009).

#### **1.4 The aim and scope of the research**

The interface between industrialized house-building and the regulation of the built environment is not well understood by either research tradition. Industrialized house-builders' and, by extension, the researchers that study them view variations in regulation of the built environment as an obstructive practice that prevents optimal utilization of their production strategies and predefined building systems. In contrast, from the perspective of planning practitioners and planning theorists, variations in regulation of the built environment can be seen as a natural and desirable consequence of a functional democratic system of local government. Yet, there is a distinct lack of research which integrates the two perspectives. Furthermore, hitherto conducted research on industrialized house-building has primarily focused on its engineering and production dimensions, rather than on its relationships with other organizations. This research has often been conducted from a methodological position of positivism and with the assumption that industrialized house-building is inherently desirable. As such, the study of industrialised house-building has historically suffered from methodological skewness and a lack of reflectivity.

In light of this discussion, I present the following two-fold thesis aim: 1) to increase understanding of how local planning authorities make interpretations when regulating the built environment and how those interpretations influence industrialized house-building contractors, and 2) to, within the ongoing research process, identify theoretical perspectives suitable for describing tensions in the interface between industrialized house-building and local planning authorities.

The research reported in this thesis has taken a problem-first approach designed to empirically explore the research context and problem before developing a theoretical frame of reference. The scope of the research includes Swedish local planning authorities ranging in size from over 100 000 inhabitants to less than 10 000. As such, some of the empirically explored municipalities are situated in population growth regions where housing construction levels are high, whereas others experience stable or declining population levels and limited levels of housing construction. In light of the significant differences between national planning contexts it is pertinent to note that local planning authorities, in the Swedish context, connotes both an official regulatory board consisting of local politicians and the associated departments of the civil servant organization that conduct the day to day activities. The departmental size ranges from a handful of planning practitioners to upwards of a few hundred, depending on the size and activity level of the municipality. On the side of industrialized house-building, the research scope covers Swedish multi-family housing contractors representing a wide range of offerings, market positions and operational platforms (Brege et al., 2014). Single-family housing contractors fall outside the scope of the research as their business models utilize a business to consumer strategies that do not necessitate interaction with local planning authorities in the same way that the business to business strategies of multi-family housing contractors do.

### **1.5 Thesis disposition**

The thesis consists of two sections: the introductory chapters and the appended papers. The introductory chapters are structured as follows:

In Chapter 1 I introduce the research topic and present the overarching research aim. In Chapter 2 I describe the research

methodology and methods employed in addressing the research aim. In Chapter 3 I summarize the identified theoretical perspectives of value for understanding the research topic. In Chapter 4 I synthesise and discuss findings from my two conducted studies and from the theoretical frame of reference. In Chapter 5 I present my conclusions, consider implication for practitioners and for various research fields, discuss the limitations of my conclusions and suggest avenues for future research. Finally, in Chapter 6 I reflect on the research process from the perspective of context, methodology and theory, as well as discuss circumstances pertaining to the particularities of this research process.

The appended papers consist of four research publications that have resulted from the research process: one article published in a peer-reviewed scientific journal, one article published in the proceedings of a peer-reviewed international conference, and two manuscripts intended to be submitted for publication in two different scientific journals.

## 2 RESEARCH METHODOLOGY

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*In this chapter I will elaborate on my methodological position and the subsequent research strategy and design choices, including the methods employed for collecting and analysing empirical material, as well as discuss the research quality. The sections on the research process and methodological position are written in an active voice, acknowledging the impact that I, as a researcher, have had on the research process as well as on the interpretations and the results.*

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### 2.1 The research process

I have been a member of the Timber structures research group at Luleå University of Technology since February 2013. The group conducts applied research within the fields of construction management and, to a lessening degree, structural engineering based in response to the needs of the construction industry and society at large. The overarching research objective of the Timber structures research group is the development of industrialized construction, also known as industrialized house-building, through the integration of the client, design and production, and supplier processes. Over the last two decades the group has collectively amassed its knowledge of industrialized house-building through collaboration with construction contractors that identify as “industrialized construction companies”. Over the years the group’s research focus has shifted from purely structural to construction technology and construction management. My own research project emanates from this process and was presented to me the same way I endeavour to present it to the readers of this thesis, namely: there somehow exists friction between municipal local planning and industrialized house-building contractors which obstructs their intended methods of managing the building process and the purpose of this project is to find out more about how and why. Although the research group had extensive experience dealing with many aspects of industrialized house-building such as: production, processes, collaboration, supply chains and business marketing, the sub-field interested in the study of industrialized house-building had, previous to this project, had limited experience dealing with the public

sphere. As such, my knowledge of local planning was emphasized as an important quality when I was recruited to the project.

For the sake of clarity, it should be mentioned that the Timber structures research group is, at the time of writing, undergoing a merger with the somewhat more technology-oriented Construction management research group set to launch during 2018. Over the years the two groups have maintained a close working relationships and as such represent relatively similar perspectives of and, as is important to note, a decidedly positive general attitude towards industrialized house-building.

My educational background includes a Master of Science in Architectural Engineering, with a specialization in Urban Planning from Luleå University of Technology. As such, my frame of reference and my assumptions are formed both by my prior knowledge of the construction industry derived from my Master's programme in general and from the specialization in Urban planning which emphasizes a combination of engineering and artistic skills. I should also be mentioned that although the Timber structures research group does actively participate in teaching at the Architectural Engineering programme, most of that teaching is focused into the alternative specialization Lean Construction. As such, up until the point of my recruitment I had had very little exposure to the Timber structures research group in general and to the topic of industrialized house-building specifically. Instead, I have gained my knowledge of the topic though the data collection activities, meetings with industry practitioners, interactions with colleagues at the research group, the courses we teach to undergraduates as well as through participation in activities in the construction management research community, such as workshops, PhD courses and international conferences.

My Urban Planning specialization gave me insight into dealing with topics, such as sustainability, where there is no immediately apparent best course of action and the importance of considering multiple perspectives on issues before jumping to conclusions. This has led me to take a problem-first approach to my research, in which new empirical and analytical discoveries have led to adjustments of the

theoretical frame of reference and the research strategy and design throughout the project.

## **2.2 My methodological position**

Historically, construction research has been dominated by researchers that take the philosophical position of *positivism* (Fellows, 2010), but the *interpretivist* research tradition is steadily growing stronger. The division between positivism and interpretivism originates in the debate over whether there is a single science or many (Schweber, 2016). The positivist position is that social phenomena can and should be studied in the same way as natural phenomena, whereas proponents of interpretivism believe that social phenomena are qualitatively different from natural phenomena and therefore require a different approach. This fundamental divide carries far-reaching implications for how the two research traditions view issues such as the aims of science and the use of theory.

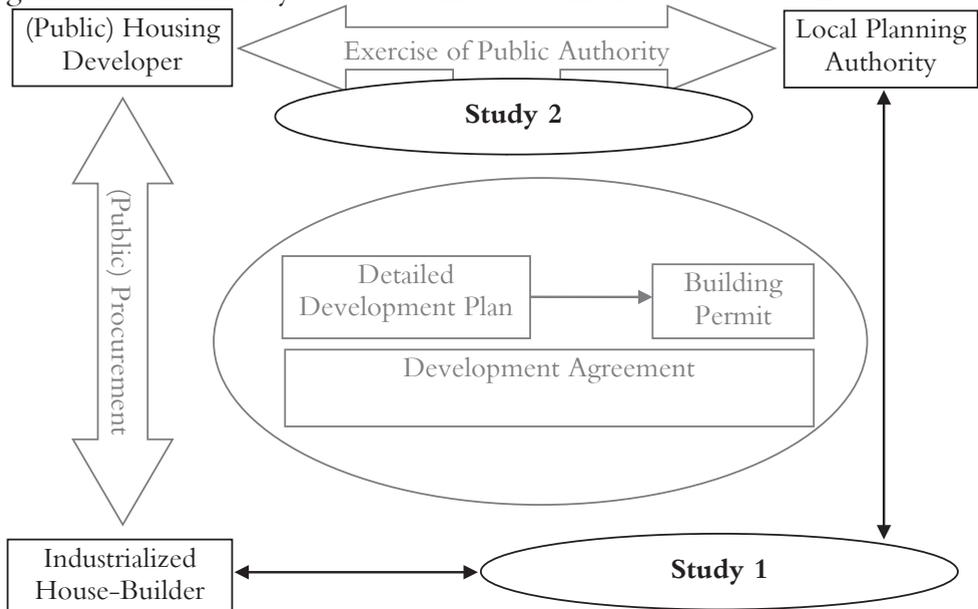
The positivist position entails ontological and epistemological stances for realism and objectivity – i.e. that reality is apprehensible and that researchers can and should strive to remain independent of their research objects. By comparison, the interpretivist tradition embraces relativism and subjectivity – that the reality people perceive is dependent on their social setting and that the past experiences and values of any social actor inevitably shape his or her interpretations of situations. As such, interpretivist researchers acknowledge their own biases and strive to curb their influence through awareness and reflexion. The purpose of the research reported in this thesis has been to further the understanding of local planning authorities in their role as regulators of the built environment. Throughout the entirety of the research process I have embraced the notion that local planning authorities and industrialized house-building contractors interpret situations in which they interact differently. As such, the ways in which I have framed the research problem, planned and managed the collection of empirical material, interpreted the results and drawn my conclusions have all been influenced by a subjective view of reality, which positions me closer to an interpretivist than to a positivist position.

Furthermore, according to the positivist tradition the true purpose of science is to explain phenomena through the creation of generalized laws. In this tradition theory serves as a source of hypothesis or propositions to be tested though contrasting with empirical data. By contrast, the interpretivist research tradition is more concerned with understanding and describing social phenomena and consequently uses theory primarily as a tool to help researchers transcend their own subjective opinions and to guide their attention to particular processes or meanings. I elect to view theories as *ideal types* (Weber, 1949) – i.e. pure analytical models of phenomena that have been abstracted from the empirical reality. The purpose of an ideal type is not to be empirically reproduced, but to serve as an extreme against which occurrences of phenomena can be compared for adequacy. According to this view, theories are tools to be used by researchers with the explicit goal of understanding particular elements in a set of empirical material. I believe that different theories applied to the same set of empirical material may help researchers understand the situation better than they would otherwise have been able to. However, although two different theories may be both be used to understand a specific situation, certain theories are better suited for specific purposes than others. A good analogy is that while it is technically possible to substitute a screwdriver for a hammer a screwdriver was designed for an entirely different purpose and will likely be less efficient as a result. For this reason, when working with different theories, a researcher must be keenly aware of the contexts in which the theories emerged and the fundamental assumptions they make. This general view of theory has lead me to a view of organization theory similar to that of Morgan's (2006) eight metaphors for understanding organization, each with their own strengths and limitations. The theoretical frame of reference I present in chapter 3 consists of a combination of contingency theory and institutional theory – two schools of thought that, although related, are based on fundamental assumptions that are partially incongruent. Viewing organization theories as metaphors/ideal types that, rather than being mutually exclusive, describe different aspects of organization allow me to combine these two streams of literature into the same theoretical frame of reference.

In summary, my fundamental assumptions about reality, knowledge and how knowledge is created position me closer to the position of the interpretivist than to that of the positivist researcher. Due to the knowledge building approach taken in this particular research project I have also favoured predominantly qualitative methods throughout the entirety of the research process.

### 2.3 Research strategy and design

In its most general form a research strategy describes the collection and analysis of empirical material. As is often that case with qualitative research designs, the research strategy for this project was not predefined, but rather evolved throughout the duration of the project. During the first half of the project (Study 1, see Table 1) the collection and analysis of empirical material was aimed at inductively exploring how industrialized house-building contractors and local planning authorities perceive the actions of themselves and each other on a general level. Initially it was assumed that interaction between



**Figure 1.** *The research design, building on findings from Paper I. Study 1 is focused on describing interactions between Industrialized House-Building contractors and Local Planning Authorities. Study 2 is focused on interactions between Local Planning Authorities and Housing Developers.*

industrialized house-building and local planning authorities occurred in a single interface. However, findings from the empirical material collected in the first of three rounds (presented in Paper I) indicated that there were multiple interfaces, due to the mediating role played by developers/clients (see Figure 1). Following this insight, it was decided that Study 1 should focus on the interface between industrialized house-building contractors and local planning authorities, and that Study 2 should focus on the interface between developers/clients and local planning authorities. It was also decided that the interface between industrialized house-building contractors, and developers/clients would not be studied (however, see section 5.3) as the particulars of public procurement did not fall within, nor necessitate the specific competence of any of the participating researchers. Study 1 relied exclusively on indirect observations in the form of interviews which meant that the empirical material did not necessarily derive from any particular project, but rather from the respondents' collective experiences and understanding. As such, it was decided that Study 2 should focus on following a single built environment regulation process so as to gain multiple perspective of the same events.

Additionally, Study 1 was characterized by a search for theoretical perspectives that could accurately describe the collected empirical material and provide a better understanding of how local planning authorities behave in their role as regulators of the built environment. Finding (see Papers I and II) indicated that planning practitioners have access to three partially incongruent logics: state logic, market logic, and professional logic, and that seemingly unpredictable outcomes could be the result of their responses to said logics. The state of being exposed to multiple concurrent logics is theoretically referred to as institutional complexity. Throughout Study 2 (as described in Paper IV) the concept of institutional complexity was developed further through an operationalization of the institutional logics concept on the specific context of regulation of the built environment.

In retrospect, although that was not obvious at outset, the research strategy and design is best described as a case study approach. Case studies provide detailed situated knowledge of complex social

phenomena within their own limited contexts (Merriam, 1998; Stake, 1995). This makes the approach especially appropriate in situations where the boundary between the phenomenon and the context is not clear (Yin, 2013) or when little is known about the phenomenon and the current perspectives seem inadequate (Eisenhardt, 1989). The overarching research goal has been to further the understanding of variations in the regulation of the built environment, a phenomenon which was practically unknown in construction research and the existing perspectives of industrialized house-building could not adequately describe why they were being adversely affected, a case study approach is a well-suited to this particular project. Moreover, in case study designs the research process is non-linear as the researcher iterate between emerging results, theory and empirical material in order to consolidate conclusions (Merriam, 1998; Yin, 2013). This allows researchers to link empirical material to theory by using theory to make sense of the empirical material and simultaneously use the empirical material to sharpen theory (Ragin and Becker, 1992).

### *2.3.1 Case conception and selection*

Case study designs have been widely used in a number of different disciplines. Still, the concept of case is so poorly defined that any scientific study, depending on your definition, could be construed as a case study (Ragin and Becker, 1992). As such, an important issue for any aspiring case study researcher is being able to answer the following questions: “what is a case?”, and “a case of what?”. Based on distinctions between understandings of cases as either empirical units or theoretical constructs and case conceptions as either specific or general, Ragin and Becker (1992) present four possible answers to the first of those questions: cases are found (empirical and specific), cases are objects (empirical and general), cases are made (theoretical and specific), and cases are conventions (theoretical and general). However, in conjunction Ragin and Becker also add that the employed definition of case should be allowed to change across the duration of the case study process as it depends on the empirical material and the researchers own analysis. The research reported here primarily views cases as conventions and the particular cases studied as cases of *institutional complexity* (section 3.1). However, following Ragin and

Becker it also acknowledges the empirical nature of cases, particularly its usefulness for distinguishing between contextually separate instances of collection of empirical material.

**Table 1.** *Overview of research design, methods for collection and analysis of empirical material.*

<b>Study</b>	<b>Research design and empirical material</b>	<b>Analysed in</b>
<p>1</p> <p>Aug 2013 - Feb 2016</p>	<p>Multi-case study design:</p> <p>Interviews at 5 industrialized house-building contractors, for a total of 7 corporate managers, 1 CEO and 1 architect/urban planner (2013-2014)</p> <p>Interviews at 7 local planning authorities, for a total of 4 planning managers, 2 urban planners, 1 land development manager and 1 building permit manager (2014-2015)</p> <p>Follow-up interviews at the same industrialized house-building contractors, for a total of 5 corporate managers and 1 CEO (2016)</p>	<p>Papers I, II and III</p> <p>Using two-step analysis of inductive coding followed by deductive coding.</p>
<p>2</p> <p>Feb 2016 - Feb 2017</p>	<p>Singe-case study design:</p> <p>Interviews with 7 planning practitioners, 2 municipal managers, and 7 developer representatives, for a total of 21 hours.</p> <p>Observations of dialogue meetings, internal meetings and presentations, for a total of 95 hours.</p> <p>Documents relevant to the ongoing process, including open call for proposals, development proposals, internal documentation, and official communication, for a combined total exceeding 1900 pages.</p>	<p>Paper IV</p> <p>Using an iterative collection and analysis approach. Empirical observations were sorted into emerging and continually refined categories.</p>

An important empirical aspect of case study research design is case selection and case study type selection. Yin (2013) distinguishes between single-case designs and multiple-case designs as aimed at different purposes. Single cases designs place a strong emphasis on the in-case design, whereas multi-case designs focus on cross-case comparisons. The case selection criteria also differ between the two design types. Single cases are selected on the merits of their adequacy, either because they are in relevant ways atypical or critical (Flyvbjerg, 2006) or, conversely, because they hold meaningful commonalities with a large number of other possible cases. By contrast, multiple cases are selected based on a notion of replication. However, replication is not to be confused with statistical sampling (Yin, 2013; Eisenhardt, 1989). The purpose of replication is not to provide statistical generalizability, but rather to identify cases for which similar results can be predicted or contrasting results can be predicted for anticipatable reasons.

The best way to describe the employed research design of this project is a two separate case studies: one multi-case study (Study 1) encompassing interviews with a large number of representatives of industrialized house-building contractors and local planning authorities, and one single-case study (Study 2) encompassing interviews, observations and documents of a land development process implemented by a single local planning authority. The purpose of Study 1 was to maximize learning about the phenomenon (Stake, 1995) and, as such, cases were selected so as to represent a wide array of perspectives. The industrialized house-building contractors were selected in such a way as to represent a multitude of building systems, production strategies and target market segments. Single-family housing contractors were not included as their business models utilize business to consumer strategies that do not necessitate interaction with local planning authorities in the same way that the business to business strategies of multi-family housing contractors do. Similarly, the local planning authorities were selected so as to include both larger urban and smaller rural municipalities with a mix of experience and success with industrialized house-building. Additionally, the number of participation local planning authorities was not pre-set but adaptive as additional cases were added until the emerging results exhibited signs

of saturation. For Study 2, due to the frequency and extent of work required to collect the empirical material, proximity and access became important determining factors in the selection process.

### *2.3.2 Methods for collection of empirical material*

Case study research allows for the use of multiple methods of collecting empirical material (Stake, 1995), thereby enabling the capturing of different dimension of the same phenomenon through triangulation. This section briefly describes the fundamental aspects of each employed method for collecting empirical material. For a full account of how Studies 1 and 2 were conducted, including their rationale, see the corresponding papers indicated in Table 1. Interview data has been a primary source of empirical material throughout the entire research project. For Study 1 interview data was the sole source of empirical material. For Study 2 the interviews were complemented with direct participant observations and document analysis.

A common feature of all interviews is that they were loosely structured around a number of predefined question areas in order to allow for the same set of questions to be asked to multiple respondents while ensuring space for adequate follow-up questions. With the exception of one follow-up interview in Study 1, all interviews were held face-to-face so as to not deprive the investigator of non-verbal communication. Whenever not specifically requested by the respondent, all interviews were also held at the respondents' workplace so as to help the investigator to understand their contextual environment. All interviews included in Study 1 were recorded and transcribed verbatim. Due to their scope and the associated time commitment, the interviews from Study 2 were recorded, but never transcribed in full.

On a number of occasion, interview methods have been severely criticized. Hammersley (2003) cautions researchers from relying solely on interview data, reminding them that interviews will gather socially constructed answers rather than generalized facts and that open-ended question designs do not guarantee capturing the respondents true voice. For these reasons and more, it was decided that Study 2 should make use not only of indirect observations such as interviews but also

complementary direct observations, as also suggested by Altheide and Johnsson (1998). The direct observations were conducted by a single investigator so as to minimize the disruption to the ongoing process observed. The observations are best described as direct in the sense that, although the observer was present in the room, he attempted to be as unobtrusive as possible and his presence was accepted by all the meeting participants as someone there to observe and learn. The observations were compiled in field notes detailing both the observations themselves and the investigators immediate reflections at the moment of writing. The observations served a dual purpose, both providing a secondary source of empirical material in order to enable triangulation and highlighting ambiguities and controversies for further exploration in the following interviews.

Additionally, an array of documents relating to the ongoing process were collected and used as a tertiary source of empirical material. These documents included the initial call for proposals including supplementary documents, proposals from prospective developers and contractors, internal meeting documentation, formal and informal communication with prospective developers and development agreement drafts. Due to the materials combined size of over 1900 pages of text the documents were not analysed in their entirety. Rather, the material was consulted as a complimentary source of empirical material at strategic points in the analysis and additionally served as a form of documentation of the local planning authority's perceptions of transpired events against which interviews and observations could be contrasted.

### *2.3.3 Methods of analysis*

This section describes the fundamental features of the performed analysis procedures. For a detailed account of the analysis procedures undertaken in Study 1 see the appended Papers I, II and III and for Study 2 see Paper IV. The main analysis has repeatedly followed a two-step process entailing iterative inductive coding performed according to the descriptions of Miles and Huberman (1994) in order to identify a suitable analytical framework, followed by a round of deductive coding based on the theoretical concepts of the chosen framework.

Acknowledging the inherently interpretive nature of inductive coding the analysis of Study 1 made use of a multiple investigator approach (Eisenhardt, 1989) aimed at managing researcher biases. An additional investigator that had previously not been involved with the empirical material and the main investigator that had performed the interviews conducted separate analyses before comparing and contrasting their findings. Any emergent controversies between the investigators' interpretations were discussed until a common understanding was reached. This method not only lessens the influence of researcher biases, but also further enriches the analysis by allowing multiple meanings and interpretations to surface and interact.

Study 2 made use of multiple sources of empirical material, thereby enabling triangulation between different sources of evidence (Yin, 2013). The intention of the triangulation was both to strengthen interpretations but also to highlight instances of inconsistency, confusion and complexity. The collection and analysis of empirical material was particularly concerned with identifying both consistency and inconsistency between different sources and, as such, should be thought of as interwoven rather than as separate entities of the research process. The collection and analysis process proceeded iteratively with empirical observations being sorted into emerging categories which were continuously refined until a point of theoretical saturation was reached.

#### *2.3.4 Research quality*

The quality of exploratory case study research is notoriously difficult to judge. Yin (2013) suggests judging quality by four evaluation criteria: reliability (the degree to which another researcher can repeat the study and obtain the same results), construct validity (the degree to which appropriate operational variables have been established), internal validity (the degree to which causal relationships are identified), and external validity (the degree to which the findings are generalizable). This evaluation framework echoes the ideal traditionally preferred by researchers of the positivist research tradition. Meanwhile, interpretivist researchers are more split; some favouring Yin's framework, others preferring that proposed by Lincoln and Guba (1985). This framework

proposes four evaluation criteria largely analogous to those of Yin: credibility, transferability, dependability and confirmability.

*Credibility* is analogous to internal validity and denotes the degree to which the research is believable from the perspective of those that participate in it. As such, measures to improve credibility typically focus on strengthening the chain of evidence (Yin, 2013) in order to ensure that no misinterpretation has occurred. In this project this has been achieved by allowing interview respondents to give feedback on interview transcripts prior to analysis and to the use of particular quotes in publications. Additionally, this feedback was also viewed as a source of empirical material

*Transferability* is analogous to external validity and denotes the degree to which the results can be transferred to different contexts. However, unlike for external validity, the responsibility for judging the sensibility of transferring the results falls to the researcher that wishes to perform the transfer. The original researcher can merely facilitate that judgement by thoroughly describing the context in and the assumption under which the research was undertaken. In this project measures to increase transferability have been addressed by describing the distinguishing features of the Swedish built environment regulation context as well as that of industrialized house-building contractors as well as identified other potential contexts which share these key characteristics.

*Dependability* is analogous to reliability but, unlike reliability, dependability focuses on the idea that the context in which research is undertaken is ever-changing and that the researcher must strive to describe these changes and how they affected the way in which the researcher approached the study. In this project dependability has been ensured by clearly describing the methods employed for collection and analysis of empirical material and presenting motivations for why those methods were elected and operationalized in the manner that they were.

*Confirmability* is analogous to objectivity which, although not one of Yin's four evaluation criteria, is also a key tenet of the positivist research tradition. However, unlike in the positivist tradition, in this context objectivity does not mean a strive for complete absence of bias

but rather the degree to which the results can be confirmed or corroborated by others. As such, objectivity is considered to be socially constructed in that its meaning will differ depending on the academic context in which the researcher is located. Researcher can improve confirmability by describing the procedures for managing multiple interpretations and dealing with inconsistencies. In this project confirmability has been managed by utilizing a multiple investigator approach and by forthrightly describing the procedures for handling inconsistencies, confusion and complexities in the analysis of the empirical material.

Perhaps the most common criticisms against case study research designs is that they offer limited, or even non-existent, generalizability. Flyvbjerg (2006) protests strongly against this notion as he feels that such critique demonstrates a vast misunderstanding of case studies. Flyvbjerg (2006) argues that by making stratified and well-thought-out case selections it becomes possible to make in-group generalizations much in the same manner as denoted by transferability in Lincoln and Guba's (1985) framework. Since case study sampling should be analytical rather than statistics-based (Eisenhardt, 1989; Yin, 2013) statistical generalizability cannot and should not be the goal of a case study researcher. However, it is possible to transfer results between contexts, thereby providing some generalizability, provided that key similarities between the origin and destination contexts are considered and that the results are treated as descriptive rather than normative or prescriptive.

Another important criterion for judging the quality of research, particularly applied research, is usefulness. Typically research in fields that are defined by theoretical and methodological schools of thought rather than consolidated around contributions to empirical problems tend to emphasize criteria for theoretical and methodological rigour, but can often forget to question whether research findings can be of practical use. Troubled by reports of a growing theory-practice gap, Hodgkinson et al. (2001) suggest a four-fold taxonomy of varieties of knowledge in the management field: *popularist science* (high practical relevance but low theoretical and methodological rigour), *pragmatic science* (high-high), *pedantic science* (low-high), and *puerile science* (low-

low). Hodgkinson et al. (2001) argue that the target category for any management researcher should be pragmatic science, but that requires both academic rigour such as described above and practical stakeholder relevance. For researchers situated in applied fields of academia, such as construction, practical relevance is often both easier and more important to achieve, yet it is nevertheless still important to reflect on the practical contributions of science. My personal stance is that neither theoretical and methodological rigour nor practical relevance should be neglected, but the relative emphasis placed on each criterion for the purpose of determining quality depends on the type of research performed. For instance, the research presented in this thesis is primarily problem-oriented and, as such, there are many potential beneficiaries among both industrialized house-building and local planning authority practitioners, which is why evaluation criteria for theoretical and methodological rigour have been emphasized in this section.



### 3 THEORETICAL FRAME OF REFERENCE

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*In this chapter I will summarize the theoretical frame of reference used in the appended papers. The chapter is divided into two sections, the former dealing with the concepts of institutional complexity and institutional logics and their roots in neo-institutional theory (section 3.1), and the latter dealing with organizational coordination and coordination mechanisms (section 3.2).*

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#### 3.1 Institutional complexity

With regard to regulation of the built environment, planning practitioners can take on many different roles depending on by which planning paradigms they are influenced. In essence, each planning paradigm prescribes its own set of expectations for how planning practitioners are to behave and act in different situations. In this sense the paradigms each present their own logic of appropriateness (March and Olsen, 1989). The study of multiple competing logics and how individuals and organizations respond to them has received attention in the institutional literature under the label of *institutional complexity* – the notion that organizations experience pressures when confronted with multiple concurrent logics that prescribe divergent expectations, values, understandings, and identities (Greenwood et al., 2011). Institutional complexity is a concept derived from the organizational study of *institutions*: “Institutions comprise regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life.” (Scott, 2014, p. 56). In particular, the starting point for institutional complexity is the existence of various *institutional logics*, defined as “the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton and Ocasio, 1999, p. 804). Institutional logics were originally introduced by Friedland and Alford (1991) as they envisioned an inter-institutional system consisting of the five major institutional orders of Western society: the capitalist market, bureaucratic state, democracy, nuclear family, and Christianity – each associated with their own central institutional logic. Friedland and

Alford (1991) argued that individual and organizational behaviour cannot be fully understood unless placed in relation to their social context represented by the inter-institutional system. The inter-institutional system was presented as a framework for analysing relationships on three different levels: “individuals competing and negotiating, organizations in conflict and coordination, and institutions in contradiction and interdependence” (Friedland and Alford, 1991, p. 240-1). As such, the institutional logics concept carries an inherent notion of complexity.

Even so, institutional complexity has, until recently, received relatively little research attention. Oliver (1991) and Kraatz and Block (2008) did each outline a number of generic strategies for dealing with conflicting institutional demands, but did not explore the circumstances under which each response is mobilized. Raynard (2016) argues that institutional complexity consists of three components: logic incompatibility, unsettled field-level prioritization and jurisdictional overlap. *Logic incompatibility* occurs when the prescriptions of multiple logics are difficult to combine or adhere to in practice (Besharov and Smith, 2014; Greenwood et al., 2011). Regardless of whether the incompatibility is rooted in goals (e.g. Pache and Santos, 2010) or means (e.g. Dunn and Jones, 2010), logic incompatibility pertain to any situation in which compliance with the prescriptive demands of one logic precludes the adherence to those of another. *Unsettled field-level prioritization* refers to organizational fields (DiMaggio and Powell, 1983) without well-recognized and agreed upon prioritizations of logic (Reay and Hinings, 2009). Such situations generate significant uncertainty as there is no established framework for how organizations should prioritize their demands (Kraatz and Block, 2008). A *jurisdictional overlap* results from prescriptive demands from multiple logics target the same jurisdictional space, e.g. an industry, a profession, or an organization (Smets and Jarzabkowski, 2013). In such situations disagreements occur among advocates of different logics as the logics compete for supremacy over the contested jurisdiction. Furthermore, based on the three components of complexity, Raynard (2016) outlines four distinct constellations of institutional complexity: *segregated complexity* (incompatibility plus unsettled prioritization), *restrained complexity* (incompatibility plus jurisdictional overlap), *aligned complexity*

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(unsettled prioritization plus jurisdictional overlap), and *volatile complexity* (incompatibility plus unsettled prioritization plus jurisdictional overlap).

### 3.1.1 *The institutional logics perspective*

Much of the recent development on institutional complexity was enabled by the publication of Thornton et al.'s (2012) 'the institutional logics perspective'. Thornton et al. (2012) revised and expanded Friedland and Alford's (1991) inter-institutional system with the aim of making the institutional orders more analytically distinct, thereby improving the framework's usefulness for theory construction and empirical testing. The revised ideal-type typology presented by Thornton et al. (2012) includes seven institutional orders: family, community, religion, state, market, profession and corporation, each with their own root metaphors, sources of legitimacy, authority, and identity; basis for norms and strategy; informal control mechanisms; and economic system.

More importantly for the study of institutional complexity, the institutional logics perspective was the result of continuous effort to reframe institutional logics into a concept that embraces and seeks to explain heterogeneity of organizational arrangement rather than, as had previously been the case, a concept that explains homogeneity. Synthesizing ideas from social and behavioural psychology, Thornton et al.'s (2012) 'institutional logics perspective' presents a meta-theoretical framework for institutional logics that treats social actors as, to varying degrees, embedded in different institutional logics. By adapting the concept of dynamic constructivism (Hong and Mallorie, 2004; Hong et al., 2000), Thornton et al. (2012) reinterpret institutional logics as cultural knowledge, the availability, accessibility and activation of which will dictate individual behaviour. In this context, *availability* refers to an individual's familiarity with and ability to call upon an institutional logic for various cognitive tasks, such as social sensemaking, problem solving, decision making and coordination. *Accessibility* refers to which logic is deemed most appropriate, either from association with the particular situational context or due to the individual actor's level of embeddedness in a particular logic. *Activation*, refers to whether a logic is actually used in

the interaction. As cultural knowledge is spread through social interactions and socialization, both availability and accessibility is largely determined by an individual actor's past experiences. As such, even though multiple logics may be available, thereby potentially enabling agency, the accessibility of those logics limits which of them can be activated. In routine situation highly accessible logics tend to be activated, whereas in non-routine situations any available logic that is deemed to be applicable to the salient features of the situational context can be activated regardless of its accessibility.

### 3.1.2 *Old institutional and neo-institutional roots*

Institutional logics builds upon, yet significantly departs from the traditions of neo-institutional theory. The study of institutions has a long history in organizational analysis, starting with Selznick's (e.g. Selznick, 1949) empirical investigations of organizations and their institutional environment. This early tradition, later dubbed "old institutionalism", focused on bringing consensus between formal organizational structure and informal culture. However, in the 1970s a new approach to institutional analysis that broke with the earlier traditions by emphasizing the role of culture and cognition developed. This neo-institutional school rejected the rational-actor model of classical economics as an explanation for organizational structure, instead emphasizing legitimacy rather than efficiency as a determinant for organizational survival and success. In a seminal paper Meyer and Rowan (1977) argued that organizations, rather than adapting their organizational structure to maximize efficiency, follow *rationalized myths* salient in their institutional environment. These rationalized myths are widely accepted prescriptions for appropriate behaviour and conforming to them grants organizations *legitimacy* - "a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574), not by actually being rational, but by appearing to be rational. Meyer and Rowan (1977) further envisioned that all organizations, to varying degrees are subject to these take-for-granted rules, leading to homogenization of organizational forms and practice.

DiMaggio and Powell (1983) extended Mayer and Rowan's (1977) ideas about institutionalization from the societal level to *organizational fields* – “subsets of organizations that together constitute a recognized area of institutional life”. DiMaggio and Powell (1983) found that, as organizational fields mature, “there is a push towards homogenization as powerful forces lead organizations to become more and more similar to one another”. DiMaggio and Powell (1983) argued that institutionalization in organizational fields is driven by three mechanisms: coercive, normative, and mimetic isomorphism. *Coercive isomorphism* is caused when powerful external actors, e.g. the state, force other organizations to adopt particular organizational elements in order to avoid sanctions from the more powerful organizations of which they are dependent. *Normative isomorphism* is driven by professionalization and causes organizations to change as they are motivated to respect social obligations. *Mimetic isomorphism* arises when uncertainty prompts organizations to copy other organizations that they perceive to be successful or legitimate. Each isomorphic mechanism grant legitimacy, thereby ensuring organizations their survival despite the potential loss of efficiency.

Friedland and Alford (1991) maintained the neo-institutional concern with how cultural rules and cognitive structures influence organizational structures. However, instead of focusing on isomorphism, the institutional logics tradition was concerned with the effects of institutional logics of individuals and organizations in relation to their social context. Furthermore, institutional logics address a key issue in the division between neo-institutional and old institutional theory, namely that of the relative importances of *structure*, “rules and resources recursively implicated in social reproduction” (Giddens, 1984, p. xxxi), and human *agency*, “the capacity of the individual to make a difference to a pre-existing state of affairs or course of events” (Giddens, 1984, p. 14). Whereas old institutionalism favoured agency, early neo-institutional theory leaned heavily towards structure. The approach taken by institutional logics is what has later been known as embedded agency: institutional logics shape the behaviour and actions of individuals but individuals in turn have some possibility to change institutional logics, thereby providing a balance between structure and agency.

### **3.2 Organizational coordination**

Construction projects are arguably some of the most complex undertakings known to mankind (Winch, 1987), both technically and organizationally. Baccarini (1996) argued that project complexity can be interpreted and operationalized in terms of differentiation (Lawrence and Lorsch, 1967) and interdependencies (Thompson, 1967), two fundamental concepts of organizational structure, and managed by coordination. Drawing on Thompson's (1967) concept of interdependencies and three mechanisms to manage them, Jahre et al. (2006) argue that standards and standardization is an important mechanism for achieving coordination in the construction industry. In fact, among the organizational coordination literature, no other author has been as frequently mobilized for such a wide range of topics within construction research as Thompson. Some authors (e.g. Winch, 1989; Shirazi et al., 1996) have used interdependencies to describe coordination on construction sites, whereas others (e.g. Bygballe and Jahre, 2009; Bygballe et al., 2013) have used them to describe coordination of value creation between construction actors, and others yet (Fellows and Liu, 2017) have highlighted their role in collective sensemaking in temporary multi-organizations. It would seem, therefore, that organizational coordination is an important concept for describing a number of construction related topics.

According to organizational theory, the need for coordination is a natural and direct consequence of specialization or division of labour. By breaking down activities into smaller interdependent tasks and distributing them across a larger number of specialized actors a need for coordinating those tasks arises. Despite, or maybe because of, the concept's widespread relevance there is no one universally accepted definition of coordination. However, for the purposes for this thesis, the following definition will be adopted: "At its core, coordination is about the integration of organizational work under conditions of task interdependence and uncertainty" (Faraj and Xiao, 2006, p. 1156). This definition highlights the centrality of three key concepts in the organizational coordination literature: integration, interdependencies and uncertainty. One stream of literature (e.g. Lawrence and Lorsch, 1967) focused on how to balance the differentiation of sub-units that naturally occurs as an organization interacts with its environment by

organizationally linking the sub-units together through *integration*. Another stream (e.g. Thompson, 1967) has concerned itself with the different ways in which subdivided organizational activities and tasks are interdependent of each other and how, through the use of various mechanisms, coordinate those *interdependencies*. A third stream (e.g. Galbraith, 1973) has emphasized that organizations coordinate by processing information and that organizations, in situations where high task *uncertainty* requires unsustainable levels of information processing, must find ways to either reduce uncertainty or increase their capacity for information processing.

### 3.2.1 Coordination mechanisms

The primary goal for early organizational theorist such as Taylor (1947), Faoyl (1949) and Weber (Gerth and Mills, 1958) was to discover the one best way to organize based on formalization of structures, formal authority and work activities. At that time, coordination was primarily studied through the applications of standardization, structuration and planning; methods that were thought to be superior to human face-to-face interaction. Soon, however, it became clear that such methods were only viable in environments of relatively low complexity and uncertainty. At that point, most coordination research shifted its attention to the concept of *coordination mechanisms*, or: “the organizational arrangements that allow individuals to realize a collective performance” (Okhuysen and Bechky, 2009, p. 472). Other authors have used terms like integration mechanisms (van de Ven et al., 1976), coordination devices, methods of coordination (Galbraith, 1973), and type of coordination (Thompson, 1967) to denote the same but for the sake of clarity coordination mechanisms shall be the preferred terminology of this thesis.

An early attempt to categorizations coordination mechanisms was made by Mach and Simon (1958) as they noted a distinction between coordination that uses plans or schedules – *coordination by plan* and coordination that requires transmission of new information – *coordination by feedback*. Thompson (1967), similarly, distinguished between coordination by planning, coordination by standardization and coordination by mutual adjustment. These early attempts lacked explanatory power, yet they served as a platform for others authors.

When sociologist Henry Mintzberg created his now famous typology for coordination mechanisms he did so by synthesizing the works of previous authors. Mintzberg's (1979) typology distinguishes mutual adjustment and direct supervision, both mechanisms derived from March and Simon's (1958) coordination by feedback, from standardization of outputs, standardization of work processes, and standardization of skills and knowledge, all derived from a combination of March and Simon's (1958) coordination by plan and Thompson's (1967) coordination by standardization. *Mutual adjustment* is the simplest and most natural coordination mechanisms and achieves coordination through informal face-to face communication between team members. *Direct supervision* is used in organizations that are too big to rely on mutual adjustment and achieve coordination by having a single person issue orders to several others whose work needs coordinating. Even larger organizations tend to rely primarily on standardization for coordination, preferably on *standardization of work processes*, to control behaviour in routine situations, or *standardization of outputs*, if the results of the work can be specified. If neither the process or the output can be sufficiently specified in advance organizations may rely on standardization of skills and knowledge of the individuals through education and training in so that their behaviour in an unspecified situation can still be predicted to a certain extent. Mintzberg (1979) further notes that, paradoxically, organizations that face extreme complexity tend to revert to coordination by mutual adjustment for the mechanism's unparalleled ability to manage complex settings.

### 3.2.2 Formal and informal means of coordination

Up until the 1970s coordination had primarily been thought of as a deliberate element of organizational structure and organizational design. Although theorists had moved away from the notion of the one best way to organize toward so an open-systems view of organizations that needed to find the best way to organize given the contingencies of its surrounding environment, emphasis still remained on coordination as a design decision to be made by corporate managers. However, since the 1980s a growing movement has begun to redefine coordination as an emergent and spontaneous reaction to arising situations. To an

extent this shift coincides with a transition from the study of manufacturing organizations, where formal organizational structure is most important, to the study of a more diverse and often more flexible type of organizations. As such, a need for other theoretical approaches to describe the new type of research objects developed.

Galbraith (1973) was among the first to place an increased emphasis on informal mechanisms of coordination. In addition to traditional planned coordination mechanisms such as the use of rules, plans and programmes and formal hierarchies he also lists the creation of lateral relations. Galbraith argues that it is important to promote connections that cut across formal hierarchical borders in order to improve informal and spontaneous exchange of information, thereby simplifying information processing and improving coordination. A further step towards recognizing informal aspects of coordination was made by Martinez and Jarillo (1989, p. 491). In their literature review of the development of typologies of coordination mechanisms they devote equal attention to *structural and formal mechanisms*, such as departmentalization, centralization/decentralization of decision making, formalization/standardization, planning and output/behaviour control as they do to “other mechanisms, more informal and subtle”. Among the latter Martinez and Jarillo (1989) list lateral relations, informal communication and, perhaps most importantly, the development of an organizational culture through *socialization*. As such, Martinez and Jarillo’s (1989) categorization represents one of the earliest attempts to integrate works on organizational structure and design with works on organizational culture and institutions. More recently, with the aim of integrating organizational coordination with lessons from adjacent field, Okhuysen and Bechky (2009) proposed three integrating conditions which must be met in order to achieve coordination: accountability, predictability and common understanding. *Accountability* refers to clarity as to who is responsible for specific task elements. *Predictability*, concerns the ability of interdependent parties to anticipate activities relating to subsequent tasks by knowing the elements of those tasks and when they occur. *Common understanding* enables coordination by providing a shared perspective on the entire task and how individual sub-tasks fit into the whole. Acknowledging the inter-disciplinary nature of coordination

research and that findings are highly context embedded, Okhuysen and Bechky (2009) attempt to move beyond simply categorizing coordination mechanisms towards an understanding of what coordination mechanisms actually achieve and how they function. In line with this ambition Jacobsson (2011), studying coordination in a Swedish facilities project, suggested that coordination mechanisms should be categorized according to what they aim to establish: steering and control, plans and structure, interaction, routines and culture, and improved conditions for achieving coordination.

## 4 SYNTHESIS

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*In this chapter I will summarize, synthesize and discuss the main findings from Studies 1 and 2 as well as from the theoretical frame of reference.*

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### 4.1 Findings from the theoretical frame of reference

Given that the research presented in this thesis has a twofold aim, one of which is to identify theoretical perspectives suitable for describing tension in the interface between industrialized house-building and local planning authorities, the perspectives presented in the theoretical frame of reference constitute findings in their own right. As such, I will now briefly summarize the most important findings derived from Chapter 3.

The study of organizational coordination has progressed from a focus on formal, planned mechanisms, popularized during a time where mass-production manufacturing organizations were the primary objects of study, to more informal and emergent mechanisms that better describe coordination in the dynamic organizational environments that are have been the primary objects of study since the 1980s and 90s. Jacobsson (2011) suggest that coordination mechanisms can be categorized based on how they achieve coordination: through the establishment of steering and control, plans and structure, interactions, routines and culture, or improved conditions for coordination. However, all coordination mechanisms ultimately aim to fulfil three fundamental *integrating conditions* (Okhuysen and Bechky, 2009): to provide accountability, predictability, and to promote a common understanding.

Industrialized house-building has the ambition to emulate management practices from manufacturing industries. For this reason, the more formal coordination mechanisms develop during the early years of organization theory, particularly Mintzberg's (1979) standardization of work processes and standardization of outputs, describe their approach to coordination quite well. Authors such as Mintzberg, Galbraith and Thompson represent what is known as the contingency-style of organizational theory, the core assumption of which is that there is no one best way to organize. Rather, an organization should be organized

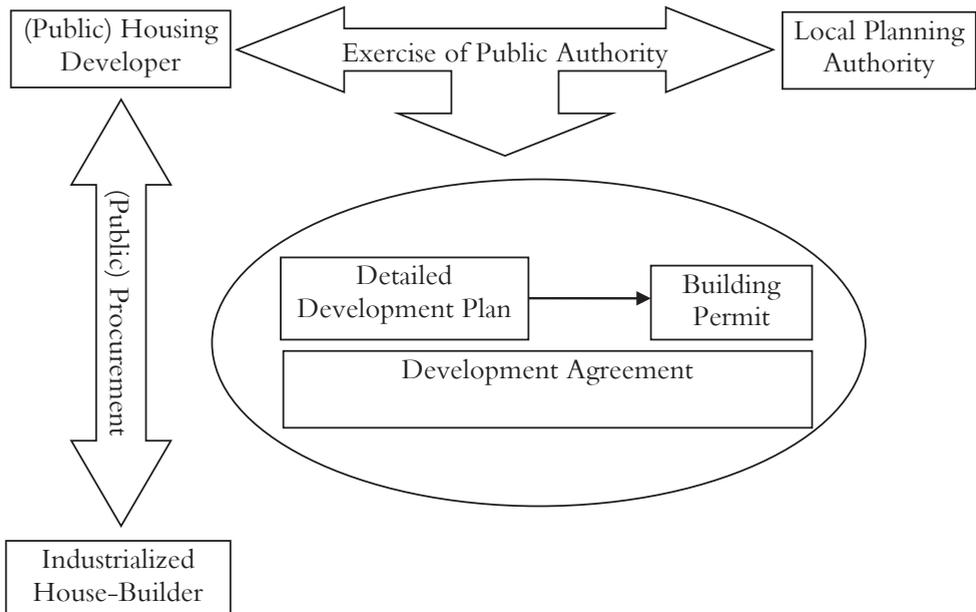
in such a way as to maximize its internal efficiency given the contingencies of its surrounding environment. Institutional theory, similar to contingency-style theory places a strong emphasis on the surrounding environment. However, whereas contingency theory focuses on ensuring survival by maximizing internal efficiency, institutional theory posits that organizations survive by appearing to be *legitimate* (Suchman, 1995). Moreover, Kadefors (1995) has argued that institutions are efficient coordination mechanisms in their own right as they, much like standardization, result in a homogenization of human behaviour. Similarly, Martinez and Jarillo (1989, p. 492) listed socialization, as in “developing an organizational culture” – ultimately resulting in the institutionalization of the organization, as an informal and subtle mechanism for coordination.

As such, it becomes possible to combine the organizational coordination and institutional theory literature to regard *institutional logics* (Friedland and Alford, 1991; Thornton et al., 2012) as coordination mechanisms in the sense that they prescribe appropriate and predictable responses to social situations. Thornton et al.’s (2012) choice to conceptualize institutional logics as cultural knowledge, furthermore, provides a parallel between the professional logic and Mintzberg’s (1979) standardization of skills and knowledge, the primary determinant of both of which is professional education.

The institutional complexity concept (Greenwood et al., 2011) can be used to describe situations where an individual or an organization is simultaneously exposed to multiple institutional logics that prescribe conflicting behaviours or actions. Planning theories have, across time, prescribed a number of different roles for planning practitioners, which in turn dictate expectations for their behaviour and actions. As such, the reality experienced by planning practitioners being exposed to those roles relate to descriptions of institutionally complex environments. Raynard (2016) argues that institutional complexity consists of three components: logic incompatibility, unsettled field-level prioritization and jurisdictional overlap. Based on these three components, Raynard (2016) outlines four analytically distinct constellations of complexity: segregated, restrained, aligned and volatile.

## 4.2 Findings from Study 1

The purpose of Study 1 was to map the terrain of the research topic, at the time framed as “local requirement setting” (see Figure 2), explore the industrialized house-building (Paper I) and local planning authority (Paper II) perspectives on the research topic, and to contrast the two perspective (Paper III).



**Figure 2.** *The empirical context of local requirement setting, as indicated by findings from Paper I.*

An important finding from Study 1 was the complexity of the research context. The finding highlight that *construction developers play a mediating role in the interaction between industrialized house-building and local planning authorities that cannot be overlooked*. Moreover, findings from Paper III indicated that both industrialized house-building contractors and local planning authorities *display difficulties distinguishing their counterparts*. The industrialized house-building contractors casually referred to both local planning authorities and municipally owned public housing developers simply as “the municipality” and mixing discussion of public procurement with discussions of exercise of public authority. The local planning authorities, similarly, rarely distinguished between developers and contractors, favouring instead the less precise term “the builders”.

An important analytical finding from Papers I and II was the *identification of institutional logics as a useful concept for describing local requirement setting*. In particular, findings indicate that *interpretative local requirement setting can be seen as an expression of human agency in response to facing a novel situational context*. As institutional logics are unevenly distributed across a population of planning practitioners that, furthermore, possess varying levels of embeddedness with each logic, confrontation with a novel situational context will result in different responses from different individuals in an unpredictable manner. In particular, findings from Paper II indicate that the three relevant institutional logics, according to Thornton et al.'s (2012) typology, are state, market and professional logic. Additionally, instances were found in which local planning authorities combined elements of different institutional logics, thereby finding ways of responding to the pressures from multiple institutional complexity. Furthermore, *interpretations were again found to be important in ambiguous situations*. For instance, the basis of strategy for the state logic is to increase community good, but depending on your interpretation of community good state logic may either be complementary, contradictory or simultaneously both complementary and contradictory with market logic.

Another important analytical finding was the *identification of organizational coordination as a theoretical perspective for highlighting an underlying tension between industrialized house-building and local planning authorities*. Industrialized house-building was found to prefer more *formal mechanisms of coordination* such as formalization and standardization of outputs and work processes. By contrast, local planning authorities tended to perceive standardization of outputs as a limitation for the applicability of industrialized house-building. The local planning authority respondents, with a few exceptions, tended to favour more *informal mechanisms of coordination* such as dialogue-based informal communication. Interestingly, to the degree that preferences varied, the different interpretations were legitimized either by reference to the Swedish Planning and Building Act (SFS 2010:900) or to prioritizations expressed by local politicians. Among the industrialized house-building contractors, it was found that most expected local planning authorities to provide clear “rules of the

game”, an expression of coordination through the use of hierarchical supervision.

An equally important finding was that, among the local planning authority respondents, opinions differed with regards to who should be responsible for making the necessary interpretations of the Planning and Building Act and the National Building Code in order to regulate the built environment. One group argued that the National Board of Housing, Building and Planning should make the interpretations and communicate them to the local planning practitioners, whereas the other group argued that the interpretations should be performed locally by the planning practitioners themselves. Essentially, this divide concerns perceptions of *planning practitioners’ role in the planning and building process: bureaucratic civil servants tasked with upholding the law or professional members wielding expert knowledge.*

### **4.3 Findings from Study 2**

The purpose of Study 2 was to investigate interactions between developers and local planning authorities within the interface of exercise of public authority. Additionally, the study was designed to follow a single longitudinal process, partly in order to alleviate concerns that the findings from Study 1 relied entirely on indirect observations that did not allow for contrasting industrialized house-building and local planning authority perspectives across the same projects.

The primary finding from Study 2 was the *identification of three ideal type institutional logics of relevance for regulation of the built environment: the professional, state and market logics, each prescribing a different role for planning practitioners.* The professional logic views planning practitioners as technical-economic experts the purpose of which is to exercise discretionary judgement while applying their body of knowledge for the betterment of society, though the prescription of optimal technical-economic solutions. By contrast, the state logic views planning practitioners as mediators that engage in participatory dialogue with a broad range of stakeholders, aiming to achieve consensus and mutual understanding between public and private interests. Finally, the market logic portrays planning practitioners as public managers concerned with

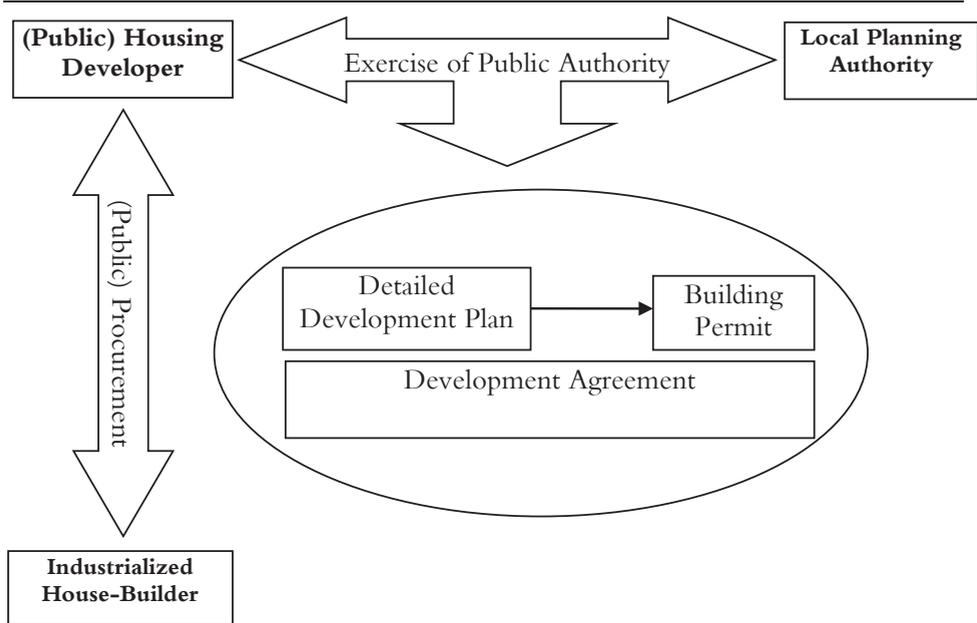
emulating business practices from the private sector seeking to citizens, businesses and tourists in constant competition with other municipalities.

Findings also indicate *variations among the participating planning practitioners with regard to which logic is mobilized*. In general, external consultants tend to emphasize market logics, particularly in cases where marketing and city branding is central to their assignment. Among the internal planning practitioners, a division can be seen between those whose participation is aimed at contributing a particular type of expertise, and therefore identify more closely with the professional logic, and those that approach regulation from a more general standpoint and therefore favour the state logic. Hence, *for the outcome of regulation of the built environment it is important to consider the professional background of the participating planning practitioners* in order to determine their levels of embeddedness in the various logics. Given the diverse educational and experiential backgrounds of the average local planning authority, this finding in particular highlight that *industrialized house-building contractors would benefit from a more nuanced stance towards how they perceive regulation of the built environment*.

#### **4.4 Discussion of findings**

In essence, the design of a multi-family housing product built using industrialized house-building is primarily the result of input from three actors: the developer/client, the industrialized house-building contractor, and the local planning authority of the municipality in whose administrative borders the house is to be erected. The hypothetical relationships between the three actors is symbolized in Figure 3 below. This research project has focused on understanding the interface between industrialized house-building contractors and local planning authorities, but during the course of the project it has become clear that the developer/client is too integral of an actor to be disregarded entirely.

One way to interpret these findings is that industrialized house-building contractors and local planning authorities are unable to coordinate their efforts in the planning and building process directly, but are able do so using the developer/client as a middleman.



**Figure 3.** *The three actors involved in the regulation of the built environment, as indicated by findings from Paper I. Emphasis added.*

As theorized by Okhuysen and Bechky (2009), in order for two entities to be able to coordinate with each other three integration conditions must be fulfilled: accountability, predictability and common understanding.

*Accountability* in this context would refer to clarity regarding who is responsible for contributing what to the design of the final building. In this case the conceptualization presented in Figure 3 is not entirely self-evident. As findings from Study 1 have shown, the industrialized house-building contractors are not consistently able to distinguish local planning authorities from public housing developers under municipal ownership. Similarly, the local planning authority respondents do not consistently distinguish between developers/clients and contractors. As such, neither of the two parties is able to effectively identify one another which in turn means that neither group would agree to the conceptualization in Figure 3. Instead it would seem as if both industrialized house-building contractors and local planning authorities consider the design of buildings to be a result of interactions between two parties: the developer/client and themselves. Consequently, as

neither group acknowledges the contribution of the other, proper accountability is nigh impossible to achieve.

*Predictability* in this context refers to the reliability with which the procedures and outcomes of the two parties can be anticipated and has been a linchpin in the industrialized house-building contractors argument since the outset of the project. To a substantial degree lack of predictability can be explained by the differences between each actor's preferred coordination mechanism. As identified in Study 1 the primary coordination mechanisms for industrialized house-building contractors are formal and planned so as to result in high levels of internal predictability. By comparison, local planning authorities appear to favour more informal mechanisms of coordination in the form of cultural institutions. However, as indicated by findings from Papers II and IV, the situation that local planning authorities face is institutionally complex with different logics/knowledge activating at different times. So, although the cultural knowledge itself is standardized, predicting which knowledge takes precedence at which time becomes difficult, which further lowers the predictability of local planning authority contributions.

*Common understanding* in this context refers to the extent to which the industrialized house-building contractors and local planning authorities embrace a shared perspective on their own contributions to the planning and building process, the contributions of each other and how they fit together into a whole. Findings from Study 1 indicate that industrialized house-building contractors expect local planning authorities to construct a framework that complies with the formal regulatory framework of laws and regulation, but beyond that do nothing. In contrast, findings from Study 2 indicate that local planning authorities serve multiple roles in the regulation of the built environment, one of which is to facilitate private development. However, other logics simultaneously dictate planning practitioners to maximize the quality of the resulting built environment and to mediate between public and private interests in a consensus-seeking manner. The complexity created by these three different logics makes it difficult to ascribe local planning authorities a single role in the regulation of the built environment and, given that they themselves

seem to struggle to realize that, it is perhaps not so strange that industrialized house-building contractors do as well. Similarly, as reported in Study 1 the local planning authorities appear to hold a fairly narrow view of industrialized house-building and standardization in construction in general, focusing much more on the standardization of outputs than on the standardization of work processes. This indicates that both parties are responsible for the lack of common understanding.

As such, it seems that industrialized house-builders and local planning authorities fail to coordinate their contributions in the planning and building process because their efforts lack accountability, display different levels of predictability and they have no common understanding of the process.

Raynard's (2016) three components of complexity: logic incompatibility, unsettled field-level prioritization, and jurisdictional overlap are useful for distinguishing between different constellations of complexity. In this case it can be seen that logics relevant to regulation of the built environment are not completely incompatible as indicated by findings from Paper II that some local planning authorities combine elements of both the professional and state logics when arguing for the use of project specific detailed development plans. Similarly, Sager (2009) notes that communicative planning (influenced by state logic) and new public management planning (influenced by market logic) share a focus on users' needs, but for two very different reasons. However, the field level prioritization does not seem to be settled. Findings from both Study 1 and Study 2 indicate that local politicians play an important role in prioritizing between different ideals and logics in the regulation of the built environment and since their appointment is the result of local democratic elections differences between municipalities are to be expected. Additionally, there appears to exist a jurisdictional overlap between professional, state and market logics in the regulation of the built environment. As findings from Study 2 indicate, each logic prescribes a different role for planning practitioners specifically, thereby claiming jurisdiction over a common domain. As such, the institutional complexity experienced by local planning authorities in the regulation of the built environment seems to be what Raynard (2016) describes as *aligned complexity*.



## 5 CONCLUSIONS AND IMPLICATIONS

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*In this chapter I will present my conclusions, highlight some implications of those conclusions for practitioners as well as for research, discuss their limitations, and present suggestions for future research.*

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The aim of this thesis has been twofold: 1) to increase understanding of how local planning authorities make interpretations when regulating the built environment and how those interpretations influence industrialized house-building contractors, and 2) to, within the ongoing research process, identify theoretical perspectives suitable for describing tensions in the interface between industrialized house-building and local planning authorities.

Interpretations made by local planning authorities in the regulation of the built environment can be described as resulting from human agency when faced with a novel situational context. The institutional environments for local planning authorities are complex, with multiple semi-compatible institutional logics available. Three ideal type institutional logics relevant to the regulation of the built environment have been identified: professional, state and market logic. Each of these logics prescribes a different role and, by extension, different expectations for behaviour and action for planning practitioners.

The *professional logic* views planning practitioners as technical-economic experts the purpose of which is to exercise discretionary judgement while applying their body of knowledge for the betterment of society, though the prescription of optimal technical-economic solutions.

By contrast, the *state logic* views planning practitioners as mediators that engage in participatory dialogue with a broad range of stakeholders, aiming to achieve consensus and mutual understanding between public and private interests.

Finally, the *market logic* portrays planning practitioners as public managers concerned with emulating business practices from the private sector seeking to attract citizens, businesses and tourists in constant competition with other municipalities.

Furthermore, institutional logics are *unevenly distributed* across the population of planning practitioners and the practitioners also display different levels of embeddedness within the different logics. For this reason, which institutional logics are activated when a local planning authority is faced with industrialized house-building is difficult to predict, as is the elicited response. Moreover, findings suggest that the three relevant logics can, to a certain extent, be combined for various purposes, resulting in a type of institutional complexity known as aligned complexity.

The theoretical perspectives of *institutional complexity and organizational coordination through the use of coordination mechanisms* have been identified to be *suitable for describing the interface between industrialized house-building and local planning authorities*. Industrialized house-building contractors have been found to favour formal planned mechanisms for coordination such as standardization of work processes and of outputs, whereas local planning authorities have been found to prefer more informal and emergent mechanisms of coordination such as direct informal coordination. Moreover, it has been argued that institutions and *institutional logics, conceptualized as cultural knowledge, can be seen as mechanisms for coordination in their own right, thereby combining the two streams of literature on institutional logics and organizational coordination*. The underlying tension between the different types of coordination mechanisms preferred by industrialized house-building contractors and local planning authorities results in them being unable to fulfil the three integrating conditions of accountability, predictability, and common understanding, consequently leading to an inability to coordinate their contributions in the planning and building process.

### **5.1 Implications for practitioners**

These conclusions imply that industrialized house-building contractors and local planning authorities need to find ways to address the integrating conditions if they want to better coordinate their contributions in the planning and building process, starting with acknowledging each other's participation in and contributions to the process. The notion that local planning authorities are supposed to have no say in the regulation of the built environment beyond the bare minimum of regulation stipulated by the Planning and Building Act

(SFS 2010:900) is not realistic given the Swedish governmental system with its strong emphasis on local power. Similarly, equating industrialized house-building with producers of fully standardized housing units or even the Million Homes Programme disregards the development the industrialization movement has undergone during the last two decades. In particular, *making efforts to understanding the coordination mechanisms that each type of organization employs* so that others may account for them when working together is perhaps the most important contribution this thesis can make to construction and planning practitioners.

Another important implication that naturally follows the description of how local planning authorities make interpretations when regulating the built environment is *that* local planning authorities make interpretations. In the public debate relating to construction it is often assumed that legislative changes to the Planning and Building Act or the National Building Code are sufficient to induce sector-wide changes. One example of this is the so called “Building regulation investigation” (SOU 2012:86) which constituted one of the early points of reference for this research project. Another is the currently ongoing mission of the Swedish National board of Housing, Building and Planning to suggest legislative changes aimed at unifying control of series manufactured houses. Arguably, in both these cases, *legislative changes are being used to circumvent problems relating to the application of the existing framework* rather than to the framework itself. There is little reason to believe that a new framework would somehow eliminate the need for interpretations entirely. As such, a major contribution from this thesis to the entire construction sector, including regulatory agencies and legislators, is that there will always be a need to interpret and apply the legal framework and some issues are perhaps better managed by addressing *how the current applications* of the frameworks can be improved rather than how the frameworks themselves can be changed.

## **5.2 Implications for research**

An important parallel to industrialized house-building and industrialization in general is the research currently being undertaken on the topic of digitalization. The two research themes share the

characteristic of depending on standardization to achieve coordination or integration. However, just as construction practitioners would do well to consider that not every regulation related problem is best solved through legislative action, construction researchers would do well to remember that not all integration related problems can be immediately solved by the invention of technical solutions. Just as legal frameworks need to be interpreted and applied, technical innovations such as BIM and open data too need to be implemented and utilized correctly in order to achieve the desired coordinating effects.

Neither organizational coordination, nor institutional logics are particularly well-established theoretical perspectives in the field of construction management research in general or in the study of industrialized house-building in particular. As such, the identification of these theoretical perspectives is in itself a contribution to construction management research. Furthermore, the ability to combine organizational coordination with institutional logics by viewing institutional logics as mechanisms for coordination offers the potential to utilize institutional theory when considering a wider range of construction management related research topics.

In addition to strengthening the importance of institutional factors in construction related research, the identification of institutional logics as important for describing the local planning authority environment also points to the importance of drawing further upon the field of public administration to address topics that include regulating agencies. Not only is institutional theory one of the most prevalent theoretical perspectives in public administration, but the topics of interest are such that they may very well provide additional insight when describing interactions between construction actors and regulating agencies, yet from a slightly different point of interest. Similar things can be said for the field of planning theory and practice. However, this thesis can offer an important contribution to the field of planning theory and practice as well. The three institutional logics identified, summarizes much of the discussion of tensions between different roles for planning practitioners conducted during the last two decades. As such, the reframing of these tensions as institutional complexity offers a new way for researchers interested in planning theory and practice to engage

with the topic in a meaningful way. It also helps strengthen the growing interest in institutional theory displayed by this field by highlighting a key issue in institutional terms.

### **5.3 Limitations and avenues for future research**

Although the findings of this thesis can be understood on the basis of established theories of organizational coordination and institutional logics, an important limitation for this research relates to the general transferability of the findings and conclusions to other empirical contexts. The methodological approach has focused on furthering the understanding of interactions between industrialized house-building and local planning authorities rather than on identifying causal relationships and formulating generalized rules, and the conclusions should be understood and treated as such. In order to completely understand the interaction between industrialized house-building and local planning authorities there are a number of issues that need to be addressed further.

Early in the research process it was identified that interactions between public housing developers and industrialized house-building contractors through the interface of public procurement was an integral portion of what was described as local requirement setting. Although it was decided that the topic of public procurement would not be pursued further it regularly has resurfaced in later interviews with industrialized house-building contractors, signalling that the issues identified in Paper I are still relevant and worthy of further investigation. However, as procurement does not lie within the expertise of the author, this topic is gladly gifted to other construction management researcher better suited to the task.

Another important limitation is that the mediating role of local politicians in determining prioritizations between logics has only been addressed in passing. With a local democratic system like that of Sweden the local political majority does not necessarily reflect the majority at the national levels. As such, the local prioritizations are expected to vary, presumable with the affiliations of the local politicians and the political prioritizations expressed by those affiliations. This theme still needs to be addressed to fully understand

the inner workings of local planning authorities with regards to regulation of the built environment.

As stated in the aims and scope (section 1.4) of this thesis, the empirical investigations performed have been limited to Swedish local planning authorities and Swedish industrialized house-building contractors. However, given the fundamental similarities between Sweden and the other Nordic countries in terms of governmental systems, similarities in how planning practitioners approach the regulation of the built environment may exist between countries. As the Nordic construction market is significantly bigger than the native Swedish it would be more impactful to speak of a common Nordic, rather than a native Swedish, phenomenon. In order to establish the transferability of the findings cross-national investigations would have to be performed. Similarly, besides industrialized house-building, the conceptualization of contractors reliant on coordination by standardization of outputs and standardization of work processes applies to a number of other approaches to construction, including offsite and lean construction. For this reason, another viable avenue for future research would be to investigate whether contractors that embrace other standardization reliant approaches are in the same way affected by the interpretations of local planning authorities in the regulation of the built environment.

Another interesting avenue for future research would be to continue to address industrialized house-building from an organizational perspective. With the exception of Unger (2006) and Gerth (2008; 2013) very little attention has been directed at describing the organizational arrangements of industrialized house-building contractors. For the purposes of this thesis industrialized the standardization reliance of industrialized house-building contractors was emphasized due to its underlying tension with the preferred coordination mechanisms of local planning authorities. However, as argued by Mintzberg (1979), any organization is likely to apply multiple if not all coordination mechanisms simultaneously, although to different extents. As such, it would be wrong to equate industrialized house-building to mass production on the account of their reliance on standardization. The findings of this thesis make for a good starting point for a more nuanced organizational analysis of

industrialized house-building contractors that would potentially be very beneficial to the emerging field of industrialized house-building (c.f. Lessing et al., 2015).

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## 6 PERSONAL REFLECTIONS

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*In this chapter I will present my personal reflections on the research in general and on the research process in its entirety.*

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The research presented in this thesis breaks with tradition and status quo in a number of ways. It integrates two previously separate research perspective and, in doing so, mobilizes lesser known theoretical perspectives through a non-dominant methodological approach. Against this background, it is perhaps not so surprising that this type of research will periodically experience challenges that more conventional research does not.

One such example is research publication. The importance of maximizing disseminating of research findings through scientific publication is more important today than ever before. However, finding a reasonably reputable journal with aims and scopes that fit the research topic, context and theoretical and methodological approaches is not always easy. A major challenge for this project has been to identify journals that can accommodate both its contextual, theoretical and methodological characteristics. The list of high-quality management-oriented construction journals is in itself fairly short, and made even shorter when factoring in the specifics of the research context. Due to the significant differences between the ways in which regulation of the built environment functions in different national contexts it is unlikely that an American or international readership would find interest in or be able to relate to the specifics of the Swedish planning context. Additionally, in order to maximize dissemination of your research findings it is preferable to publish in an array of different journals rather than concentrating on a few select. In short, there is a lack of communication channels that are suitable for research that cuts across established lines. I would imagine that this leads to the promotion of well-entrenched research traditions at the expense of more innovative ones. One can only wonder whether the similar trends can be observed with regards to research funding.

Another personal reflection regards the role and use of theory applied in research. One possible, and to some extent valid, criticism against the research presented in this thesis is its rather relaxed stance towards differentiating intra-organizational from inter-organizational coordination. Within the context of construction making such a distinction is, due to its project-based nature, not entirely simple. Furthermore, the use of organizational coordination concepts in construction management research has historically lacked stringency. This can be seen by looking at the various applications of Thompson's (1967) interdependencies, a concept originally developed to describe intra-organizational coordination in manufacturing organizations. Yet, interdependencies have primarily been used to study topics that are either clearly inter-organizational or difficult to distinguish. What is more, the terms coordination and integration, despite their relatively frequent use in construction management research, are rarely accompanied by any form of theoretical underpinning be it through references or efforts of theory-building. I would welcome a more active debate about the theoretical underpinnings of organizational concepts and their applicability to construction management research and can only hope that the research presented in this thesis can, in some small way, contribute to spark such a discussion.

An additional reflection on the role of theory is how quickly the interests of a stream of literature can change. When I first began investigating the potential value of using institutional theory to describe the actions of local planning authorities Thornton et al.'s (2012) institutional logics perspective had only just been released. Prior to that so much of the institutional theory literature had been discussing the structure-agency duality, tracing its origins to a tension between old and neo-institutional priorities. Even within institutional logics research, the structure perspective seemed to dominate. As such, I concluded that relating structure to agency, as I did in Paper I, would be central to applying institutional logics. However, with the publication of the institutional logics perspective the structure-agency debate seems to have vanished nearly entirely and the focus of institutional logics research, particularly through institutional complexity, as shifted heavily towards the role of agency.

A final reflection concerns the historic context of the research topic. Study 2 was intentionally designed to study interaction between developers and local planning authorities in a single project. A consequence of this choice was that I had no control over which developers and, by extension, contractors would be engaged in the process. Ultimately, the study still had to contribute to the overall research objectives of explore the interface between industrialized house-building and local planning authorities. As such, I was hoping that a number of the selected proposals would utilize industrialized house-building. However, despite a fair number of such proposals, no industrialized house-building project was selected for stage 2 of the development process and I must ask myself why. One of the developer respondents, a lead architect, reflected on the importance of not allowing contractors to influence the design too early in the process as that would lead to an overly economic focus that would not benefit the project in the long run. To me the connection between economic rationality and contractors in general and industrialized house-building contractors in particular signals that there may be an unintentional, or possibly even intentional, bias against highly rational approaches to construction. Likely such a bias stems from experiences with the Swedish Million Homes Programme (Hall and Vidén, 2005), a large scale political housing programme conducted during the 1960s and 70s primarily using industrialized and standardized construction approaches that is currently experiencing significant problems both from a building technology and from an urban planning perspective. Such biases, caused by the historical context are difficult to account for in research, particularly when they have partially been ingrained in some individual planning practitioners through education and schooling.



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## Exploring industrialized house-builders' interpretations of local requirement setting using institutional logics

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# Exploring industrialized housebuilders' interpretations of local requirements using institutional logics

ANDERS VIKING\* and SOFIA LIDELÖW

*Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, 971 87 Luleå, Sweden*

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Industrialized housebuilding contractors use standardized processes and building systems to improve time and cost efficiency. Recent governmental investigations argue that Swedish local planning authorities' requirement setting practices stifle the potential for increased industrialization. Yet, no previous research has accounted for the industrialized housebuilders' perspective. We aim to explore industrialized housebuilders' interpretations of local requirement setting, using institutional logics to increase the understanding of how structure and human agency influence the emergence of local requirements. Interviews were conducted with representatives of five industrialized housebuilders who together span the Swedish multi-family housing market. Findings indicate that industrialized housebuilders do not perceive intentional local requirement setting as problematic, yet struggle to cope with interpretive local requirement setting. Findings also necessitate distinguishing local requirement setting in the exercise of public authority from local requirement setting in public procurement. The agency structure dualism contributes an understanding of interpretive local requirement setting in the exercise of public authority as an expression of agency and of local requirement setting in public procurement as one of structure. Furthermore, using an institutional logics approach is found to provide an accentuation of human agency and the individual level of analysis that is often absent from construction management research.

*Keywords:* Agency, industrialized building, institutional theory, local planning, structure.

## Introduction

Swedish governmental investigations (Statskontoret, 2009; Bygghälsöversynen, 2012) and national research agendas (Stehn *et al.*, 2013) alike regard increased industrialization in construction as a way to meet clients' demands for lower and more predictable production costs, shorter time frames, and higher product quality. Swedish local planning authorities (LPAs) in and amongst themselves set highly varying requirements for local construction projects, henceforth this is referred to as local requirement setting (LRS). LPAs act either in the capacity of exercisers of public authority or in that of technical experts, helping public housing developers to prepare tendering documents for a public procurement process. LRS has been interpreted as detrimental to housing construction in general (Bygghälsöversynen, 2012) and to contractors using industrialized approaches in particular (Stehn *et al.*, 2013). Government reactions to LRS have been to

implement legislative changes to render all intentional instances of LRS in the exercise of public authority void (Prop. 2013/14:126). By adopting this strategy the government assumes that local requirements are not subject to influences or interpretations of individual planning officers, but are the products of completely rational decisions made by the LPA organizations and their individual members.

The starting point of the research reported here is that such assumptions of rationality are inherently false; that local requirements are in fact the results of intricate cognitive and intra-organizational processes within the LPA organization that must be understood before attempting to invoke change. The perceived problems with LRS exist in the intersection between IHB and LPA organizations and their individual members. As such exploration of both these perspectives is imperative to the understanding of LRS. In this paper we will explore the IHB perspective, using institutional logics, to contribute to the understanding of LRS. As such

\*Author for correspondence. E-mail: [anders.viking@ltu.se](mailto:anders.viking@ltu.se)

we respond to the call of Phua (2013) for construction management research that integrates the individual and organizational levels of analysis.

Findings indicate that intentional instances of LRS do not pose as big an issue to IHBs as LRS resulting from interpretations do. Interpretive forms of LRS are perceived to be heavily influenced by the human agency of individual organizational members and their position within the organization. Yet, LRS in public procurement is perceived to be much more dependent on structure, such as organizational routines and practices.

### Research setting

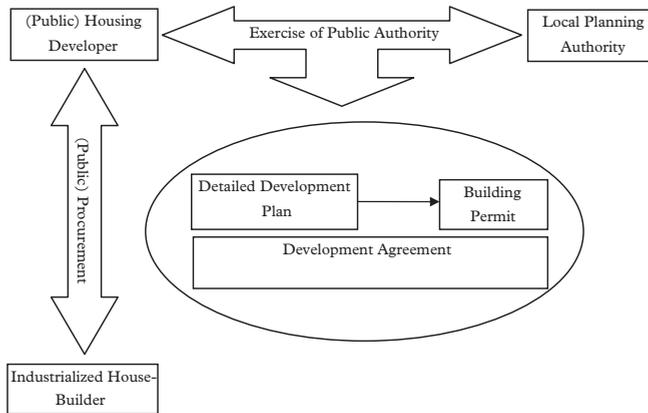
The Swedish movement towards increased industrialization in housing construction is spearheaded by industrialized housebuilders (IHBs). IHBs are housing contractors who use standardization and repetition of processes, building parts, and methods to create products which, as opposed to traditional housing construction projects, are concurrently based on the specifications of the client and the limitation of the predefined building system (Engström and Stehn, 2014). Each IHB's chosen engineering and production strategies dictate the level of predefinition of its building system and the reduction of its design flexibility (Johnsson, 2013). Design flexibility entails two interrelated dimensions: compliance with varying client/customer demand and adaptability of the building system. Requirements that influence the adaptability and that are not configurable to the building system are difficult for IHBs to accommodate because they interfere with the engineering and production methods. Requirements that are configurable can more easily be adjusted for a specific project or even through product development. To counteract their reduced design flexibility IHBs are forced to enter the design phase (Brege *et al.*, 2014), and by extension also the local planning process, early. Even so, IHBs are still dependent on external project conditions, e.g. requirements from clients or regulatory agencies, being transparent, predictable, and adaptable in order to realize the benefits from the use of their building systems.

Although external project conditions affecting IHBs are explored in the construction management literature, i.e. as client barriers to adopting technical innovation (Hedgren and Stehn, 2014), little research attention has been directed towards external conditions stemming from governmental agencies. A notable exception is Pan *et al.*'s (2007) survey study of UK housebuilders, which reveals that many potential benefits of offsite modern methods of construction were not realized due to the slow processes of changing building regulations and obtaining planning permission, and

highlights the need for a more flexible and market responsive planning system. While significant, Pan *et al.*'s (2007) results are not readily transferrable to the Swedish context because in Sweden, as opposed to in the UK, all formal planning is performed by the LPA rather than by the client. As a consequence Swedish construction clients and contractors have a limited understanding of planning matters, which all the more emphasizes the importance of exploring LRS from the perspectives of both IHBs and LPAs in order to understand the complexities of the phenomenon.

When the client is a private housing developer local requirements emerge from the exercise of public authority, but when the client is a local public housing developer IHBs instead face local requirements in the public procurement process (see Figure 1). In their role as exercisers of public authority Swedish LPAs have a very far-reaching mandate to set requirements for local construction projects which is central to Swedish construction law. Requirements can be set as regulations in a legally binding detailed development plan (*detaljplan*), or in a building permit (*bygglov*), or a development agreement (*exploaterings-/markanvisningsavtal*) or be attached to any of the above in the form of a local design programme (*gestaltningssprogram*). Recent societal changes have also increased the need for municipal profiling resulting in LPAs exercising their mandate more frequently. LPAs acting in the capacity of technical experts have even greater opportunities to set requirements. Local public housing developers rarely have detailed knowledge of construction and therefore trust the LPA's judgement implicitly. The Public Procurement Act quite explicitly dictates the process to be undertaken when a public organization makes procurements which over time has led to the establishment of unspoken norms regarding how public procurement is conducted. Bygghälsöretningen (2012) concluded that the setting of requirements intentionally specifying a higher standard than that prescribed in the national building code has led to a situation with highly varying requirements between and sometimes within the 290 different Swedish municipalities.

There is a wide need for more exploratory research of Swedish municipal decision-making processes, organization, and communication with clients and contractor (Kalbro *et al.*, 2013). Despite this there is also an agreement by the Swedish government and industry that the practice of LRS disregards IHBs' needs for transparency and predictability, thereby stifling the potential for increased industrialization (Bygghälsöretningen, 2012). The governmental response has been to implement legislative changes that, while not altering the formal planning process itself, dictate that detailed development plans, building permits, development agreements and attached local design programmes



**Figure 1** Research setting including the two intersections between LPAs and IHBs: exercise of public authority and public procurement

may not contain local requirements. By implementing these legislative changes the government assumes that these types of local requirements are rendered void and that the perceived problem of LRS will therefore vanish. An underlying assumption for this line of thinking is that local requirements are brought about in a completely rational manner, stemming from intentional initiatives taken by the LPA organization and its individual members.

The point of departure for this paper is to question this assumption of rationality. To do this we adopt the theoretical lens of institutional logics (Friedland and Alford, 1991; Thornton *et al.*, 2012), subsequently employing two key theoretical constructs: human agency as in ‘the capacity of the individual to make a difference to a pre-existing state of affairs or course of events’ (Giddens, 1984, p. 14) and structure as in, ‘rules and resources recursively implicated in social reproduction’ (Giddens, 1984, p. xxxi). The resulting theoretical framework:

- (1) takes a holistic approach, focusing on the interplay between organizations and individuals; and
- (2) recognizes the cultural dimensions of organizational life, integrating the role of structure in shaping human agency and the role of human agency in shaping structure (cf. Giddens, 1984).

The institutional logics approach has been used extensively in sociology and social psychology, but is very rarely touched upon by construction management researchers. The study by Buser and Koch (2012) is a notable exception and while their intentions are similar to ours, they elect to use institutional theory combined

with actor-network theory to conceptualize the agency–structure dualism. Meanwhile, the institutional logics perspective (Thornton *et al.*, 2012) can also be used not only to conceptualize dominant organizational routines and practices on the part of an LPA as structure, but also to conceptualize events where a lack of routines and practices accounts for unpredictable responses from individual planning officers as agency.

IHBs require transparent, predictable and adaptable external project conditions in order to fully benefit from their building systems. However, due to LPAs’ LRS practices the external project conditions are not transparent, predictable and adaptable. Up until now LRS has only been discussed in terms of the requirements themselves, which in our view is not adequate. Instead we argue that LRS should be viewed from a process perspective, which accounts for the interaction between individual planning officers and the LPA organization itself. In light of this discussion we present the following aim:

The aim is to explore IHBs’ interpretations of LRS using institutional logics, in order to increase the understanding of how agency and structure influence the emergence of local requirements.

### **Institutional logics: agency and structure**

Institutional theory advocates non-rational, cultural socially constructed explanations of societal order and change. Friedland and Alford (1991, p. 243) define institutions as follows:

Institutions are supra-organizational patterns of activity by which individuals and organizations produce and reproduce their material subsistence and organize time and space. They are also symbolic systems, ways of ordering reality, thereby rendering experience of time and space meaningful.

Scott (2008) conceptualized institutions as consisting of regulative, normative, and cultural cognitive aspects. Early contributions by neo-institutional scholars such as institutional rules (Meyer and Rowan, 1977; Zucker, 1977) and DiMaggio and Powell's (1983) concept of isomorphism assume structural determinism. Even Jackall's (1988) concept of corporate institutional logics, a precursor to the modern-day institutional logics, significantly stresses the regulative and normative aspects of institutional structure as the major contributing factor to societal order and change, but de-emphasizes the importance of the cultural cognitive aspects. Friedland and Alford's (1991) seminal work on institutional logics broke with neo-institutional tradition in two distinctive ways: first, it reintroduced agency into the institutional debate, and secondly, it embraces the cultural cognitive aspects of institutions viewing them as simultaneously both material and symbolic. By integrating the regulative and culturally cognitive approach of Friedland and Alford (1991) with the regulative and normative approach of Jackall (1988) Thornton and Ocasio (1999, p. 804) define institutional logics as:

the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality.

Thornton *et al.*'s (2012) approach to institutional logics, 'the institutional logics perspective', includes a meta-theoretical framework for analysing the interrelationships between Friedland and Alford's (1991, pp. 240–1) three distinct levels of analysis: 'individuals competing and negotiating, organizations in conflict and coordination, and institutions in contradiction and interdependency'. Institutional logics scholars currently recognize an inter-institutional system comprised of seven loosely coupled institutional orders: family, community, religion, state, market, profession, and corporation (Thornton *et al.*, 2012).

Thornton *et al.* (2012), drawing on Giddens (1984), view agency as simultaneously enabled and constrained by structure: enabled through contradictions between different institutional logics, and constrained by the establishment of core principles for organizational activities and channelling of interests.

This approach is known as embedded agency. Some scholars, e.g. Holm (1995) and Seo and Creed (2002), have viewed embedded agency as a paradox: how can individual social actors change institutions if their actions, intentions, and rationality are all conditioned by the very institution they wish to change? As Friedland and Alford (1991) failed to provide an explicit theory for embedded agency, institutional logics has motivated significant research on institutional field-level logics while echoing the need for a conceptualization of agency. These calls were recently answered by Thornton *et al.*'s (2012) synthetic framework for the micro-foundations of institutional logics, drawing on concepts from social and behavioural psychology.

### Social identities, goals and schemas in interaction

Thornton *et al.* (2012) adapt the concept of dynamic constructivism (Hong *et al.*, 2000; Hong and Mallorie, 2004), interpreting institutional logics as learned knowledge structures that, as a result of differences in social interaction and socialization, are unevenly distributed across a population. This view naturally assumes a bounded rationality and thus rejects the assumption of rationality argued e.g. by rational choice theorists. Dynamic constructivism uses three central constructs: availability, accessibility, and activation. Availability refers to an actor's familiarity with a type of knowledge, in this context a particular institutional logic. Opportunities for agency exist when at least two contradictory logics are available to an individual social actor, but all available logics are not equally accessible. Accessibility is determined by previous experiences, associating the situational context (Ross and Nisbett, 1991) with certain institutional logics (temporary accessibility) and by structural elements, such as organizational routines and practices, which direct the actor's focus of attention (Simon, 1947) towards certain logics (chronic accessibility). In routine situations individual social actors are likely to activate chronically accessible logics. In novel situations temporary accessibility determines which logic is activated. If no highly accessible logic is deemed to be applicable to the situation agency is achieved as other available but less accessible logics may be activated instead.

Culturally embedded (Zukin and DiMaggio, 1990) in each institutional logic is a number of social identities (March and Olsen, 1989) and goals (Simon, 1955), which can be either contradictory to or interdependent on those embedded in other logics (Thornton *et al.*, 2012). Also embedded in institutional logics are

schemas, top-down knowledge structures that guide expected behaviours and are used by individual social actors for resolving ambiguities and drawing inferences. When the schemas embedded in the most accessible logic are incongruent with the situational context, e.g. under novel conditions, the actor may attempt to resolve the incongruences by activating a combination of social identities, goals and schemas from a less accessible logic or from multiple logics simultaneously.

Drawing on Mead's (1934) concept of symbolic interactionism Thornton *et al.* (2012) posit that a group of social actors use the distinct symbolic languages of the institutional logics they activate to ritualistically interact with one another and generate a shared focus of attention. In these interactions schemas provide frames, different interpretations of the social reality. As individual social actors are embedded within different logics they may activate social identities, goals, and schemas which contradict those activated by others. Such contradictions serve as barriers to cooperation and generate conflict and power struggles in social interactions (Thornton *et al.*, 2012). Every social interaction is also a negotiation (Strauss, 1978) and internal power structures influence the outcome of these negotiations, thus partly determining which of the competing goals and frames will dominate the group's shared focus of attention.

### Methodology and research methods

The aim of the research was to gain a wider understanding of the role agency and structure play in the emergence of local requirements through exploring IHBs' subjective perceptions of LRS. The underpinning philosophical position is interpretivist, as it focuses on the perceived experiences of representatives of IHBs of their interaction with LPA organizations and their individual members. This position implies that the perceptions of an organization reflect those of its individual members, and by extension that by exploring the interpretations of its individuals conclusions may be drawn about the interpretations of the entire organization. Organizations are understood as cultures (cf. Mead, 1934; Durkheim, 1966), socially constructed realities based on the cognition of and communication between its individual members. Individual members are understood as socially and culturally embedded (Zukin and DiMaggio, 1990), in that they are simultaneously enabled and constrained by organizational elements from which they cannot be disentangled, and situated (Ross and Nisbett, 1991) actors. The intentions of social actors are regarded as guided by social identification (March and Olsen, 1989), individual interests and goals (Simon, 1955) and as bounded by the cognitive

limits on attention (Simon, 1947) and by cognitive heuristics (Kahneman *et al.*, 1982). By taking this position we reject both the assumption of structural determinism and that of rationality.

Within this context exploratory interviews were used as the primary data source. Exploratory interviews are particularly suitable when the researcher does not know enough about the phenomenon to formulate the relevant question. The choice of method was thus consistent with the research aim. Following this approach we began the study with a single interview, adding one interview at a time until each new interview offered few new insights. At this point we judged that conducting further interviews would be less fruitful than transitioning our data collection into another study. The end result was a total of six interviews, each lasting between 60 and 90 minutes, conducted during August 2013 and January 2014 with nine representatives from five different IHBs. The chosen IHBs encompass a mix of building systems and target a mix of market segments which span a large portion of the multi-family housing construction market. Single-family housing contractors were not included since the development towards increased industrialization within the Swedish construction industry in recent times has been driven mostly by actors on the multi-family market (Brege *et al.*, 2014). The chosen IHBs also differentiate themselves by the degree to which they work with private or public clients, thus providing experience of meeting LPAs both in the role of exercisers of public authority and in the role of technical experts preparing tendering documents for a public procurement process. From each IHB respondents were chosen in such a way as to maximize their collective experience with LRS (see Table 1).

Endeavours were made to perform all interviews in situ, as indirect interview techniques deprive the researcher of seeing the respondents' informal, non-verbal communication. As the interview approach was iterative, not all of the respondents were asked exactly the same questions; however, from all the interviews emerged the following five recurring question themes:

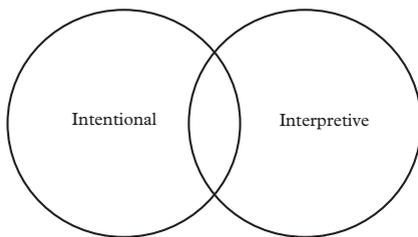
- (1) How do they perceive LRS?
- (2) How does LRS affect their engineering and production processes?
- (3) How do they attempt to counteract LRS?
- (4) How do they interpret the actions of LPAs in relation to LRS?
- (5) Why do they believe that the LPAs act in such a way?

Interviews were recorded and subsequently transcribed. Together with a review of recent governmental investigations of the legislative framework for housing

**Table 1** Overview of the respondents R1–R9

<i>Respondent: Years of IHB experience</i>	<i>Degree of standardization and pre-assembly (Gibb, 2001)</i>	<i>Main IHB/LPA intersection</i>
R1: 8 (CEO)	Modular building	Public procurement
R2: 7 (Marketing manager)	Modular building	Public procurement
R3: 20 (Marketing manager)	Modular building	Both
R4: 10 (Marketing manager)	Modular building	Exercise of public authority
R5: 4 (Architect)	Component and sub-assembly	Both
R6: 4 (Concept manager)	Component and sub-assembly	Both
R7: 4 (Marketing manager)	Component and sub-assembly	Both
R8: 7 (Marketing manager)	Non-volumetric pre-assembly	Exercise of public authority
R9: 7 (Development manager)	Non-volumetric pre-assembly	Exercise of public authority

construction and lead times in the planning and building process (Figure 1) the data from question areas (1) and (2) were used to develop a contextual description (see ‘Research setting’). They also formed the basis for a categorical model (Figure 2) of LRS. The data from question areas (3), (4), and (5) was analysed using a two-step coding process: first relatively unprejudiced using procedures for inductive coding recommended by Miles and Huberman (1994), and secondly through the application of the theoretical lens and translation of codes expressed in terms of constructs inherent in the theoretical framework. We performed this coding manually, electing to not use coding software such as NVivo as we felt that doing so would risk compromising the depth and richness of the original data. We further acknowledge the risk that the subjective values of the researcher bias the results during this process and have strived to eliminate such biases by allowing both authors to perform the same analysis independently before comparing and discussing analyses, consulting the interview transcripts in cases where we had made different interpretations. After being analysed the empirical material from question areas (3)–(5) was used to describe and exemplify: occurrences of intentional and interpretive LRS, the IHB representatives’ perceptions of LRS, and how LRS relates to the theoretical framework.



**Figure 2** Proposed model for categorization of local requirement setting

**Findings and discussions**

Traditionally LRS is defined as the action to set requirements that intentionally specify a higher standard than that which is prescribed by the national building code (Bygghkravsutredningen, 2012). This view of LRS as primarily intentional is often featured in politics and public debate. Yet, all respondents agree that this definition is not sufficient to encapsulate LRS fully. In addition the findings identify that there are also interpretive forms of LRS. Yet, the line between what constitutes intentional LRS and interpretive LRS does not appear to be very clear and some respondents even hint that some local requirements should be considered the result of both intentional and interpretive LRS (Figure 2). While Venn-diagrams are traditionally used for presenting quantitative data, they also serve as a visualization aid for key relationships and as such Figure 2 should not be understood as an attempt to quantify the extent of overlap between intentional and interpretive LRS.

It is important to distinguish between the two different roles LPAs have in relation to LRS in the exercise of public authority and LRS in public procurement. This division is supported by findings as well as by the fact that recent Swedish legislative changes only prevent intentional LRS in the exercise of public authority, but have no effect on intentional LRS in public procurement.

R4 and R8 remark that LPAs do not always act in ways that are supportive of IHBs, despite having a generally positive attitude to industrialized housebuilding. We argue that LRS should be understood as an indication that the representatives of IHBs have activated different logics than the planning officers did. Representatives of IHBs most likely activate market logic to a great extent whereas planning officers can be expected to regularly activate a more diverse set of logics, primarily dominated by state, family and/or community logics. Structural elements such

as organizational routines and practices have made these logics chronically accessible to the planning officers and this results in the activation of different social identities, goals, and schemas than the activation of market logic would have. While the institutional logics perspective (Thornton *et al.*, 2012) does not explicitly state so, it stands to reason that when the shared focuses of attention (Mead, 1934) between two organizations align, i.e. when social identities, goals, and schemas that are being activated resonate, there is a better foundation for cooperation. R1–R3 had observed that municipalities are easier to cooperate with when they have been unable to find a suitably cheap tender in the first round of public procurement and since have had to readjust their expectations for the project. R3 further develops this idea in his description of the challenge LRS poses to an IHB:

You have to be able to break the code within the detailed development plan and decipher the ambitions that the municipality had for the area when making the design programme. You must be able to do that and still create housing with attractive apartments and reasonable end-user costs.

This line of reasoning is also supported by observations made by R3, R4, and R8 that it is easier for them to find good compromises to LRS issues if their arguments for the use of standardization and repetition resonate with the LPAs' own ambitions for the project. All respondents agree that dialogue is most fruitful when both parties focus on finding solutions, and thus finding shared values is viewed as an important factor for successful interaction with LPAs.

### Intentional LRS

Intentional LRS, most often discussed in relation to an exercise of public authority, is generally motivated by a wish to contribute to sustainable development or as a means to profile the municipality in order to attract citizens and economic resources. Intentional local requirements can be either quantitative, as in the case of energy requirements or qualitative, as in the case of accessibility requirements expressed as increased or extra increased accessibility.

Intentional requirements do not seem to be an important focus for most of the respondents. According to R1, R2, R4, R8, and R9 they are configurable via product development, for example increasing wall thicknesses to facilitate energy requirements. Rather, the problem IHBs perceive with intentional LRS is that they struggle to achieve sufficient repetition

when the design solution constantly changes due to variance in requirements, which results in higher production costs. Some design revisions are so major that the project economy will be unable to sustain them. Even so, there are ways for IHBs to deal with intentional LRS.

R4, for example, explains how intentional LRS can be counteracted through intelligent product development:

We know that an outer wall solution works on x% of the market. What we want to do is to establish that solution and work methodically with developing it. When we face these different levels of requirements our solution thus far has been to more or less keep the wall unchanged but to work with different installation systems.

R3 describes how some companies actively choose not to engage in projects that they find to be too extreme, thereby relinquishing entire market segments:

We are rather particular about which businesses opportunities we engage in. If we do not feel that the product is one that we can definitely deliver we do not partake. E.g. if the client demands low energy housing or passive housing we choose to decline.

R8 illustrates the method of actively conducting market evaluations and driving product development according to the principle of lowest common denominator:

It does not really matter to us if the requirements are tough or relaxed ... We want to know what is what, to know what the conditions are. Then we can develop a product which is interesting to the market both in terms of quality and economy.

Given that all these strategic responses are available to IHBs and given that recent legislative changes will render void any instance of intentional local requirements in the exercise of public authority, most respondents seemed more eager to discuss other aspects of LRS. As a result, we lack the necessary data to analyse intentional LRS using our theoretical framework. However, from a theoretical point of view it is possible to conceive the actions of decision makers relating to intentional LRS as an expression of structure. However, as we lack the data to do so, in this paper we content ourselves with regarding intentional LRS as merely a boundary condition.

### Interpretive LRS

Interpretive LRS entails the setting of all requirements that are interpretations of national and international

goals which are mandated to the municipalities to enforce. Boverket (2011) identified over 100 such national political goals, in addition to national strategies, plans, programmes, and international strategies and initiatives, out of which at least 40 could be considered to be overarching. Given the abstract nature of these goals planning officers are forced to make interpretations in order to concretize them to a sufficient degree. Interpretive requirements are often qualitative in nature, e.g. the prescription of particular technical solutions or related to the design of details. Predefined building systems rarely include these prescribed components or solutions, but may very well include other components or solutions capable of performing the same functions. This statement by R8 emphasizes IHBs' opinion of prescribed technical solutions:

For us, from an industrialized perspective it is preferable that both municipalities and other procuring units, those who design detailed development plans, grant building permits and procure complete products ... that they leave the decisions about the product and its technical solutions to us.

R4 and R8 say that the variability of interpretive requirements results in unpredictability for IHBs, as there is no way of telling which interpretations of which goals will be made for each project. Some interpretive requirements, such as prescription of non-standardized openings, interfere with the engineering and production methods and as such are not configurable to the building system. Non-configurable requirements cause serious issues for IHBs and may force them to relinquish projects altogether.

We argue that interpretive LRS in the exercise of public authority should be understood as agency. Hedgren and Stehn (2014) describe industrialized housebuilding as a radical technical innovation and as such any project involving an IHB should present itself to most planning officers as a novel situational context, thus promoting agency. The difference in embeddedness and uneven distribution of institutional logics among the planning officers enables a wider variety of responses. Cases where planning officers respond to situational novelty by activating unexpected and somewhat incongruent social identities, goals and schemas would present themselves to the IHB as arbitrary. Respondents were typically reluctant to make general statements about interpretive LRS. We attribute that to the varying degrees of situational novelty each planning officer perceives combined with the unpredictable nature of agency making it difficult for IHBs to discern recurring patterns. This statement by R8 emphasizes IHBs' opinion of prescribed technical solutions:

The way we perceived it was that changes were made by an individual planning officer, on a personal level, which drastically changed the circumstances and forced us to make a far less than optimal solution. Maybe not so technically advanced changes, but from a property management perspective costly.

R8 recalls a similar story of seemingly completely arbitrary decisions made by an LPA:

Our opinion was that we had interpreted the descriptions in the detailed development plan in such a way that the spirit of the requirement was met, but the municipality made a totally different interpretation. Furthermore, to some extent they accepted deviations from their own interpretation because they liked certain parts of our solution ... but not all of it.

### LRS in public procurement

In a public procurement setting the role of LPAs is not that of exercisers of public authority. According to R1, the LPA's role is rather to prepare tendering documents and technical specifications for another part of the municipal organization, which acts as the client. Symptomatic of LRS in public procurement is a high level of pre-described details in these documents. R1–R4, R7, and R8 explain that this makes it difficult for IHBs to efficiently compete for the contracts, because compliance with the local requirements means a non-optimal use of the building system which in turn results in a less competitive tender. R3's description of the early stages of the public procurement process further elaborates this point:

For an IHB the difference between private and public procurement is that a public client often hires someone to design the buildings, define them, and create the technical systems ... They lock many things down with their request. It can be difficult for an IHB who has a building system and technical systems of its own to manage that because there are too many deviations.

Findings indicate that LRS in public procurement include both intentional and interpretive LRS. Findings do not, however, reveal a conclusive difference between the two as both seem to manifest themselves in the same way. This could be explained by the fact that agency stems from the situational novelty experienced by individual planning officers when making interpretations, while simultaneously communicating with an IHB. However, in public procurement the planning officer does not communicate with the IHB while making the interpretations as doing so is forbidden by the Swedish Public Procurement Act. Instead

the interpreting takes place before the tendering process even begins and at this point the planning officer is not even aware of whether an IHB is going to be involved. The situational context is therefore routine rather than novel.

R5 and R6 suspect that LRS in public procurements is a result of inexperienced planning officers. The implication of the word 'inexperience' is that market logic is not available to the planning officers due to a lack of familiarity with that logic. R1, R2, R4, and R8, however, feel that today's planning officers are very competent and professional. Instead, R1, R2, and R3 claim that the local requirements are caused by traditional organizational routines and practices. Here public procurement should be understood as a routine situational context. Over time particular logics have become highly accessible, severely limiting the chances of alternative logics being activated. It seems that in LRS in public procurement structural elements seem to dominate even in cases of interpretive LRS, where one would have expected agency to be the dominating factor. This statement from R2 clearly illustrates how traditional approaches to public procurement cause lock-in:

Some municipalities have an ambition to build using industrialized techniques but they still procure the same old traditional way that they have always done and that means that they will not achieve the full benefits of industrialization. What we feel is missing, where both IHBs and clients need to think a little extra is the forms of procurement; which kinds of questions to ask, which tendering documents to produce. That is where the rest of the project is decided.

### Future research of LRS

Procurement is one of the most common research subjects in the construction management field. While LRS in public procurement, to the best of our knowledge, has not previously been addressed, the topic is closely adjacent to other well-established topics of inquiry. LRS in the exercise of public authority on the other hand is a topic very distant from mainstream construction management research. A wide range of countermeasures to intentional LRS is already available to IHBs and considering the recent legislative changes rendering intentional LRS void we see little reason to conduct any further research on this particular topic. Due to their total neglect of interpretive LRS in the exercise of public authority and LRS in public procurement we also argue that these legislative changes will not have the desired effect on the potential for increased industrialization in Swedish housing construction. While we consider intentional LRS in the

exercise of public authority to be of little further interest we do see the need for studies of interpretive LRS in the exercise of public authority, particularly since interpretive local requirements, as opposed to intentional local requirements, are not configurable to IHBs' building systems, and as such are much harder for IHBs to relate to.

Many of the respondents made the important observation that some planning officers have more influence than others. In one case R1 and R2 observed that the mid-process replacement of a key planning officer resulted in the LPA radically changing its behaviour. The institutional logics perspective (Thornton *et al.*, 2012) dictates that if one individual social actor is replaced by another, particularly when difference in embeddedness is great, this influences the group's shared focus of attention; even more so if that actor has a strong standing in the internal status hierarchy. These observations highlight the need to further explore the interaction between individual planning officers and the LPA organization.

### Conclusions

We propose a model for categorizing and understanding different types of local requirement setting. The model distinguishes between intentional and interpretive local requirement setting as well as between local requirement setting in the exercise of public authority and local requirement setting in public procurement. The public and political debates about local requirement setting have thus far exclusively dealt with intentional local requirement setting and have thus completely neglected not only the existence of interpretive local requirement setting but also that local requirement setting can be related to public procurement. Industrialized housebuilders have already developed strategies to cope with intentional local requirement setting, whereas interpretive local requirement setting remains a major inconvenience. Findings further indicate that interpretive local requirement setting in the exercise of public authority is an expression of agency and that all instances of local requirement setting in public procurement, whether intentional or interpretive, are expressions of structure.

We contribute to the theoretical development of institutional logics by applying Thornton *et al.*'s (2012) institutional logics perspective to the context of the Swedish construction sector. Construction as opposed to most other organizational fields (DiMaggio and Powell, 1983) distinguishes itself by a large number of complex relationships between its constituent organizational members. We thereby suggest that the concept of institutional logics, which has hitherto predominantly

been used for understanding stability and change within a single organization or organizational field, can also be used to understand interaction between different organizations within the same organizational field. We also promote agency and the individual as an important level of analysis, which has often been neglected in construction management research.

Lastly, we contribute to the development of an important cornerstone for institutional logics: the conceptualization of agency. Lack of agency conceptualization is a constraining factor for the use of institutional logics on an individual level of analysis. Thornton *et al.*'s (2012) use of dynamic constructivism (Hong *et al.*, 2000; Hong and Mallorie, 2004) is therefore an important attempt to advance the development of institutional logics. By providing empirical data which supports the use of dynamic constructivism we contribute to the conceptualization of agency and by extension to the development of the institutional logics.

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## Exploring Swedish local planning authorities' perceptions of standardized housing construction

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*Written by Anders Viking with feedback and critical response from Lars Stehn. Anders Viking formulated fundamental ideas, developed the model for analysis, and planned and performed the collection and analysis of the empirical material. Writing the paper was a joint venture between the authors. The paper was presented at the 31<sup>st</sup> Annual ARCOM Conference, 7-9 September 2015, Lincoln, UK, where it received the Emerald Research Methodology Award.*

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# EXPLORING SWEDISH LOCAL PLANNING AUTHORITIES' PERCEPTIONS OF STANDARDIZED HOUSING CONSTRUCTION

Anders Viking<sup>1</sup> and Lars Stehn

*Division of Structural and Construction Engineering, Department of Civil, Environmental and Natural resource Engineering, Luleå University of Technology, Sweden*

We explore how Swedish Local Planning Authorities perceive standardized housing construction and attempt to use an ideal type typology of institutional logics to describe how Local Planning Authorities make use of the multiple institutional logics available to them. Increased standardization in Swedish housing construction has been suggested as a means to meet the growing need for housing with reasonable rent levels. However, housing contractors that use standardization and repetition of processes and components claim that the variation of requirements set by Local Planning Authorities prevents them from taking full advantage of their standardization. A recent empirical study of standardized housing contractors' perceptions suggests that Local Requirement Setting, the requirement setting practices of Local Planning Authorities, are interpretational responses to a lack of familiarity with standardized housing construction. Yet, Local Planning Authorities' perceptions of standardized housing construction have never previously been explored. Empirical material for this on-going study was collected through in-depth exploratory interviews with local planning officers from three municipalities situated in Swedish population growth regions. Findings suggest that Local Planning Authorities perceive potential benefits with standardization, but ultimately expect standardized housing concepts to adapt to local standards for processes and products. In projects with high ambitions for architectural quality standardized housing concepts need to be highly flexible. Conversely, highly standardized housing concepts benefit from project ambitions that favour reasonable rent levels. Therefore, Local Requirement Setting is indicative of a mismatch between the Local Planning Authority's project ambitions and the standardized housing contractor's degree of product standardization.

Keywords: ideal type, institutional logics, local planning, local requirement setting, standardization.

## INTRODUCTION

The Swedish government and construction sector agree that increased standardization of housing construction is necessary in order to meet demands for lower production costs, shorter time frames and higher production quality (SOU 2012:86, Statskontoret 2009). Standardization is frequently highlighted as a potential remedy the growing Swedish housing shortage, particularly to the shortage of housing with reasonable rent levels; by reasonable we mean a level of rent that an average Swedish household can afford. Gibb and Isack (2001) define standardization as:

'Standardization is the extensive use of processes or procedures, products or components, in which there is regularity, repetition and a record of successful practice

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<sup>1</sup> anders.viking@ltu.se

[...] Suppliers produce standard items or customised items with standard components through standard procedures [...] Process standardization may vary from absolutely standard documentation and procedures at the detailed level, to a more strategic approach of a standard framework or approach.'

In literature standardization is frequently connected to a discussion in terms of pre-fabricated construction, offsite production or construction, and industrialised building systems as a means to move some of the effort that goes into the construction process, into a controlled environment (Goulding *et al.* 2015). This discussion takes its standpoint from how to control the means of production. However, as early as 2001 Gibb and Isack (2001) pointed out that standardization has changed over the years with efforts now being made to meet clients' needs and produce customised individual buildings, yet still using standard components and employing standard processes to ensure success. An increased level of standardization must be weighed against the reduced variety for the costumer. Using definitions from production-systems and resource based perspectives Jansson *et al.* (2014) view standardization as the strategic idea of housing contractors to control and create a predictable and stable supply chain though the notion of platforms. In their platform definition of standardization Jansson *et al.* (2014) include a variety (continuum) in the component platform between certain levels of standardization for housing contractors utilizing the off-site production technologies volumetric preassembly and/or modular building categorized by Gibb and Isack (2003). For the scope of this paper it is interesting to recognize that there are primarily two types of standardization a client meets: process or product standardization and that both types offered by a standardized housing contractor may be designed (as a company strategic choice on how to control the means of production) in ranging levels.

According to the Swedish Planning and Building Act (PBA) it is mandated to the local authority to plan the use of Swedish land and water to ensure the quality of the built environment. The concept of 'quality' in architecture and urban design is theoretically complex and subject to a wide range of interpretations (Rönn 2010). However, among practitioners the term 'architectural quality' is commonly associated with building proportions, façade materials and the design of particular features such as the ground floor, roofs and eaves and 'urban design quality' is more closely associated with city block structures, street spaces and the specifics of the site surroundings such as noise pollution. The two terms do somewhat overlap, but generally speaking urban design quality deal with the proposed building in relation to its surroundings whereas architectural quality deal with the proposed building in relation to its end users.

To fulfil this mandate local planning authorities (LPAs) are allowed to set requirements for local construction projects, either through regulations in detailed development plans (DDPs) or in development agreements. DDPs can be either flexible or project-specific (Kalbro *et al.* 2012). The PBA is based on the assumption that all DDPs are flexible, i.e. are developed without a specific project in mind, and as such contain only the bare minimum of regulations that is necessary in order to ensure the purpose of the plan. However, developers that initiate DDPs want to be involved during the planning process in order to optimise the DDPs for specific projects (Kalbro *et al.* 2013).

Local requirement setting, the municipal practice of setting requirements that vary greatly in extent and scope between one LPA and the next, has been questioned on the basis that the large variance is detrimental to housing construction in general (SOU

2012:86 ) and to standardized approaches in particular (Stehn *et al.* 2013). The conclusions made by SOU 2012:86 that the intentional setting of local requirements disregards standardized housing contractors' needs for transparency and predictability has led to the implementation of legislative changes that forbid LPAs from formulating intentional local requirements. In the wake of these changes some LPAs are now struggling to find new ways of ensuring the quality of the built environment.

Although the relation between standardized housing contractors and external project conditions stemming from client decisions have been previously explored in the construction management literature, i.e. as client barriers to adopting technical innovations (Hedgren and Stehn 2014), requirements originating from local authorities remains an under-developed research topic. Viking and Lidelöw (2015) identified that in addition to intentional local requirement setting there is also interpretive local requirement setting which results from a lack of familiarity with standardized housing construction, yet there are no studies that address how standardization is perceived by LPAs.

Viking and Lidelöw (2015), using Thornton *et al.*'s (2012) institutional logics perspective, suggested that when confronted with standardized housing construction planning officers respond by making use of a number of different institutional logics. By exploring LPA's perceptions of standardized housing construction we aim to use a model of Friedland and Alford's (1991) inter-institutional system constructed from a typology of ideal types (Weber [1922] 1978) to describe how LPAs make use of the multiple institutional logics available to them.

Empirical material for this on-going study was collected through exploratory interviews with respondent from the LPA of three Swedish municipalities situated in regions of population growth. Our analysis reveals that we are at present not able to use institutional logics to conclusively describe the actions of LPAs in relation to standardized housing construction.

## **AN IDEAL TYPE TYPOLOGY OF INSTITUTIONAL LOGICS**

Institutional theory advocates non-rational, cultural socially constructed explanations of societal order and change. Friedland and Alford (1991:243) define institutions as:

'Institutions are supraorganizational patterns of activity by which individuals and organizations produce, and reproduce their material substance and organize time and space. They are also symbolic systems, ways of ordering reality, thereby rendering experience of time and space meaningful.'

Friedland and Alford (1991) conceptualised the world as an inter-institutional system comprised of the major institutional orders in society, each associated with its own central institutional logic. They argued that individuals, organizations and society constitute three nested levels, specifying progressively higher levels of opportunities and constraint for action. Thornton (2004) following Doty and Glick (1994) argues that Friedland and Alford's (1991) inter-institutional system can be viewed as a typology of ideal types (Weber [1904] 1949).

An ideal type is a pure analytical model of the typical features of a phenomenon that have been abstracted from the empirical reality. The ideal type never seek to claim its validity in terms of reproduction or correspondence with reality, but through terms of adequacy (Weber [1904] 1949). As such the ideal type is a tool for interpreting cultural meanings into their logically pure components and understanding the meaning that actors invest their actions with (Swedberg 2005).

In its most recent update (Thornton *et al.* 2012:73) the ideal type typology of the inter-institutional system consists of seven institutional orders: family, state, market, profession, corporation (Friedland and Alford 1991), religion (Thornton 2004) and community (Greenwood *et al.* 2010), each constructed by a set of nine categorical ideal types: root metaphor, sources of legitimacy, sources of authority, sources of identity, basis of norms, basis of strategy, informal control mechanism and economic system. Friedland and Alford (1991:250) note that institutional logics are 'mutually interdependent and yet contradictory'. During later years the study of institutional complexity, how individuals and organizations respond to encounters with incompatible prescriptions from multiple institutional logics (Greenwood *et al.* 2011), have become a rapidly growing stream within institutional logics research. The literature on institutional complexity details a number of strategies that individuals and organizations may use to respond to interdependencies and contradictions between different institutional logics (Pache and Santos 2010, Kraatz and Block 2008).

## **RESEARCH DESIGN AND METHODS**

Empirical material for this on-going work was collected during December 2014 – April 2015. The material was collected through the use of explorative interviews with respondents from the LPAs of three Swedish municipalities. Municipalities A, B and C are situated in Swedish population growth regions and as such housing construction volumes in all three municipalities are high compared to the national average.

Municipality A was chosen because of its extreme need for housing with reasonable rent levels coupled with very high ambitions for architectural quality. Municipality B distinguished itself by a large number of completed standardized housing construction projects. Municipality C were very strongly opposed to the legislative changes to forbid intentional local requirement setting, but still carries an interest for standardization due to a perceived potential for environmental improvements. From each municipality interviews were conducted with two respondents, one detailed development planner (A1, B1 and C1) and one respondent who works with development agreements (A2, B2 and C2).

Due to the exploratory nature of the study the interview questions were revised with each new interview, and as such none of the respondents were asked an identical set of questions. However, the following question areas were recurrent throughout all of the interviews: (1) what were the LPA's requirement setting prior to the legislative changes and how have they changed since their implementation, (2) what did the respondents think standardized housing construction is and what associations they made upon hearing the term, (3) what were the respondents previous experiences with standardized housing construction, and (4) what did the respondents think should be standardized, to what degree, and by who so as not to conflict with their local standards for products and processes.

All interviews were made in situ, so as not to deprive the researcher of informal, nonverbal communication. The interviews lasted 45-90 minutes each and were all recorded and subsequently transcribed. The empirical material was analysed using thematic coding (Miles and Huberman 1994) in which thematic codes from a predefined list were applied to transcribed sections of text. Superfluous codes were removed and overly represented codes were subdivided, redefined and reapplied in an iterative manner until the researcher determined that the remaining themes corresponded well to the empirical material at large. The remaining themes were then

abstracted into the terms of the ideal type typology of the inter-institutional system. Only 9 out of the 63 ideal types were found useful to make these abstractions so due to space limitations only those 9 ideal types are depicted in the analytical model (Table 1) below. This also approach allowed us to identify empirical material where ideal types from multiple institutional logics were used simultaneously.

*Table 1: Analytical model adapted from Thornton et al. (2012:73)*

	State logic	Market logic	Profession logic
Source of legitimacy	Democratic participation	Share price	Personal expertise
Source(s) of identity	Social and economic class	Faceless	Association with quality of craft Personal reputation
Basis for strategy	Increase community good	Increase efficiency profit	Increase personal reputation

## THE MUNICIPAL PERSPECTIVE ON STANDARDIZATION

All the respondents agreed that the term 'standardized construction' transmits many negative associations. Most of them immediately thought about failed business ventures involving standardized housing construction or of projects from the Swedish Million Homes Programme during the 1960s and 70s, infamous for its overly rational approach that resulted in extremely monotone environments. However, many of the respondents were also adamant that standardized construction has come a long way since then and they believed that the approach carries with it lots of benefits over traditional approaches construction. In fact, most were convinced that standardization is an important, perhaps even necessary, factor for tackling the current Swedish housing shortage.

### Municipality A

Municipality A is among the biggest municipalities in Sweden, both in terms of population growth and in housing construction. Even so the housing deficit is massive and coupled with extremely high construction costs, the shortage of small lease-hold apartments, is a particularly growing concern; so great that the LPA has is instructed to pay particular attention to the ability to produce housing with reasonable rent levels when considering housing developers for development agreements for construction on municipal land. The LPA stressed that rent level is a much more important variable than construction cost, because if the housing is sold or leased at market value the earnings from low construction costs will not benefit the end-users at all. The LPA employs project-specific DDPs, as the PBA directs them to carefully describe the consequences of plans to the public; conducting public consultations for one building yet granting building permit for another would be to trick the public.

Urban planning is an issue of great importance to the local politicians and, despite a frequently shifting political majority, there is a broad political consensus in this particular area. Municipality A feels that it can afford to have extremely high ambitions for architectural quality as the central location assures that there will never be a shortage of willing housing developers regardless. One planning officer elaborated that while architectural quality may seem subjective to the untrained in actuality it is not:

*“Architectural quality is like musical quality. Regardless of whether you like it or not, if you are well versed, you can determine what is good quality and what is not.” - A1*

With regards to standardization, the planning officers felt that they have never been opposed to it; that while reasonable rent levels is secondary to high architectural quality, the interests are not by nature antagonistic. On the contrary, they found the prospect of standardized leasehold apartments with reasonable rent levels and high architectural quality to be a very attractive proposition. However, they felt that standardized housing concepts need to be quite flexible in order to be applicable, because in highly urbanised areas adaption to the surroundings is an important factor that will exclude the usage of housing concepts with too high degrees of product standardization. They also felt that in order to avoid many complications it would be beneficial to standardized housing contractors to consider architectural quality to a greater extent in their product standardization, perhaps by incorporating a flexible interface for the façade to an otherwise standardized product.

### **Municipality B**

Municipality B is among the ten largest Swedish municipalities in terms of population and also boasts a very large number of standardized housing construction projects relative to their size as well as a wide range of different standardized housing contractors. The LPA employs flexible DDPs with few requirements and local design programmes that describe desired qualities rather than prescribe detailed solutions. One planning officer explained that their approach focuses more on urban design quality than architectural quality:

*‘We often focus on the logic of the space: how will people act around it, how will they use the proposed building. That is more important than whether the facade is red or black or what type of roof it has.’ - B2*

The flexible approach is motivated not only by the content of the PBA, but also because the practice saves the LPA from having to redo the DDP if the project falls through as would be the case for a more project-specific DDP. The planning officers believed that this in combination with their more collaborative approach to development agreements is the key to enabling standardized construction.

Municipality B did previously use local requirements for energy, as this was mandated by the local politicians, but the planning officers claim that they felt that they lacked the proper legitimacy required to enforce a deviation from the building code and were almost relieved when the legislative changes were implemented that now prevent them from setting such requirements. It seemed, however, that the local politicians were keenly aware that there are conflicting interests related to housing construction. One planning officer elaborated:

*“On the one hand they want to quickly enable the construction of housing – affordable housing, but at the other hand they do not want to lower the level of quality ambition either.” - B1*

The planning officers said that despite the uncertainty of the local politicians, the long-standing overarching goal is the construction of a sufficient quantity of affordable housing. However, they were still not convinced that standardized housing construction necessarily leads to reasonable rent levels. In particular, they felt that standardized housing concepts with high degrees of product standardization are difficult because they lack the level of flexibility necessary to adapt to most project surroundings, e.g. noise pollution. Instead, they felt that standardized housing

contractors should focus on developing their process standardization or a product standardization that enables more diversity.

### **Municipality C**

Municipality C is smaller than A and B, but with a positive population growth and a sizable housing deficit. The local politicians strive to develop an environmentally friendly profile. In particular, municipality C was among the most vocal in the public debate about local requirement setting, claiming that the national building code was out of sync with time. Municipality C has a strong interest in the forest industry and wood as a construction material. The local public housing developer was recently ordered to drastically increase its production share of timber-frame housing. According to the LPA, setting challenges and forcing actors to think outside the box is the best way to drive a development process forward.

The municipality is eager to try anything that drives the development forwards; they want to experiment, to learn together with other actors, and for this purpose they have designated an area that they stipulate will only be used for pilot projects using timber frames. The LPA felt that learning and developing is a teamwork effort that requires the cooperation of a chain of actors: sawmills to deliver the raw materials, politicians to create the right conditions, planning officers to create the plans and surfaces, architects to deliver ideas and the construction industry to deliver the finished product. This approach has allowed the local public housing developer to work continuously with a number of local contractors that together have been able to drive the production costs down to a level that is among the lowest in the entire country.

Municipality C employ flexible DDPs, as they believe that if there is an opportunity for development advancements, then the DDP should not stand in their way. They were very critical towards LPAs that regulate architectural quality in the DDP, claiming that it should be reserved for regulating the urban design quality. One planning officer elaborated on their view of different municipalities setting different requirements for similar projects:

*“It is not reasonable. It is not wrong for municipalities to set requirements, but there has to be rules so that everyone knows what is going on.” – C1*

The planning officers of municipality C have had previous exposure to standardized housing construction in the shape of standardized glulam timber frames and prefabricated concrete components, but not with fully modular construction which they admit may be influencing their perspective. In general, they believed that the construction industry is the weakest link in their chain and that anything that could possibly drive the development of the industry forward is a good thing. However, they felt that standardized housing contractors should focus on process standardization and limit their product standardization to the supporting structure, installations and other cost driving components. This standardized core could then be modularised and configured according to the architect’s visions in order to achieve product diversity. One planner explained why it is important that each actor in the chain does their own job and not someone else’s:

*“No matter how much we draw we cannot do this without the input from the building industry, but also vice versa. We should not create utopian plans or houses that cannot be implemented, but they should not produce houses that no one wants.” – C1*

## **ANALYTICAL IMPLICATIONS**

The analysis of the empirical material reveals that for all three municipalities the main source of legitimacy was 'personal expertise', the main source of identity was 'association with quality of craft' and the main basis of strategy was 'increase of community good'. Given the limited extent of the empirical material it any claim for analytical conclusions would be premature, however there are a number of analytical implications that we can identify from the analysis.

The first implication is that LPAs to an extent do seem to employ strategies to handle interdependent and contradictory logics. For instance the claims of respondents from municipality A that detailed development plans should be project-specific is based on an argument that their source of legitimacy consists of both 'personal expertise' and 'democratic participation', thus combining elements profession logics with elements of state logic.

The second implication is that some of the ideal types, such as 'personal expertise', 'association with quality of craft' and 'increase of community good' are somewhat ambiguous. Respondents from municipality A considered the primary cause of 'increase of community good' to be high architectural quality, whereas respondents from municipality B considered it to be reasonable rent levels and respondents from municipality C considered it to be a combination of reasonable rent levels and urban design qualities. These different considerations result in the three municipalities having different ways of relating 'increase of community good'(state logic) to 'increase of efficiency profit' (market logic). As respondents from municipality A consider architectural quality potentially contradictory to standardized housing construction state logics is also considered contradictory to and given primacy over market logic. For respondents from municipality B the two logics are instead complementary and for respondents from municipality C they are simultaneously both complementary and contradictory. Although we acknowledge that these differences may be caused by the combinations of multiple institutional logics, which may be possible to study by using institutional complexity, we have at present not been able to identify which these combinations may be.

A third implication is that by using the analytical model we were not able to fully describe all aspects of the empirical material; some unexplained themes remained. One such theme was the insistence of some LPA on furthering their own politically motivated local standards for housing construction. Municipality A would be willing to accept standardized housing construction only on the condition that it adapts to the local standards for architectural quality and municipality C only accepts standardized housing contractors on the condition that they are willing to engage in collaborative experimentation. Another related theme was the tendency of these LPAs to insist that adaptation is strictly voluntary for standardized housing contractors; that if they are not interested they can always go somewhere else. This insistence is based on the assumption that other municipalities do not have local standards of their own. These two themes in particular were difficult to describe using the ideal type typology analytical model.

In summary, implication one is encouraging; it seems possible to some extent to explain LPA's perceptions of standardized housing construction using an ideal type typology of institutional logics. Implications two and three are less encouraging; there are themes that are not properly described and the elements of the analytical model may result in different interpretations from one respondent to the next. However, let

us stress again the exploratory and early character of our research, which is based on a very small amount of empirical material. While at present it is implied that some of the ideal types are ambiguous, it may be because the limited extent of empirical material prevented the discovery of abstractions to other combinations of ideal types that would better describe the observed empirical differences. A similar case can be made for the non-described themes, that more empirical material may enable discoveries and abstractions that at present are impossible to make.

The answer to the question whether or not LPAs' perceptions of standardized housing construction can be described using an ideal type typology of institutional logics remains unanswered. We see three possible avenues for advancement. The first would be to go out and collect more empirical material and thereby being able to draw more precise conclusions. The second avenue would be to redo the analysis, focusing more intently on the institutional complexity in the hopes that this would bring about new realisation and insights. A third possibility is to accept that the ideal type typology approach can only hope to be successful to a certain degree and that in order to provide a more complete description of the empirical material the current theoretical perspective may need to be complemented by an additional theoretical perspective.

## CONCLUSIONS

This paper contributes empirically by identifying that the degree of product standardization that is possible to use depends on the Local Planning Authority's project ambitions. In projects where ambitions for architectural quality are high standardized housing concepts need to be more flexible. Highly standardized housing concepts instead benefit from project ambitions that favour reasonable rent levels. Therefore, the presence of Local Requirement Setting is indicative of a mismatch between the Local Planning Authority's project ambitions and the standardized housing contractor's degree of product standardization.

We also identify that although Swedish local planning authorities see potential benefits in using standardized housing construction, they ultimately expect standardized housing concepts to adapt to the local standards for processes and products that each Local Planning Authorities itself champions. Although local requirements can no longer be set through formal directives municipalities seem to be finding new, less formal ways, to regulate the built environment.

Finally, we contribute to the small body construction management papers based on institutional theories by attempting to describe our empirical material using an ideal type typology of institutional logics, thereby making three analytical implications.

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## Using coordination mechanisms to explore tension between industrialized house-building contractors and local planning authorities

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*This paper was written by Anders Viking under the supervision of Susanne Engström. Anders Viking formulated fundamental ideas, planned and performed collection and analysis of the empirical material. The rest of the work, including development of the model of analysis, and writing the paper was a joint venture between the authors.*

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# Using coordination mechanisms to explore tension between industrialized house-building contractors and local planning authorities

Anders Viking\* and Susanne Engström

*Div. Industrialized and Sustainable Construction, Luleå University of Technology, 971 87, Luleå, Sweden*

\* Corresponding author: anders.viking@ltu.se

Variations in the regulation of the Swedish built environment can be seen either as a desirable consequence of the Swedish local political system or, by industrialized house-building contractors, as a hindrance to the use of standardized building systems and standardized production processes. We have aimed to explore how the theoretical lens of organizational coordination can help understand the underlying tension between industrialized house-building contractors and local planning authorities, in the context of the Swedish planning and building process. Empirical material was collected through exploratory interviews with representatives of five industrialized house-building contractors and seven local planning authorities. Findings indicate a tension between industrialized house-building contractors and local planning authorities with regard to their preferred mechanisms of coordination. Industrialized house-building coordinates through formalization and standardization of outputs and work processes, whereas local planning authorities rely on socialization, roles and standardization of skills and knowledge. Our findings imply that any approach to construction that coordinates using formalization or standardization of outputs or work processes may be susceptible to variations in the regulation of the built environment.

Keywords: coordination mechanism, industrialized building, industrialized house-building contractor, interpretations, local planning authority, standardization

## Introduction

Swedish governmental investigations (SOU 2012:86) and reports (Statskontoret, 2009) highlight increased industrialization of the construction sector as a way to address construction clients' demands for lower and more predictable production costs, shorter delivery times and higher product quality. Numerous labels have been used, seemingly interchangeably, to discuss industrialization in construction: systems building, off-site construction, modern methods of construction and industrialized building to name only a few (Pan and Goodier, 2012; Goulding et al., 2015). For the purposes of this paper we will be using the term industrialized house-building (IHB), coined by Lessing et al.'s (2015) in a comprehensive attempt to synthesise and describe the emerging research field. IHB borrows production principles from the Toyota-era automotive industry (Gann, 1996; Winch, 2003) and have been found to organizationally resemble manufacturing companies (Gerth, 2008). Furthermore Unger (2006) has emphasized the importance for the organizational structure of an IHB contractor to be coherent with its production and business strategies. As such, IHB contractors differ from traditional project-based contractors by their utilization of predefined building systems and production processes as their primary means of achieving coordination within and across projects. A key issue for IHB contractors has therefore been to leverage internal efficiency with design flexibility in order to

produce customized individual buildings while utilizing their standardized building systems and production processes (c.f. Barlow et al., 2003; Gibb, 2001). As such a standardized building system of components and technical solutions is a central concept in IHB and has been seen by Jansson et al. (2014) as a strategic choice to create a stable and predictable supply chain, which in turn enables standardization of work processes through the use of design management strategies. For this reason, IHB contractors are dependent on transparent and predictable external project conditions in order to realize the full benefits of their standardization, and are hence sensitive to variation in the regulation of the built environment. In a 2012, a Swedish government investigation (SOU 2012:86) concluded that variation between different local planning authorities' (LPAs) applications of the national building code had significant detrimental effects for IHB contractors, assuming the variation to be primarily caused by intentional deviations from the building code. Exploring the topic further, Viking and Lidelöw (2015) found that IHB representatives perceived intentional deviations to only account for some of the variation in the regulation of the built environment. Additionally, the respondents considered the remainder of the variation to be caused by diverging interpretations of the regulatory framework and of how various political goals should be concretized and expressed through the built environment. Viking and Stehn (2015) have further suggested that the success of IHB contractors may vary from project to project depending on how LPAs prioritize between different aspects of societal value.

The idea of industrialization in housing construction is by no means new. Ever since the success Henry Ford's standardized production line for car manufacture European and North American construction sectors have periodically attempted to transfer knowledge from mass-production industries to low-cost housing (Gann, 1996). Most notably this occurred during the mass-housing programmes of the 1960s, so also in Sweden where the enactment of the political Million Homes Programme (Hall and Vidén, 2005) saw the erection of over one million housing units during 1965-1974. Although, at the time, the Million Homes Programme did initially address a shortage of housing and contributed to significantly raising the standard of living, many of the homes that were built using industrialized and standardized methods today suffer from severe problems with regards to building technology. Moreover, the contemporary rationalistic urban planning ideals have been criticized for increasing the socio-economic segregation in many of the Million Homes Programme areas. As such, terms like industrialized and standardized housing construction do carry significant negative connotations for a significant portion of the Swedish people.

The Swedish democratic system uses three levels: national, regional and local, and, as local political majorities do not necessarily reflect the national majority, variations in prioritizations are likely to occur. Furthermore, the Swedish governmental system is characterized by high levels of decentralized power and local autonomy, giving local planning authorities a far-reaching mandate for regulating the built environment within the municipal administrative borders. As such, it falls to the local planning authorities of Sweden's 290 municipalities, with the help of the National Board of Housing, Building and Planning, to jointly ensure transparency and uniformity of regulation of the built environment on a national level by coordinating their application and enforcement of the Swedish Planning and Building Act (SFS 2010:900) and the National Building Code (BFS 2011:6). The Swedish planning system contains three formal levels of planning: the municipal comprehensive plan, the detailed development plan (DDP) and the building permit. Each municipality must maintain and regularly update a comprehensive development plan encompassing the entirety of its land and water areas and although it is not legally binding it should be seen as indicative of planned future developments. For each development project the LPA may also elect to draft a DDP, either ahead of time or in unison with the construction clients. The DDP, which may contain few or many regulations depending

on how the PBA is applied (Kalbro et al., 2012), does become legally binding after undergoing public consultation unless the DDP is appealed. Upon submission of the client's building permit application the LPA reviews and judges the applications compliance with the DDP, the PBA and the national building code and either approves or rejects it. In addition, the LPA and client may negotiate a development agreement for the project, which in the case of public land granting the LPA additional opportunity to impose regulations in their capacity of land owner. In summary, the DDP, the building permit and the development agreement all offer LPAs opportunities to enforce their interpretations of the regulatory framework granting them significant influence over the development of the built environment. Additionally, each new development inherently entails adaptation to the local surroundings and conditions in such a way that it could be considered unique. Due to variations in site conditions and prioritizations of local politicians, coordination between different local planning authorities cannot be conducted on the basis of output or process standardization, but must rely on other, less formal mechanisms for coordination such as the establishment of organizational cultures of shared values, norms, collective grounded knowledge and assumptions. As such, from the local planning authority perspective, variations in regulation of the built environment can be seen as a natural and entirely desirable consequence of a functioning democratic system rather than, as viewed by industrialized house-building contractors, a practice that hinders the use of standardized building systems and production processes.

Against this background we argue that there is an underlying tension between industrialized house-building contractors and Swedish local planning authorities with regards to how they coordinate their work across project on a national level. In this paper we aim to explore how the theoretical concepts of organizational coordination and coordination mechanisms can help increase the understanding of that tension in the context of the Swedish planning and building process. Following Jacobsson (2011) we find it useful to categorize coordination mechanisms based on what they aim to establish: steering and control, plans and structures, interaction, routines and cultures, or improved conditions for achieving coordination. Industrialized house-building is characterized by its production principles derived from manufacturing industries, in which coordination is primarily formal and aimed at establishing steering and control, and plans and structure. By contrast, local planning authorities rely on more informal mechanisms of coordination. In the context of regulation of the Swedish built environment, Viking and Lidelöw (2015) identified that the seemingly unpredictable actions of local planning authorities can be described as the result of multiple conflicting institutional logics (e.g. Thornton et al., 2012). Conceptually, institutional theory in general and institutional logics in particular share distinguishing features with informal routine and culture establishing coordination mechanisms, in that they both indirectly influence individual organizational members through the establishment of a culture of shared values, norms, collective grounded knowledge and assumptions.

## **Theoretical frame of reference**

### **Organizational coordination and coordination mechanisms**

The organizational coordination literature presents two distinct perspectives on coordination (McEvily et al., 2014; Okhuysen and Bechky, 2009): the organizational design and practice perspectives.

The *organizational design perspective*, which dominated the study of organizational coordination up until the 1980s, describes coordination as a natural consequence of division of labour into specialized teams that need to be integrated, which introduces interdependence among teams

(Lawrence and Lorsch, 1967; Thompson, 1967). This view argues that coordination between interdependent specialists relies on *formal* structures that control the roles, relationships and responsibilities of individual organizational members. The underlying purpose was to align the organization's capacity for information processing with their need for information processing (Galbraith, 1973). Following this line of thinking, contingency theory (Perrow, 1967; Thompson, 1967) stipulates that in organizational environments where task uncertainty is high and interdependencies between specialists are unpredictable organizational designs need to increase their information processing capacity by enabling more extensive interaction (Burns and Stalker, 1961). Jacobsson (2011) lists two categories of predominantly formal coordination mechanisms: steering and control establishing, and plan and structure establishing mechanisms. *Steering and control establishing* mechanisms aim to control or govern the financial results of an organization and the actions of its individual members. This includes mechanisms that aim to control and govern the organizations economy, such as budgets, financial plans, and other forms of financial output control (Mintzberg, 1979; Martinez and Jarillo, 1989). It also includes ways to motivate or steer an organizations individual members towards particular actions, including reward systems (Galbraith, 1973) and direct supervision (Mintzberg, 1979), but to a certain extent also plans and schedules (March and Simon, 1958; Thompson, 1967; Galbraith, 1973; Martinez and Jarillo, 1989; Okhuysen and Bechky, 2009). *Plan and structure establishing* mechanisms aim to develop organizational patterns of action, stability and organizational structure. As such, central mechanisms concern organizational and departmental structure (Galbraith, 1973; Martinez and Jarillo, 1989) and the creation of matrix organizations or interdisciplinary teams through what Galbraith (1973) refers to as 'lateral relations'. Additionally, the category includes mechanisms such as centralization/decentralization of decision making (Galbraith, 1973; Martinez and Jarillo, 1989), establishment of rules, job descriptions, policies (March and Simon, 1958; Galbraith, 1973), and plans and schedules. As such, depending on how they are utilized in practice, plans and schedules can be seen to establish both steering and control, and plans and structure. In addition, this category also includes formalization (Martinez and Jarillo, 1989) and standardization of both work processes and outputs (Mintzberg, 1979). Finally, a more emergent form of plan and structure establishing coordination mechanism is Okhuysen and Bechky's (2009) 'roles' that allow individuals to rely on experience and expectations of behaviour and action to create structure among relations and tasks.

The *practice perspective* emphasizes the importance of *informal* emergent aspects of coordination (Okhuysen and Bechky, 2009). In contrast to the organizational design perspective, the practice perspective focuses on coordination practices as they dynamically unfold and adapt to changing circumstances. Also, the practice perspective is primarily utilized for studying coordination in contexts where task uncertainty is high, interdependencies fluid and expertise widely distributed (Ben-Menahem et al., 2016; Faraj and Xiao, 2006), whereas the organizational perspective was primarily utilized for studying relatively stable and low uncertainty environments. Jacobsson (2011) lists two categories of predominantly informal coordination mechanisms: interaction establishing, and routine and culture establishing mechanisms. As the name implies, *interaction establishing* mechanisms aim to initiate or establish interaction between organizational members and, as such, relate more closely to informal contacts and communication than the previous two categories. Examples of this type of mechanisms are direct managerial contact and inter-organizational teams (Martinez and Jarillo, 1989), and mechanisms that denote any form of informal communication, such as mutual adjustment (Thompson, 1967; Mintzberg, 1979) and what March and Simon (1958) call coordination by feedback. The category also includes a number of examples of 'lateral relations' given by Galbraith (1973): direct contact, liaison roles, task forces, integrating roles and linking managerial role, all of which aim to enable informal

contract between organizational members, albeit through the use of formal measures. Okhuysen and Bechky (2009) further identify boundary objects and representations as important reference points around which to communicate and interact. *Routine and culture establishing* mechanisms aim to indirectly influence organizational members through the establishment of an organizational culture of shared values, norms, collectively grounded knowledge and assumptions. Among these mechanisms can be counted organizational arrangements that contribute to the creation of routines but are also normative, such as socialization (Martinez and Jarillo, 1989), and standardization of skills and knowledge (Mintzberg, 1979). In addition, Okhuysen and Bechky's (2009) 'roles' are also included, as they create expectations of behaviour and awareness of the norms and values of others through socialization. As such, roles, similar to plans and schedules, can belong to two different categories depending on how they are used.

Finally, Jacobsson (2011) lists *condition establishing* mechanisms, which refer to organizational arrangements that entail contextual conditions that indirectly enable other mechanisms of coordination. The most prominent example of this is physical proximity (Okhuysen and Bechky, 2009) which enables interaction establishing coordination mechanisms by facilitating informal meetings. Another example is Galbraith's (1973) strategies for reducing the need for information processing within organizations, thereby reducing the need for coordination, through the creation of slack resources and self-contained tasks.

### **Inter-organizational coordination and dimensions of value**

Although most coordination mechanisms were primarily intended to describe coordination within individual organizations, they are applicable to coordination between organizations as well. This can be seen by looking at Thompson's (1967) work on interdependencies. Identifying three types of interdependencies between activities: pooled, sequential and reciprocal, Thompson (1967) argues that in order to deal with interdependencies organizations need to coordinate their activities using various coordination mechanisms. Building on Thompson (1967), Malone and Crowston (1994, p. 90) have later defined coordination simply as: "coordination is managing dependencies between activities". Thompson's (1967) interdependencies too were originally used to motivate coordination within organizations, but Norwegian Strategic Management researchers Stabell and Fjelstad (1998) have since identified inter-organizational counterparts for all three of Thompson's (1967) types of interdependencies.

In construction related research, followers of Stabell and Fjelstad's (1998) inter-organizational application of Thompson (1967) have emphasized the importance of coordinating interdependencies in order to achieve value creation in individual construction firms as well as in the construction industry as a whole. For instance, Bygballe and Jahre (2009, p. 695) have claimed that "*a key issue for construction companies is to ensure value creation within and across projects.*" Similarly, Bygballe et al.'s (2013) review of industry-level conceptualizations of value creation logics identified four distinct theoretically or empirically based models for how to coordinate inter-organizational relationships between construction actors in order to ensure value creation across the entire construction process. One of these models, the supply-chain-oriented model (see Bankvall et al., 2010 for an in-depth overview), has been used extensively in IHB related research, often in contrast with the project-oriented model. From the perspective of the project-oriented model, Winch et al. (2003 in Winch, 2006, p. 172) has claimed that the following three dimensions of value are applicable to the construction process:

- The contribution that the asset created by the process makes to the client's business processes
- The contribution that the process makes to the supplier's business processes, and

- The contribution that the asset makes to society as a whole

Winch (2006) further posited that these three dimensions of value are ever-present in all construction projects, but may not necessarily be aligned. Similarly, evidence from value creation research in other fields (e.g. Lepak et al., 2007) suggests that the value construct is highly subjective and context-specific in nature (Bos-de Vos et al., 2016). This implies that the relative emphasis on each of Winch's three dimensions of value can be expected to vary not only between different actors, but also from project to project.

## Research design and methods

The research involves an interpretivist approach based on qualitative data in the form of exploratory interviews. The research aim is met by aggregating and contrasting empirical material from two previous part-studies encompassing seven Swedish LPAs and five Swedish IHB contractors (see Table 1 for an overview of the studies including their research design and methods of collecting empirical material). Respondents in the study LPA were interviewed about their understanding of standardization in construction as well as of their own work practices. Conversely, the respondents in the study IHB were interviewed regarding their understanding of LPAs' work practices as well as of the role standardization plays for IHB. Pre-understanding derived from the empirical material from a previous study regarding IHB contractors' perceptions of LPA work practices, presented in Viking and Lidelöw (2015), regarding IHB contractors' perceptions of LPA work practices, was used to contrast and reflect on the subsequent interviews in the study IHB, as further elaborated below.

**Table 1** Overview of the research design and methods for collecting empirical material.

Part-study	Research design	Primary source of empirical material	Previously analysed
<b>LPA</b>	Seven LPAs, seven respondents representing Urban planning (detailed development planning, development agreements and/or building permissions)	Exploratory, semi-structured interviews (in situ during Dec 2014-Aug 2015, recorded and transcribed)	Methods and part results presented in Viking and Stehn (2015)
<b>IHB</b>	Five IHB contractors (the same as in Study IHB 1), six respondents representing the corporate management team	Exploratory, semi-structured interviews building on study IHB 1 (in situ during Jan 2016 – Feb 2016, recorded and transcribed)	

## Sampling

The five IHB contractors addressed in study IHB (henceforth referred to as IHB contractors  $\alpha$ - $\epsilon$ , see Table 2) were selected in such a way as to represent the largest portion of the Swedish market for multi-family housing possible in terms of offerings, market positions and operational platforms (Bregre et al., 2014). IHB contractor respondents were either corporate management team members or business area managers. The seven municipalities addressed in study LPA (henceforth referred to as municipalities A-G, see Table 2) were selected based on a combination of factors, such as their internal organizational structure, the way in which they communicated

the planning and building process to the public and the number of completed IHB projects. Municipalities A–G can roughly be divided into two groups which share a number of characteristics. Municipalities A – D are situated in population growth regions where housing construction levels are consistently high and, as such can be expected to have greater amounts of experience with IHB than the average Swedish municipality. In fact, municipalities B and C can boast some of the largest numbers of completed IHB projects in all of Sweden. In contrast, municipalities E – G are situated in regions where the population growth is neither booming nor declining. As a consequence, they have had limited volumes of housing construction during the last few decades.

**Table 2** Overview of interview respondents from the studies LPA and IHB 2.

LPA	Interview respondents	IHB	Interview respondents
A	RA – Planning Manager	$\alpha$	R $\alpha$ – Chief Executive Officer
B	RB1 – Planning Manger	$\beta$	R $\beta$ – Marketing Manager
	RB2 – Land Development Manager	$\gamma$	R $\gamma$ – Marketing Manager
C	RC – Planning Manger	$\delta$	R $\delta$ 1 – Product Manager
D	RD – Building Permit Manager		R $\delta$ 2– Business Manager
E	RE – Urban Planner	$\epsilon$	R $\epsilon$ – Construction Manager
F	RF – Planning Manager		
G	RG – Urban Planner		

Table 2 presents an overview of the respondents from studies LPA and IHB, including a legend indicating how each individual respondent is hereinafter to be referred. The LPA respondents were selected in such a way as to embody a comprehensive expertise in detailed development planning. As such, most of the respondents were either planning managers or, in municipalities where no such exist, planning officers. However, in municipality D our request was instead referred to the building permit manager who contributed a different yet relevant perspective to the study. In municipality B the planning manager insisted on a conjoint interview with the land development manager as they claimed that their two functions were so closely organizationally integrated that it would not make sense to view each function separately:

There is a strong relation between detailed development planning and land development and in our municipality we have a long tradition of incorporating both functions within the same office. [...] In fact part of our development agreement process almost depends on this close cooperation.

Moving forward we made a conscious effort to include the land development manager if the internal organizational structure of the municipality indicated a similarly close proximity between detailed-development planning and land development functions which, in the case of the remaining municipalities, it did not.

### Data collection and analysis

Interviews from all studies were based on interview guides of open-ended questions. In line with our qualitative approach we chose to prioritize heterogeneity over the direct comparability that would have resulted from a more rigorously structured interview format. The interviews, most of which lasted for between 45 and 75 minutes, were all performed in situ so as not to deprive the performing researcher of informal and non-verbal communication. The interviews were audio-recorded in their entirety, transcribed in full and the transcripts verified by the respondents to ensure their accuracy. To test for consistency of rigour in the qualitative research process (Lincoln and Guba, 1985) an additional researcher was invited as an auditor to review the

gathering of empirical material by examining the transcripts of the interviews in full. All remarks were documented and included in the subsequent analytical process.

The analysis process entailed two distinct stages: an initial analysis and a subsequent analysis. During the initial analysis the investigator who originally performed the interviews broke down the empirical material from studies LPA and IHB, labelling it using thematic codes derived through the iterative procedures described by Miles and Huberman (1994). During this and the subsequent stage of analysis, all coding was performed manually using adhesive notes, as the investigators engaged in the analysis considered this approach to afford them a greater overview of the empirical material than using specialized coding software. Acknowledging the inherently interpretative nature of coding empirical material, an additional investigator (c.f. Denzin, 1978) was engaged in the analysis process. The corroborating investigator was provided full access to the empirical material from the studies LPA and IHB, but not to the pre-understanding derived from the result of previous analyses (presented in Viking and Lidelöw, 2015; Viking and Stehn, 2015).

In accordance with the researchers' expectations, the initial analysis revealed a contrast between the respondents' understandings of standardization in IHB and of interpretations in LPA practices as well as emerging themes such as the centrality of standardized production processes and the use of predefined building systems in IHB. Furthermore, the investigators also noticed an emerging theme of planning officers relying on collectively grounded knowledge in the form of personal expertise to make case-by-case judgements in LPA practices. The investigators recognized these three themes as two distinct types of coordination mechanisms: formal plan and structure establishing mechanisms on the side of IHB contractors and informal and routine and culture establishing mechanisms on the side of the LPAs. Additionally, the initial analysis indicated that the different IHB and LPA practices were frequently motivated by referencing different aspects of value that were either contractor-internal, perceived as important to clients or significant to the entire society, a categorization bearing resemblance to Winch's (2006; Winch et al., 2003) three dimensions of value relevant to the construction process. Following these discoveries, the investigators developed an analytical framework for the subsequent analysis based on Jacobsson's (2011) five categories of coordination mechanisms and Winch et al.'s (2003) three dimensions of value.

During the subsequent analysis both investigators separately repeated the coding process, this time specifically using codes derived from the analytical framework. After cross-referencing their analyses, the investigators jointly compared and contrasted the codes in order to identify potential tensions between the respondents of the two studies (LPA and IHB) as well as to identify differences between the respondents of each study viewed in isolation. Particular attention was paid to respondents' corresponding and conflicting understandings of standardization in construction and LPA practices, their value considerations as well as to their view on interpretations in the regulation of the built environment.

## **Understandings of standardization in construction building and of local planning authority practices**

### **Standardization in construction**

Standardization was found by all five IHB respondents to be central to IHB. The respondents unanimously identified two distinct types of standardization: standardization of technical solutions and standardization of processes. Yet, while in agreement that both types are important, the

degree to which different respondents emphasized each type varied. R $\epsilon$  was of the opinion that standardization of processes was more important than standardization of technical solutions:

*For us as a company it is more difficult if we are not allowed to work with our standardized processes, compared to our standardized components. It is much easier to introduce new components than if someone tells us to do things this or that way; for us that is much worse.*

This sentiment was also shared by R $\beta$  and R $\gamma$ . Meanwhile, R $\alpha$  argued that standardization of technical solutions was more important than standardization of processes:

*Suppose that you had a standardized process, but always built different things: on the first day you would build an airplane, on the second day a house and on the third day a boat. I personally cannot see how that would work; you need some sort of technical delimitation. Still, the process is definitely important, because we are not talking about building the exact same thing over and over again either.*

Furthermore, R $\beta$  argued that repetition is also important in the relationship with clients:

*“Number one for industrialized house-builders is to have recurring clients that you know so that you do not have to start from the beginning each time.”* R $\epsilon$  concurred and added that established client relationship ultimately enables the standardization of forms, contracts and documents.

Generally, the LPA respondents equated standardization in construction to IHB. However, whereas the IHB respondents identified both standardization of technical solutions and standardization of processes, the LPA respondents, when describing their understanding of standardization, tended to focus mainly on the technical aspects and/or the specific outcomes in terms of specific buildings. RA and RE for example both associated standardization and IHB with the use of predefined modules *“that can be combined in different ways”* (RA), where *“as much as possible is built in advance and everything is according to the same standard. [The modules] can then be assembled on site”* (RE). In a similar vein, RF and RB too associated standardization with the development and use of standardized measurements and specific technical solutions, but also with tower-block buildings and buildings shaped in specific ways. Moreover, the respondents commented on their understanding and assessment of the potential opportunities associated with IHB as well as the limitations they perceived to be associated with standardization and IHB. With the exception of RA, who claimed to have little experience with IHB, most LPA respondents expressed generally positive attitudes towards standardized building. RF specifically described standardization as a *“means of reducing building costs, particularly production costs”* and suggested that *“if similar projects have been built previously it is known to work and then it should be easier for us as well”*. RG seemed to agree with RF's sentiments regarding building costs, stating that *“we have a housing shortage and need to solve that problem in some way, and standardization is part of that solution”*. However, RG additionally indicated a decidedly non-positive stance towards IHB by arguing that: *“Standardization, at least according to my opinion, is only good for solving the cost issue, nothing else. [...] standardization is like having an IKEA-concept for solving building costs, that's it”*. Respondents RB, RE and RF each elaborated on the need for enabling variation in the urban environment and the limited ability, they perceived standardized building to have, to adapt to specific environments. For instance, referring specifically to tower block buildings RF stated: *“If you were to build within an environment where close attention has to be paid to the building's appearance, then you may encounter some problems.”* RE also expressed that infringement on the architectural freedom might be a concern: *“From an architect perspective, that freedom to plan every detail... those small beloved details and special little angles... those do not work well with such a rational process.”*

## Local planning authority practices

With regard to their relation with LPAs R $\beta$ , R $\gamma$  and R $\epsilon$  argued that although LPAs follow similar local planning and building processes the contents of those processes varies significantly. R $\Gamma$  further reflected on the implications of varying applications of the PBA and the building code:

*We have a number of laws and regulations to relate to that are the same across the entire country. I would say that there are incentives from our side to question why the application of the law should differ when the law itself does not.*

R $\alpha$ , R $\beta$ , R $\gamma$  and R $\epsilon$  argued that LPAs are supposed to dictate the *rules of the game*, but if the rules cannot be predicted the game becomes difficult to play. For this reason, R $\beta$  and R $\epsilon$  think that dialogue based local planning and building processes offer an advantage over traditional processes, in that it is easier to find alternative solutions that are acceptable to both parties. Moreover, R $\epsilon$  clarified that IHBs are not opposed to project uniqueness in itself, only other factors masquerading as project uniqueness:

*In each individual project, we should discuss what makes the building site unique. That the site is located in municipality X should not be relevant. There should be project unique issues, but let the site be what is unique; not municipality X or planning officer Y.*

In relation to the local planning and building process, the LPA respondents identified that there are two distinct approaches to detailed development planning: flexible and project specific. According to RA it is important that DDPs clearly depicts the consequences of implementation:

*According to the Planning and Building Act you have to account for the DDP's consequences and in order to do so you need to specify quite clearly what is going to be built. Presenting one building to the public during consultation and then approving something different is not really acceptable.*

Meanwhile, RC argues that too many DDPs are overly specific:

*With the Planning and Building Act it is easy to be blinded by all the things you can regulate in DDPs. But according to the Act, there are only three or four things that LPAs have to regulate. We are allowed to regulate other things as well, but only if it is necessary to ensure the purpose of the plan. I think that that is too often forgotten.*

RD mentions that keeping DDPs flexible simplifies the building permit review process as well. In keeping with their previous argument, RE, RF and RG also claim that their municipalities use flexible DDPs. According to RB2 municipality B's local planning and building process utilizes flexible DDPs combined with a development agreement for construction on public land, but RB1 adds that if the client is already the landowner the DDP needs to be more project specific than if the land was owned by the municipality.

## Value considerations

All of the IHB respondents related their standardization of technical solutions and standardization of processes to their market offering and how clients should act in order to take full advantage of that standardization. In reference to standardized documents, contracts and descriptions, R $\epsilon$  states that: *"If we have clients who appreciate this way of working together they can cut down on their people, we can cut down on our people; they make more money; we make more money."* Without explicitly distinguishing between LPAs and public client owned by municipalities, R $\delta$ 2 concluded that municipalities often express locally defined specific requirements that need to be fulfilled but fail to acknowledge any costs-related consequences: *"Many times they express that 'this is the standard*

that we want for our houses', but they are not aware of costs, they add things that drive costs...". R $\alpha$  also saw potential value for clients in "cost efficiency and quality", both stemming from repetition and subsequently accumulated knowledge and experience: "we have a pretty long and well-proven experience of doing this and [...] we have a number of approved warranty inspections for this particular solution...". R $\gamma$  described that different requirements presented by different municipalities around the country impact R $\gamma$ 's clients and that they need to contribute to their clients' ability to better position themselves in relation to the different municipalities and their standards.

According to all eight LPA respondents, multiple aspects of value are relevant during the local planning and building process. The respondents from the large municipalities A, B and D identified that alleviating housing shortage is a major concern, but ultimately it is the local politicians that make the decision of which value aspects are to be prioritized. RD notes that in municipality D the need for addition of housing units is currently dwarfing other concerns:

*Right now, in this city, the political focus is volume; to construct housing units. Earlier there was an ambition to emphasize energy efficiency, but in the position we are in today that is no longer a priority.*

Meanwhile, RA claims that as there is no shortage of willing housing clients or contractors, the local politicians in municipality A are currently prioritizing quality over quantity: "The directives we get from our politicians says that we are to emphasize architectural quality. So whenever a construction company wants to build something, we have very high design ambitions." RB1 argued that the local politicians of municipality B are not quite able to decide between high quality housing and cost-efficient housing, to which RB2 added: "With this issue I believe that there is stability over time – a stable state of insecurity." Conversely, respondents from the smaller municipalities E, F and G noted that their conditions for housing construction differs significantly from those of larger municipalities. RE, RF and RG argued that for this reason they have no ambitions to deviate from the PBA and the building code. Although RE and RG both claim that they would prefer to see qualities beyond the PBA and the building code they also realize the unfeasibility of making such demands. Similarly, RF reflected that having a weak negotiating position could make it difficult if a client wanted to build something that was unsuitable for the location, but that ultimately that would be a matter for the local politicians to decide.

## **Interpretations**

R $\alpha$ , R $\delta$ 1 and R $\delta$ 2 noted that interpretation related issues in the building permit application stage have become more common in the last few years than before. In particular, R $\alpha$  and R $\delta$ 2 highlight interpretations of the building code section on universal accessibility as especially problematic. R $\delta$ 1 argues that the wording of the PBA is sometimes near indecipherable and leaves too much room for interpretation: "The Planning and Building Act says that a building's shape, colours and materials should have a good impact on its surroundings. What does that even mean; in the eye of which beholder?" Furthermore, RA questions whether it would not be better if building permit review was performed on a national level. In a similar vein, RE places part of the blame on the National Board of Housing, Building and Planning:

*I thing that the National Board of Housing, Building and Planning has been very passive in regards to this whole thing about interpretations, which I think is wrong because... it affects how the local authorities are supposed to interpret and how the companies are supposed to work [...] They are the ones who decide...that is their role.*

With regards to interpretations RD argues that the National Board of Housing, Building and Planning should be clearer on how the building code section on universal accessibility is to be interpreted:

*Take height tolerances for example. The Building Code basically only says that it should work. But if you look in some of the handbooks it says a maximum of 2.5 centimetres or 1.5 centimetres. Which is it? I mean, for all multi-storey housing buildings with balconies that centimetre makes a huge difference."*

Conversely, RC and RE argue that the building code section on energy efficiency has previously set the bar too low and that the only way to achieve long-term development on energy efficient construction was for LPAs to formulate sharper requirements even though this deviated from the building code. Similarly, RA argued that architectural quality is a term that can be judged objectively against a background of proper schooling and experience: "*Architectural quality is like musical quality. Regardless of whether you like it or not it is possible for someone with schooling to say that this is quality and this is not.*" Meanwhile RD claimed that architectural quality and design are instead highly subjective concepts: "*Given that architecture and design are just matters of taste I can understand why it could cause an issue for IHBs.*"

## **Coordination mechanisms and dimensions of value**

It seems that all IHB respondents' companies employ formalization and standardization of both outputs and work processes (Mintzberg, 1979; Martinez and Jarillo, 1989) and, although their expressed emphasis on each coordination mechanism varies, both appear to be central for defining what constitutes IHB. As such, the primary purpose of their coordination mechanisms appears to be to establish plans and structure. Some respondents even seem to attempt to extend their utilization of these coordination mechanisms from purely intra-organizational to inter-organizational coordination by standardizing aspects of their interaction with recurring clients. In comparison, the LPA respondents' understanding of standardization in construction appears to not fully, in terms of coordination, capture the essence of IHB. Furthermore, some LPA respondents struggle to properly differentiate between clients and contractors, just as some IHB respondents have difficulties distinguishing LPAs from public clients owned by the same municipality. Hence, given that IHB respondents and LPA respondents apparently have no shared understanding of what to coordinate nor whom with which to coordinate, it is perhaps not surprising to find that they also seemingly disagree over which coordination mechanism is most appropriate.

The IHB respondents' argument that LPAs are supposed to set the rules of the game can be seen as a statement for the use of other plan and structure establishing coordination mechanisms such as the creation of rules (March and Simon, 1958; Galbraith, 1973) or roles (Okhuysen and Bechky, 2009) over interaction establishing mechanisms such as mutual adjustment (Thompson, 1967; Mintzberg, 1979) in situations where outright standardization is not possible, such as in project unique interactions. Even so, some of the respondents seem to gravitate towards interaction establishment, as they perceive that the rule creation they are experiencing are not sufficiently predictable. Among the LPA respondents, opinions of which coordination mechanism is preferable appear to vary more than among the IHB respondents than among the LPA respondents. RA's insistence on the use of project-specific DDPs can be seen as an expression of plan and structure establishment through rules, whereas RC's argument for flexible DDPs can be seen as an expression of interaction establishment. It is also noteworthy that both RA's and RC's arguments use the PBA as a foundation but the two different interpretations of the PBA arrive at very different conclusions. Municipality B's dialogue-based process appears to

favour interaction establishment to an even further degree, but also indicates that this approach is limited to situations where the municipality can leverage its position as landowner through a development agreement.

It would also appear that there is a clear difference in perceptions of value between IHB respondents and LPA respondents. IHB respondents seem to focus on value contributed to the client's business process and value contributed to their own (the supplier's in Winch's terminology) business process, often in close conjunction with one another as if the two are inherently interconnected. Meanwhile, LPA respondents seemingly concentrate mainly on value contributed to society as a whole and additionally appear to, between themselves, prioritize differently among aspects of value in the planning and building process in relation to local conditions. To a certain extent, there also appears to be a connection between the preferred coordination mechanism and prioritized value aspects. RA, the only respondent to strongly argue for plan and structure establishing coordination mechanisms, is also the only respondent that takes a clear stand for architectural quality, a position that is presumably enabled by municipality A having a high level of competition between clients. For comparison, both RE and RG also want to prioritize architectural quality highly, but appear to be limited to interaction establishment by having a weak level of competition among potential clients. Overall, it seems as though the local politicians of the large municipalities A, B, C and D are able to prioritize more freely than the local politicians of the small municipalities E, F and G for this very reason. Among the larger municipalities interaction establishment appears to be the favoured coordination mechanism where speedy addition of new housing units is prioritized, particularly in municipality D. Similarly, in municipality B, where the local politicians seem ambivalent about deciding between high quality housing and cost-efficient housing, interaction establishing appears to be the preferred means of achieving coordination most of the time. However, the ambivalence does, to an extent, appear to be reflected by the LPAs dual approach, favouring plan and structure establishment as a basis for coordination for private land developments.

Using Jacobsson's (2011) categorization of coordination mechanisms, interpretations can be seen to relate to routine and culture establishing coordination. Interpretations are action performed by an individual that possesses skills and knowledge (Mintzberg, 1979) that transforms those skills and that knowledge into norms. As such, routine and culture establishing coordination mechanisms are relevant to this discussion. Keeping this in mind, there appears to be two distinct views among the LPA respondents of interpretations in the planning and building process. The first view, displayed by RD as well as by IHB respondents RA and RE, is that the National Board of Housing, Building and Planning should be responsible for telling LPAs which interpretations should be made. In other words: in the capacity of national governmental agency the National Board of Housing, Building and Planning should possess the standardization of skills and knowledge to make the necessary interpretations and communicate them to the LPAs, thereby ensuring a standardization of norms across municipal borders. The second view, displayed primarily by RA, is that local planning officers themselves should possess the necessary skills and knowledge to make any necessary interpretations as this is included in their professional role. A likely effect of this approach would be that each LPA would develop its own unique standardization of norms. These norms would, in small but significant ways, differ across municipal borders in an unpredictable way which is exactly the situation the IHB respondents wish to avoid. As such, which view an LPA organization and its individual planning officers decide to adopt regarding interpretations is likely to have a significant impact on the ease with which an IHB concept can be utilized within the borders of the municipality of that LPA organization. The two views also reflect which perception an LPA and its planning officers have of their role (Okhuysen and Bechky, 2009) in the planning and building process; are they

bureaucratic civil servants who safeguard the quality of the built environment through the application of a institutionalized set of norms (Martinez and Jarillo, 1989), thereby ensuring transparent and equal treatments for all projects, or are they members of a profession and influence the process outcome through the exercise of professional judgement guided by a standardized set of skills and knowledge (Mintzberg, 1979).

On a separate but related topic, RC and RE seem to advocate that in situations where LPAs perceive that the National Board of Housing, Building and Planning is not properly performing its function, in other words when the interpretations of the two agencies do not align, LPAs should reserve the right to enforce their own interpretations and the related norms. This line of reasoning appears to represent an overlap between the two previous views; in general, the interpretative prerogative should remain with the National Board of Housing, Building and Planning, but in special cases LPAs may intervene against interpretation that contradict their shared norms. This line of reasoning appears to be the origin of the intentional variation in regulation of the built environment reported by Viking and Lidelöw (2015). As such, although the variation may have been perceived as intentional by IHB contractors, the intentional decision to deviate from the National Board of Housing, Building and Planning's interpretation of the building code was partly based on the LPA's own interpretation. This seems to resonate with Viking and Lidelöw's (2015) claim that variation need not be either intentional or interpretative but may also simultaneously be both.

## **Conclusions and discussion**

Our aim has been to explore how coordination mechanisms can help understand tension between industrialized house-building contractors and local planning authorities in the context of the Swedish planning and building process. Our analysis has revealed an underlying tension between industrialized house-building contractors and local planning authorities with regards to their preferred mechanisms of coordination. We have conceptualized industrialized house-building contractors as reliant on plan and structure establishing coordination mechanisms such as formalization and standardization of outputs and work processes and local planning authorities as reliant on routine and culture establishing mechanisms such as socialization, roles and standardization of skills and knowledge, roles and socialization. In doing so we suggest that not only industrialized house-building, but indeed any approach to construction which relies on formalization and standardization of outputs and work processes as a means for coordination, may to some degree be susceptible to variation in regulation of the built environment. However, it is also important to consider the political and historical context of standardization in built environment regulation. Although variations in the regulation of the built environment can be seen as problematic by contractors that coordination through the use of standardization, from a democratic perspective, they may also be seen as a natural consequence of the Swedish political system and its emphasis on strong local power. Furthermore, the local planning authority respondents' tendency to focus on standardization of outputs as opposed to standardization of work processes may be contingent on the historical inheritance from the Swedish Million Homes Programme and the negative connotations it ascribes to standardization as a concept. As such, the role of and tolerance for standardization in Swedish housing construction is a contentious topic which requires researchers to carefully consider the potential biases towards the subject.

Moreover, in the context of regulation of the built environment, we have conceptualized interpretations as the process of translating skills and knowledge into norms. In doing so, we have identified two separate perspectives among planning practitioners with regards to the role that they ascribe to interpretations in the planning and building process. The first perspective accentuates that local planning practitioners themselves should be responsible for performing he

necessary interpretations of the regulatory framework and political prioritizations on a case-by-case basis based on their own professional judgement, informed by standardized skills and knowledge. The second perspective maintains that, although professional judgement is sometimes necessary, planning practitioners need the guidance of national level governmental agencies in figuring out which interpretations to make. This division raises an interesting question regarding the role of local planning practitioners in the regulation of the built environment. Are they to be considered bureaucratic civil servants, professional members or something else entirely? We believe that this question lies at the very heart of understanding variations in regulation of the Swedish built environment.

Empirically, we have found significant differences between how Swedish local planning authorities: 1) interpret and apply the formal regulatory framework related to construction, 2) prioritize between different aspects of social values in relation to various political goals, and 3) perceive the role interpretations play in the planning and building process. As such, our findings echo those previously presented by Viking and Lidelöw (2015). Additionally, in that our study builds on empirical material from both local planning authorities and industrialized house-building contractors whereas Viking and Lidelöw's (2015) study is limited to only contractors, our findings provide further support to theirs. A limitation of both approaches is, however, that neither study examines the interactions between local planning authority and contractors in relation to any one common project, but rather only the perceptions of each respondent in general terms. In our opinion a potential next step for furthering understanding the interactions between local planning authorities and industrialized house-building contractors could be to investigate their perception based on one particular project.

In closing, our study is the first to consider variations in the regulation of the built environment from both the industrialized house-building and local planning authority perspective. In doing so, the theoretical lens of coordination mechanisms has helped to highlight a tension between industrialized house-building contractors and local planning authorities, and as such has been valuable in integrating and contrasting the dual perspectives. Even so variations in the regulation of the built environment is still a topic in need of further empirical investigation and, whereas the industrialized house-building perspective is relatively well understood (c.f. Lessing et al., 2015), the local planning authority perspective requires further exploration. In particular, the division between how different planning practitioners view their own role in the planning and building process is in need of further research attention. Moving forward we suggest that the theoretical lens of institutional logics an institutional complexity can be a fruitful avenue for addressing local planning authorities in-depth as it synergizes well with Jacobsson's (2011) routine and culture establishing coordination mechanisms. In fact, Viking and Lidelöw (2015) and Viking and Stehn (2015) have both previously highlighted institutional logics and institutional complexity as prospective avenues for describing the local planning authority perspective on variations in the regulation of the Swedish built environment..

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## Institutional complexity in regulating the Swedish built environment

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# Institutional complexity and the role of planning practitioners: findings from a Swedish development process

Anders Viking\*

*Div. Industrialized and Sustainable Construction, Luleå University of Technology, 971 87, Luleå Sweden*

\*Corresponding author: anders.viking@ltu.se

Drawing on the institutional logics and planning and practice literatures, I develop theory about how the role of planning practitioners can reflect multiple institutional logics. Through a longitudinal case study of a Swedish land development process, I propose a conceptualization of planning practitioners as guided by three ideal type institutional logics derived from broader society. In doing so I contribute a theoretical framing that helps understand the multi-faceted role of the planning practitioner in the planning and building process.

Keywords: built environment, ideal type, institutional complexity, institutional logics, planning theory and practice

## Introduction

The role of planning practitioners in planning has been a perennial discussion in the planning theory and practice literature (Fox-Rodgers and Murphy, 2016). Across time the dominant planning theories, and by extension the expectations of the role of planning practitioners, have mirrored broad political trends (Sager, 2005). A core portion of the rational comprehensive models that dominated planning theory throughout the 1960s and 70s was the technocratic view of state officials that stressed the power of bureaucratic administration, professionalization of decision making and reliance on expert knowledge. The dominant role for planning practitioners emerging from this time period was the notion of the ‘planner as a bureaucrat’ (Beckman, 1964), a technical–economic specialist acting in accordance with the interests of the state. By contrast, the currently dominant paradigm is the communicative (Forester, 1989) or collaborative (Healey, 1997) planning model that seeks to limit the distorting effects of power imbalances between various stakeholder groups on the planning process. From this perspective the role of the planner is to deal with misinformation and be a guardian of the public interest by seeking to resolve conflict between competing stakeholder groups (MacLaran and McGuirk, 2003). Concurrently, neo-liberal movements such as New Public Management encourage public organizations to adopt the techniques and values of private businesses. This movement portrays planners as agents of the capitalist state who must facilitate private development (Yiftachel, 1989). Empirical investigations show that planning practitioners have historically struggled to define their own role in the planning process in relation to existing planning paradigms. Howe (1980) suggests that a majority of responding planners expressed views that aligned their role perception with a hybrid between technical and political roles. Similarly, Sager (2009) argues that Nordic planners are torn between dialogical ideals that are pulling them in one direction and efficiency-obsessed “realpolitik” pushing them in the opposite direction. Similar tensions between different roles of planning practitioners have also been found in the British (Campbell and Marshall, 2000), American

(Nalbandian, 2005), and Irish (Fox-Rodgers and Murphy, 2016) planning contexts. As such, it appears that the role of planning practitioners is complex with multiple concurrent role perceptions.

An increasingly popular way to conceptualize complexity is through the concept of institutional logics (e.g. Thornton et al., 2012). Institutional logics were introduced by Friedland and Alford (1991) in an effort to combat what they perceived to be a neglect of social context in institutional analysis. They argued that the behaviour of individual and organizational actors could not be fully understood without considering their relation to the five major societal level institutional orders of market, state, democracy, family and religion, each characterized by its own central logic. These logics are “the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality.” (Thornton and Ocasio, 1999, p. 804). Building on the concept of institutional logics a growing number of institutional scholars have begun investigating how individuals and organizations respond to institutional complexity, i.e. the pressures created by concurrent sets of logics that prescribe divergent cultural expectations, values, understandings and identities (Greenwood et al., 2011; Besharov and Smith, 2014; Reay and Hinings, 2009).

In this paper I endeavour to build on the institutional complexity literature to better understand the role of planning practitioners in the context of the Swedish planning and building process. My goal is to describe how different logics can collectively be reflected in the multi-faceted role of planning practitioners by analysing planning practitioners from a Swedish local planning authority as they regulate the built environment of a large-scale development project. Based on my analysis I develop a new conceptualization of the role of planning practitioners as guided by a constellation of logics derived from broader society. I propose that this conceptualization provides a theoretical foundation to understand coexisting multiple logics and their simultaneous influence on planning practitioners.

## **Institutional complexity**

The notion of institutional complexity, has been implicit in institutional theory ever since Meyer and Rowan (1977) observed that organizations confront both sociocultural and commercial expectations that may be incompatible. Scott (1991:167), similarly, noted that: “there is not one but many institutional environments and [...] some would-be sources of rationalized myths may be in competition if not in conflict.” Yet, despite this, the study of how organizations respond to institutional complexity received relatively limited attention during the formative years of institutional logics. Some authors, notably Kraatz and Block (2008) and Oliver (1991), did outline generic strategies for dealing with conflicting institutional demands but did not explore under which circumstances each response is mobilized. Hence, as ways of conceptualizing relationships between multiple institutional logics have shifted over time, the generic strategies have lost some of their explanatory power. Most of the early institutional logics research was focused on how populations of organizations respond to a single dominant logic and how subordinate logics over time can grow to challenge and usurp the previously dominant logic (e.g. Thornton and Ocasio, 1999; Scott et al., 2000). Over time interest shifted to a view of organizational fields (DiMaggio and Powell, 1983) in times of transition as fragmented and contested as multiple institutional logics battle each other for dominance over long periods of time, reaching the state of an uneasy truce before the conflict is eventually resolved and one of the logics emerges as dominant (e.g. Reay and Hinings, 2005; Suddaby and Greenwood, 2005). More recent contributions have embraced the notion that not all institutional conflicts are resolved and that logics can coexist over long periods of time as different actors, geographical communities and types of organizations are simultaneously guided by different logics (e.g. Greenwood et al., 2010; Reay and Hinings, 2009). Temporarily, these shifts coincided with continuous efforts (Thornton, 2004; Thornton and Ocasio, 2008; Thornton et al., 2012) to reframe the institutional logics concept into one that

embraces and seeks to explain heterogeneity, rather than homogeneity. Thornton et al.'s (2012) focus on how logics, through their linkages to the societal level institutional orders, provide social actors with different sources of meanings and practice opens up new avenues for theorizing conflict, agency and change (Lee and Lounsbury, 2015). Following the institutional logics perspective, a growing number of studies have begun to theorize the mechanisms by which organizations negotiate demands from multiple concurrent logics. A rapidly growing stream of research (Battilana and Dorado, 2010; Dunn and Jones, 2010; Pache and Santos, 2010; Pache and Santos, 2013) has focused on hybridization of logics and of organizational structures as a response to institutional complexity and the challenges that accompany attempts to converge elements of multiple logics while maintaining both outward legitimacy and internal unity (Battilana and Lee, 2014; Raynard, 2016).

## **Institutional logics in the planning and building process**

Previous planning and practice scholars have identified roles for planning practitioners and associated expectations for behaviour and action (e.g. Fox-Rodgers and Murphy, 2016). However, those roles have not been systematically explicated in relation to a common theoretical framework. A theoretical foundation for comparing the relative influences of the relevant roles is missing. Institutional logics and institutional complexity can provide just such a framework. Additionally, scholars of planning theory and practice have either focused on the unique attributes of particular roles (e.g. Beckman, 1964) or engaged in comparisons of two logics in a limited domain (e.g. Sager, 2009). Building on previous descriptions of roles for planning practitioners (e.g. Beckman, 1964; Albrechts, 1991; Sager, 2009; Fox-Rodgers and Murphy, 2016), I describe the characteristics of three institutional logics, which may be reflected in the role of planning practitioners: the professional, state and market logics. To identify the ideal types for each logic, I drew on my knowledge of the institutional logics and planning and practice literatures, turning my attention to previous studies where ideal types were developed to study institutional logics (Rao et al., 2003; Thornton, 2004; Goodrick and Reay, 2011). An ideal type is a “pure case in which the relevant features are distinct and unambiguous” (Weber, 1949, p. 88) and, as such, represents an abstraction from the empirical reality which provides a stable point against which to compare empirical observations.

In the *professional* ideal type, the role of planning practitioners is that of rational technical-economic experts, the purpose of which is to serve public interest by advising the rest of society on what is good and right through the prescriptions of technical-economic solutions. The expert achieves this by making discretionary judgement calls (Innes, 1995) based on an abstract body of knowledge, achieved through training and experience, that is inaccessible to the average layperson. As such, rational experts believe it impossible to standardize the procedures for and the output of planning and building process, as interpretations of the legal framework must be made, by them, on a case by case basis. The expert embodies bureaucratic values such as professionalism, technical excellency and maximization of societal value.

In the *state* ideal type, the planning practitioner takes the role of the facilitator and mediator, the purpose of which is to limit the distorting effects of power imbalances between different stakeholder groups (Sager, 1994). The mediator achieves this through engaging in dialogic endeavours with a wide range of stakeholders in a fairness and consensus seeking process. For the mediator there is no such thing as expert knowledge, only different opinions to be brought together (Allmendinger, 2009). As such, important tasks for mediators are collecting and giving information, negotiation, conflict resolving, consensus building, eliciting preferences and building political support. The mediator embodies democratic values such as openness, inclusivity, fairness, and transparency and values the input of the public though legally mandated public consultations for its unique personal experiences and

opinions of the built environment and, therefore, has a need to be perceived as trustworthy, committed, responsive, and humble (Tunström, 2009).

Finally, in the *market* ideal type, planning practitioners take the role of public manager, the primary purpose of which is to facilitate private development. The idea of the public manager is heavily influenced by neo-liberal “realpolitik” (c.f. Flyvbjerg, 1998) through the concept of New Public Management, according to which municipalities continuously compete with each other over “inhabitants that want an attractive place to live, work and relax, companies looking for a place to locate their offices and production facilities, do business and recruit employees, and visitors seeking recreational facilities in the cultural or leisure domain” (Hospers, 2006, p 1017). Managers are keenly aware about the importance of city branding and the need to attract members of the creative class (Florida, 2002). The manager facilitates private investment by providing developers with expertise in substantive and procedural as if providing a service to a customer. The manager embodies business-like values such as accountability through transparent, timely and proper deliveries; and competition over resources (Sager, 2009). A fundamental assumption is that competition between developers improves the overall end-quality by only promoting the very best. Similarly, the constant competition between municipalities promotes efficient use of resources which in turn maximizes the value experienced by taxpayers. In the planning and building process, managers utilize economic incentives, such as discounted land pricing to influence developers into choosing desired designs.

## Introducing Nature Town

Empirical material for this study was collected from an eleven-month long investigation of the local planning authority of Muni (a pseudonym), an above-average sized Swedish municipality, during 2016. Local planning authorities constitute the portion of the civil servant organization concerned with regulation of the built environment as well as the corresponding political board. The primary tasks of local planning authorities include providing detailed development plans for areas of interest for future development, judging building permit applications, and to enter land development agreements with developers over the execution of planned developments. In cases where the municipality owns the land intended for development a development agreement dictates the conditions under which the municipality accepts transfer of the land to the developer, and as such development agreements for public land serve as an additional form of regulation on top of what is possible for privately owned land. Nature Town, the development of which was the focus of this study, is a large brownfield area transferred to municipal ownership after it was abandoned by the military two decades ago. It is estimated that once fully developed Nature town will accommodate housing for 5500 residents as well as necessary community functions. As such, Nature Town constitutes the largest development project on public land the local planning authority has undertaken since the 1970s.

Common praxis among local planning authorities is to conduct most of the regulation of the built environment through detailed development plans, however, as Nature Town resides entirely on municipal land the local planning authority has elected to regulate primarily through the use of development agreements complemented by a low-detail detailed development plan covering the entire Nature Town development area. Detailed development plan revisions are time and cost intensive, but as development agreements are more flexible and can more easily be adapted to changes in market conditions this approach results in lower long-term risks for Muni. However, as the existing process for establishing development agreements had been subject to criticism it was also decided that a new process model was to be developed and implemented in the Nature Town development project. The underlying idea for the new model was to create a more open and transparent process, in which more developers have the opportunity to participate and in which the design of the built environment emerges from dialogue between developers and the local planning authority. The resulting process

model consists of two stages: first an assessment stage in which all willing developers may enter development proposals for new blocks from which a smaller number is selected for further consideration, and a negotiation stage throughout which the remaining proposals are refined ultimately resulting in the signing of a development agreements. Muni's newfound commitment to regulation though development agreements and vision for an inclusive dialogue-based process mirror current trends in Swedish land development processes and, as such, Nature Town represents a rather typical case of a Swedish municipal development process at the current point in time. My investigation has followed two groups of planning practitioners, each active during one of the two stages of the development process for the first expansion phase of Nature Town, focusing especially on how these groups and their members respond to the pressures of institutional complexity during the process.

## Methodology of the study

Table 1 - Overview of the Local Planning Authority and Developer Respondents.

Local planning authority respondents:		Active in stages:	
Alias	Respondent	Assessment	Negotiation
A	Business Developer, Nature Town Development	X	
B	Urban/Detailed-development Planner	X	
C	Strategic Planner/Sustainability Expert	X	
D	Strategic Planner/Sustainability Expert	X	X
E	Architect	X	X
F	Land Development Engineer	X	X
G	Landscape Architect/Detailed-development Planner		X
H	Nature Town Project Owner		
I	CEO, Nature Town Development		
Developer respondents:		Experienced stages:	
Alias	Respondent	Assessment	Negotiation
$\alpha$	Project Developer	X	X
$\beta$	Business Development Manager	X	X
$\gamma$	Lead Architect and Developer Proxy	X	X
$\delta$	Sales Manager	X	X
$\epsilon$	Project Manager	X	X
$\zeta$	Project Manager	X	X
$\eta 1$	Business Development Manager	X	
$\eta 2$	Lead Architect	X	

The study is based on case study methodology which includes a number of different data collection methods, such as interviews, participative observations and document analysis. A total of ten interviews were conducted with members of the two active groups after the conclusion of each stage. As three planning practitioners were part of both the stage one and stage two active groups (see Table 1), this resulted in them being interviewed twice, whereas each other member was only interviewed once. The interviews, which lasted between one and one and a half hours, were recorded but not fully transcribed. The interviews were loosely structured around a number of predefined question areas which focused on the experiences of each member and their reflections about ways in which the process could be approved. This format allowed for the same questions to be asked to all respondents while at the same time ensuring space for adequate follow-up questions. According to the same procedure, additional interviews were conducted with representatives of the six developers that were selected for the dialogue phase as well as with one developer that was not selected were conducted after the conclusion of stage two. These interviews focused on the developers' perceptions of the process, their experiences with other similar processes, and their suggestions for improvements. Finally, on a continuous basis two more interviews were performed with selected core members of the local planning authority

organization, targeted at providing insight into the historical and organizational context of the Nature Town development project.

Over the course of the study the two studied groups attended 15 presentation meetings with prospective developers and conducted 18 dialogue meetings with selected developers plus 16 internal meetings, all of which were attended and observed by me. During these meetings the I adhered strictly to the role of observer and my presence was readily accepted by all participants. During the observations field notes were taken both of comments made by the observed participants and of my own reflection of the situations, made in that same moment. In addition, documents pertaining to the first expansion phase of Nature Town were collected and studied as a source of reference by which to triangulate the findings from the interviews and observations. The collected documents include the local planning authorities open call for development proposals, development proposals from prospective developers, documentation of internal meetings and dialogue meetings with developers, e-mail correspondence and drafts of development agreements.

During the early stages of data collection, it became apparent that patterns in communication, perspectives invoked and certain repeat phrases and keywords were used by the observed and interviewed members of the local planning authorities. The process for collecting and analysing empirical material progressed iteratively as new and existing material was compared against emerging dimensions of interest. As themes emerged, the collection strategy was refined to ensure efficient and accurate records of the observed events. I sorted observations into emergent categories based on the recommendations and suggestions by three of my colleagues until I reached a point of theoretical saturation, at which point all future observations fit into constructed framework.

## **The Nature Town Development Process**

In 2012 Muni established a municipal company by the name of Nature Town Development (NTD) with a twofold purpose. Firstly, NTD was to market the Nature Town area and Muni with the purpose of garnering interest in the municipality and persuading non-local developers to establish themselves in in Muni by participating in the development of Nature Town. Secondly, since the local planning authority lacked the proper organizational structure to manage large scale development projects, NTD was to coordinate the development process for the Nature Town area until such time that such a structure could be developed. An accordance with this plan, in January 2015, Muni underwent an organizational restructuring after which NTD's tasks were successively transferred to the regular local planning authority organization until, on January 1st of 2017, NTD was dissolved. As such, during the period of study the two organizations were running in parallel and, prior to that, the work performed by NTD set important parameters for the development of the Nature Town area. Hence, although the main focus of the investigation has been on the local planning authority organization, NTD provides contextual information important to understanding the new process model.

One of the two most noteworthy of NTD's contributions to the Nature Town development project is the development of a 'Quality and Design Programme' (QDP) for the Nature Town area, in which guidelines for design of the area were established and important qualities were defined. As such, the QDP sets key parameters for the design of the Nature Town built environment. At the time it was decided that the resources and competences necessary to develop the QDP in-house did not exist in the current local planning authority organization and, as such, the services of an external Architectural company were procured. This decision was not looked on favourably by all the local planning authority respondents. Most notably, respondents C, D and, E, giving expression for the professional logic, did not think that the QDP developed by the procured architectural company provides enough practical guidance to developers for what the local planning authority considers important in terms of building

design and sustainability. Among the interviewed developers, opinions on the QDP were split. While some respondents agreed that the programme had the nature of a utopian wish list and, therefore, difficult for developers to interpret, other praised the local planning authority for having the courage to express its visions for the Nature Town area so boldly.

Another legacy of the NTD was a first draft for the new land development process model that was used as the template for the first expansion phase of Nature Town. According to this draft, the process would consist of three stages rather than two: first an assessment stage, including face-to-face interviews, from which a number of developer proposals would be chosen for further consideration; then a negotiation stage in which the proposals would be refined and improved based on the feedback of the local planning authority; and finally another assessment stage in which the final proposals would be selected and development agreements be entered. As such, in the competitive spirit of market logic, a linchpin of the model was that the first assessment stage would pass more proposals than were needed for the final selection, so as to promote competition between developers during the negotiation stage. This was also the formal process model presented to developers as part of an open call for proposals issues in March 2016. However, of the fifteen submitted proposals, the assessment stage passed only six, one for each of the blocks in the first expansion phase. The decision to do so was made after a great deal of uncertainty and internal discussion, but in the end it was deemed to be too difficult to conduct a meaningful dialogue with the developers if they did not know the site conditions for their project and could show how they had accounted for them. As such, the decision was primarily made on the basis of a combination of state logic. However, in hindsight, several of the local planning authority respondents lamented this decision as they perceived it to have had negative effects on the interaction with developers during the negotiation stage. Respondent G, giving voice to the competitive aspect of market logic argued that: *“in only selecting one developer per block we have lulled the developers into a sense of security that has not been favourable for the process [...] because if you end up in a situation where you have to abort negotiations with one developer you need to have a fleshed out reason for doing so.”* In the end, the same six developers that were chosen in the assessment stage were also offered to enter development agreements at the end of the negotiation stage.

### **Stage 1 – Assessment**

The open call for development proposals for the first expansion stage of Nature Town asked prospective developers to respond with descriptions of how they aim to fulfil the guidelines regarding design and sustainability presented in the Nature Town QDP. As we shall see, this approach is consistent with both professional and the competitive aspects of market logic. Later, the members of the assessment group reflected that this request was perhaps too open-ended, as the ensuing responses varied greatly in terms of page count, included content and degree of execution, making the different proposals more difficult to gauge against each other. This line of reasoning is supported by the fairness seeking nature of state logic as well as demands for accountability from market logic. At the same time, respondents C and D, echoing the professional logic, remarked that an open-ended question makes it easier to spot which developers have the right mind set and think about the right things. Developer respondent  $\beta$  argued that open-ended questions is a very fair way of asking, as it becomes a competition over who can best fulfil the specified goals, rather than a competition over who pays the most for flashy illustrations, however it requires the assessment group to be able to look beyond the exterior and not be blinded by flashy proposals. Similarly, respondents B and E, giving voice for concerns grounded in state and market logic, remarked that it is important to remember the evaluation criteria, but that if a proposal present something that was not asked for that it is natural to want to evaluate it.

In order to help ensure fair assessment an assessment template was developed. However, disagreement arose within the assessment group regarding how the template was to be used. In the interest of

transparency grounded in the accountability aspect of market logic, respondent A argued the importance of actually evaluating the received proposals in the same way that it was announced in the open call. In contrast, respondent D was concerned that the template made the assessment process too quantitative and mathematical rather than, as the professional logic dictates, holistic. While agreeing that an entirely quantitative assessment is problematic, respondent F voiced concerns, consistent with market logic accountability, that a lack of an expressed weighting system also causes issues: *“I think it was a continuous problem. We considered so many different factors that reasonably should not weigh the same. We highlighted the things that were good, but not necessarily the things that were most important. Ten mosquitoes and an elephant, you know.”* In the end all members of the assessment group agreed that the assessment template was useful as a way of structuring information and making sure that no aspect was forgotten. The sentiment that there was a lack of clarity over which factors were important was echoed by respondents  $\eta_1$  and  $\eta_2$ , one of the developers that did not pass the assessments stage. They argued that it was not clear which factors the assessment group would emphasize and had they known that, it would have been very easy to revise their proposal to include those, in their eyes, minor aspects. Even among the six developers that did pass the assessment stage the general consensus was that clarity regarding why their proposals were deemed to be better than the remaining nine was lacking. Although some had not explicitly reflected on this topic, none were really able to pinpoint the aspects of their proposals that exceeded the others’.

Summarizing, the assessment group members were in agreement that using assessments as a way to weed out the less thought-through proposals does increase the quality of the finished product. This is another instance where professional and market logic complement each other. Using professional logic as a starting point, respondent E argued that it *“is the only way to obtain the best and sharpest solutions and the most ambitious developers”*. However, respondents  $\alpha$  and  $\gamma$ , both of build leasehold estates, counter argue that since they plan to manage their properties themselves they already have incentives to deliver good value for the tenants as well as sustainable long-term maintenance costs. Additionally, respondents  $\gamma$ ,  $\epsilon$ , and  $\zeta$  all argued that an unfortunate effect of processes which utilize assessment or competition-like elements is that they result in higher consultancy costs early in the project and that those cost must somehow be covered. Respondent  $\beta$  further clarified that *“I do not think that the municipality is aware that their process by design drives costs. You have to tell them that now that our architect has had to redraw this proposal twenty-seven times the costs of that work will naturally affect the final price of our product.”*

## **Stage 2 – Negotiation**

The second stage of the process was officially called the negotiation stage, however, the group members unanimously questioned whether that was actually the right name for the group. Unofficially, the group referred to themselves as the dialogue group as they considered that name to be more akin to their actual function in the development process. Respondent D explained that: *“When work began for the negotiation group I did not understand what we were supposed to negotiate about, since we did not have any cards left to negotiate with: the blocks were already assigned and the price was already set. So, besides threatening to throw them out unless they meet our requirements which is a very extreme punishment, what was left? I do not understand how you could enter a negotiation after having thrown away every card in your hand.”* The respondent is referring to an internal discussion, initiated by an external consultant influenced by competitive aspects of market logic, over whether or not to allow for adjustments of the land price to use as an economic incentive for developers to incorporate desirable design and sustainability solutions. However, ultimately it was decided that, in the interest of fairness, the land price would remain constant. The use of economic incentives in the form of adjusted land prices is a feature of market logic, whereas arguments for fairness and transparency are consistent with both state logic and market logic depending on whether fairness is based in democratic or business-like values.

Some of the developer respondents also reflected on the distinction between dialogue and negotiation. A clear difference could be seen between  $\delta$ , who thought that discussions with the negotiation group were held on equal footing, and  $\alpha$  and  $\zeta$ , who felt as though the negotiation group clearly held the stronger position. Respondent  $\alpha$  clarified that: *“During the process we perceived that the municipality had a lot of wishes for the design, but that they were not direct demands. But in the end it turned out that they were actual demands that, furthermore, would be stipulated in the development agreement.”* During the negotiation process, the investigator noted that the general atmosphere in the room did vary significantly depending on which developer was currently meeting with the group. Respondent G also reflected on the differences: *“I think it is interesting that two developers with roughly the same product can have so remarkably different approaches to what they want to achieve. In the beginning I tried to treat all the developers the same, but then I realized that they were different and that we had to adapt to who was sitting in front of us. And in the end we can still see that different developer have better or worse with different types of issues.”* Essentially, depending on which developer was currently in the room the planning practitioners seem to have been guided either by state logic or professional logic.

Regardless of whether they thought that their opinions were heard in the negotiation process, all developer respondents that had participated in the negotiation stage but  $\delta$  thought that the local planning authority had tried to regulate too many detailed questions, a sign of the professional logic, at least for this stage of the development process. Respondent  $\zeta$  argued that *“right now they regulate things such as that it needs to be a timber-frame building. Things like that are really difficult for a developer to lock down before they procure their main contractor because it will affect the costs of the project. In fact, this type of process favours developers that have already decided which contractor they are going to go with and therefore, have a better understanding of what is and is not economically possible.”* However, respondent  $\gamma$  cautioned against allowing the contractor to influence the process too much: *“I think it is dangerous to let the contractor decide too much this early in the process because they are so focused on project economy and making a quick profit. In that sense I am not convinced that it is an advantage to have that type of constellation in this type of process.”*

In closing, the developer respondents were generally positive to dialogue-based formats because, as respondent  $\beta$  put it: *“it helps straighten out the question marks and helps you feel that you are in control of the process. It leads to fewer insecurities, so to speak.”* The local planning authority respondents, following state logic, generally agreed that dialogue-based forms of regulation offer an added value compared to traditional requirement setting, however respondent F was unsure of whether those values have been realized in this particular instance of dialogue. In contrast, respondent E considered the dialogue process to be successful: *“face-to-face dialogue offers many benefits because it can birth ideas that can make the end result better and I think I can point to instances of that in all six of the proposals [...] I think it is a good way to accomplish co-creation, because they are not the only ones that create; we do it together with our ambitions rooted in the QDP and our personal experiences. It gives a much better opportunity to develop ideas, particularly in the early stages of a project.”*

## Discussion

In my study I saw that planning practitioners in the planning and building process were simultaneously guided by different logics. Analysis of the development process and its evolution through its stages reflected influence from professional, state and market logics. The initial draft for the Nature Town development process model showed particularly strong influences of market logic, but very little influence by either professional or state logics. In the assessment stage I observed that market logic, professional logic and state logic all had significant influences. Interestingly, with regards to assessment, different aspects of market logic are simultaneously consistent with both the professional and state logics. On the one hand market logic prompts local planning authorities to emulate businesses and, as such, strive to enable competition among developers so as to elicit the best possible result. In this sense

market logic is complementary to professional logic, which also dictates a strive towards the best possible solution for society as a whole. On the other hand, market logic also dictates that local planning authorities should approach developers as customer and, as such should strive towards maximizing accountability through timely and transparent deliveries. In this sense market logic prescribes the same type of behaviour as state logic, i.e. to promote fairness and transparency, although for a very different reason. Sager (2009) has noted that although the individualism of neo-liberalism and the collective nature of discourse ethics lead to different sets of values in New Public Management and Communicative Planning Theory, there are occasionally patches of common ground. As such, the state logic prescribes openness and transparency in order to ensure fairness for the public in their capacity of citizens, whereas the market logic prescribes transparency in order to increase accountability towards the developers in their capacity of customers. In the negotiation stage the professional and state logics remained significant, but the market logic, partially due to decisions taken in the assessment stage, decreased in strength. Another interesting observation is that, although the term dialogue was preferred among the planning practitioner, not all developer respondents describe the process as being guided by state logic. In fact, the nature of the dialogue varied significantly between the different developers and some seemed more influenced by professional logic than by state logic.

Furthermore, the analysis shows that different types of planning practitioners, throughout the development process, seem more invested in certain logics than others. The respondents that were hired as external consultants, either by NTD or by the new local planning authority organization, tended to relate more closely to market logic. In the case of NTD this is not surprising, given that city branding and marketing of the Nature Town area and the municipality to prospective developers was central to the NTD mission statement. An interesting reflection is that over time, as NTD was being replaced by the new local planning authority organization the influence of market logic diminished, signalling that the planning practitioners of the local planning authority organization were less invested in market logics than were those of NTD. In addition, a clear difference can be seen between those planning practitioners that viewed their purpose for participating in the development process as representing or safeguarding a particular type of expertise, versus those that did not. Respondents C-E each stated that their personal expertise or organizational affiliation with a division that represented a particular type of expertise was the reason for their participation. The same three respondents also displayed a stronger affinity with the professional logic than did any of the other planning practitioners. This observation is important specifically for understanding variations in the regulation of the built environment. Based on this finding it therefore becomes pertinent to consider not only the local planning authority as a whole, but also the distribution and embeddedness (Thornton et al., 2012) of different logics among its planning practitioners. Factors such as educational background and professional experience play a large part in how individuals are exposed to institutional logics through socialization and therefore become important for understanding which institutional logics are available and accessible (Hong et al., 2000; Hong and Mallorie, 2004) to planning practitioners in a given situation. As such, the diverse composition of planning practitioners within and across local planning authorities further adds to this complexity.

## **Conclusions**

I wanted to understand how the role of planning practitioners can be influenced by multiple concurrent institutional logics. Based on a reading of the planning theory and practice literature I identified three distinct logics: the professional logic, state logic, and market logic. Each of these logics prescribe a different role and, by extension, expectations for behavior and action for planning practitioners. The professional logic portrays planning practitioners as technical-economic experts, the purpose of which is to, based on an abstract body of knowledge, make discretionary judgements of the betterment of society. The state logic describes planning practitioners as mediators between public and private

interests that, through open and transparent dialogue seek to instill consensus and mutual understanding. The final role, ascribed to planning practitioners by the market logic, is that of a public manager constantly competing with other municipalities over inhabitants, companies, and tourists.

This study contributes to planning theory and practice by providing a new theoretical framing that helps understand the role of planning practitioners in the planning and building process. The conceptualization as institutional logics and institutional complexity provides a way for planning scholars to draw on institutional complexity research conducted in the wider field of management. Furthermore, I contribute to the literature on planning and practice by outlining three ideal types previously discussed in the planning theory and practice literature. In doing so I provide a theoretical foundation that enables the reinterpretation of previous research on the role of planning practitioners. For instance, the topic of tension between democratic and market-oriented ideals experienced by Nordic planning practitioners (Mäntysalo et al., 2011; Puustinen et al., 2017; Falleth et al., 2010; Sager, 2009) can be reinterpreted as a situation of institutional complexity. As highlighted by my analysis different aspects of the market logic are, at times, complementary either to the professional or to the state logic. As such, the proposed framework enables discussion not only about the internal consistencies of different logics, but how planning practitioners can leverage them against each other.

Finally, consistent with findings from Howe (1980), Sager (2009) and Fox-Rodgers and Murphy (2016), I have found that not all planning practitioners view their role in the planning and building process to be the same. My analysis has suggested that educational and experiential background are important determinants for which role a planning practitioners identifies closest with. This finding is of particular interest for those that seek to understand and predict variations in the regulation of the built environment. For instance, research in the field of construction management highlights that variations in the regulation of the built environment can be seen as detrimental to non-local construction contractors that coordinate their work through the use of standardized building systems and production processes (Viking and Lidelöw, 2015). Like any single case design, this study inevitably trades empirical richness for overall transferability. As such, there is need of more research attention directed specifically at the underlying causes of variations in the regulation of the built environment as well as of the processes by which they emerge.

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