

Frontage Rules

How Societal Ideas of Legal Regulation Affect Micro-Morphological Solutions at Street-Level

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Abstract: As an element within the urban fabric, the urban frontage reflects and is a result of societal ideas of its time. Rules, codes and regulations are social constructs derived from the dynamic relation between society and built environment forming one of the highest levels of societal consensus in the organization of city society. Embedded in legal framework, they determine the *production of the façade-threshold* (Børrud & Standal, 2019) creating conditions for urban experience.

This paper explores the development of historical regulatory narrative of the façade-threshold and the nature of relation between built-form and regulatory development. This investigation is based on the development of the Norwegian regulatory system the last century, through the Planning and Building Act and related technical regulations. These are analysed using *assemblage theory* and *conventional content analysis*. It explores two dimensions, the *façade-threshold and modality of recommendation* in the legal text (to what degree it is enforced). Chronological development of regulation and the morphology of façade-threshold form a basis for analysis. This reveals an early focus on the urban frontage, as a priority, which reduces over time as both a regulatory and societal concern, and informs on the societal ideas and concerns which determine today's urban form.

1. Introduction

The book *Urban Forms: The Death and Life of the Urban Block* presents a morphological account of the development of relation between the dwelling and the city through the last century. By describing the different steps of this transition process from perimeter block to free-standing slab block it presents a basis to understand how form and structure are vital in framing everyday lives and urban experiences. The book suggests how the thoughts of modernism contributed in dissolving this relation by both abandoning the street grid as well as separating buildings as free-standing objects (Panerai *et al.*, 2004). This typological dilution and interface rupture came as a result of modernist ideas in which planning was split apart from architecture, presenting a focus on *objects* of form and land-use space and neglecting the *relations* that kept these objects together in the building-street relation, as such the spatial aspect of urban knowledge disappeared. Seminal voices such as Jane Jacobs and Christopher Alexander challenged the modernist ideas of functional distinction and suggested different approaches in city building. Alexander

challenged the tree-like structures of hierarchical thinking and suggested an understanding of cities as overlapping semi-lattices where a range of *relations* take place (Alexander, 1964). Jacobs proposed to professionals to engage in the science of complex systems and relations presenting prospects for a better understanding of how cities work (Jacobs, 1961). The founding father of urbanization as a professional field, Ildefons Cerdà, engaged in the capacities of relations in city building, both between domains and as relations between parts. In his theory of urbanisation from 1869 he defined *urbs* and *civitas* respectively comprising the physical city and the city organisation in a dialectic and reciprocal dependent relation. Cerdà connected street space as an integral part of the building object highlighting the *relation* between these as forming the *quintessence of urbanization* (Soria y Puig & Serratosa, 1999).

The urban form of Oslo presents examples and similar problem of the transition process in the urban housing blocks from the late 19th and early 20th century and up to current examples. Housing demands and provision became the most important societal task as a response to problematic conditions of industrialisation that developed as the urban fabric densified (Ridderstrøm, 2015) This Industrial climate presented the impetus for the first step in a typological dilution and geographical displacement of the urban housing block from the inner original compact city, out to the suburbs and back to the intended compact city (Børrud, 2013). As such, another aspect presents itself, geographical displacement of form though space conditions/constraints. This journey can be illustrated by a morphological *loop* of geographical displacement and typological dilution explaining an interface rupture in the relation between building and street that this paper engages in.

The morphological loop of housing projects in Oslo is presented through six different types. (Figure 1) The first comprised the clearly defined and enclosed urban form of the *perimeter block* (1) closely knit with the street network, exemplified by the private development of Grünerløkka built between 1870 and 1890. The next step includes the *large court block* (2) related to the modified grid, exemplified by the public development of Torshov built between 1915 and 1923. The *street-related slab blocks* (3) exemplified by Ila built between 1935 and 1948 forms the third type. These three first types are built closed to work places and within close vicinity of the city centre



Figure 1. Geographical displacement and typological dilution of urban form – Oslo context.

and are all related to the street. The fourth type comprise the *free-standing lower slab blocks and tower block* (4) exemplified by Valle built between 1953 and 1960, and is presenting a geographical shift moving the house further away from both the street and the city centre. The last type of geographical displacement includes the aggregated slab blocks and tower blocks (5) inside a ring road, exemplified by Romsås built between 1970 and 1974, where the buildings have lost any contact with the street. Finally, the hybrid solution of the “perimeter styled” *slab and tower blocks* on top of a podium forms the last type in this loop, and is exemplified by the development of Løren from the early 2000s presenting a compromised approach to the building-street relation.

This paper address the problem presented in the book about urban form and in the story about housing projects in Oslo, *the interface rupture of the urban block*. It engages in this problem through an investigation of the legislative acts; seeking to understand how this can have happened by researching how this history can be assessed and discussed through the regulations. As an element within the urban fabric, the urban frontage reflects and is a result of societal ideas of its time. Rules, codes and regulations are social constructs derived from the dynamic relation between society and built environment, forming one of the highest levels of societal consensus in the organization of city society (Skatland, 2018). These regulations represent collective societal ideas embodied in a legal framework, which determine the production of the physical public-private interface. The paper presents the impact of legislation both as a *precondition for* and as a *result of* urban form and on the production of the *façade-threshold*, a new concept presented by Børrud & Standal in a parallel conference paper (Standal & Børrud, 2019). This concept presents the relation between building and street, including *façades* of visual and physical permeability as well as *thresholds* of depth and spatial interaction, comprising both *relations and objects*. In this paper I look for explanations about this problem in the legislative development and morphological results of urban form in the last century by asking the following research questions;

- How has the regulatory description addressing the *façade-threshold* developed over the last century?
- What is the impact of legislation both as a *precondition for* and as a *result of* urban form as revealed through the production of the *façade-threshold*?

Seminal thinkers such as Cerdá, Jacobs and Alexander form precedents of the understanding that has come to light in the last decades through the work of philosophers Gilles Deleuze, Félix Guattari and Manuel DeLanda on assemblage theory (DeLanda, 2019; Deleuze & Guattari, 1988). I suggest that we can read the *façade-threshold* of the Urban Frontage through the lenses of these assemblage perspectives, where complex *relations* between material forms and socio-spatial practices, between human and non-human, between top-down and bottom-up processes forms the basis of the understanding. The unique spaces and places of the *façade-threshold* form complex interrelations between parts; this includes both the urban form and the legislative ideas being able to react to and develop this form.

2. Methodology – Conventional content analysis

I have investigated the research questions through a conventional content analysis of regulatory documents covering the top level of the building codes and related to urban form development in the last century, looking for the effect it plays on and the way it is affected by this urban form. The empirical sources include the Norwegian Building acts with technical regulations,

as well as the 1965 public road act. The legal regulations and planning system are constitutional constructs based on Norwegian history, legal traditions and practices. They provide a two-way perspective on the production of built environment, *the planning system* and *the legal regulations for buildings* (Røsnes 2005). This investigation considers the regulation, and uncovers a “hidden” planning system by which the regulation of details and buildings has a direct effect in determining the urban form. They form site-unspecific regulation at the highest level of Norway’s legally enforceable system, which focuses mainly on *built object* rather than *unbuilt space*, and crucially lacks a focus on the relation between *built and unbuilt*.

The story of the legislation, rules and codes has been reflected on in a range of research addressing *rules* (Talen, 2012), *law and technical regulations* (Skatland & Lohne, 2016) and *planning history* (Grønning, 2017; Ridderstrøm, 2015) while morphological changes of urban form have been investigated through *morphological* (Panerai et al., 2004) (Sonne, 2009), and *Syntactical* (Hanson, 2000) patterns of transformation. Emily Talen combines morphological results and legal ideas, connecting the *effect of rules on urban form* as a type of social history where rules reflect values embedded in legal framework. She highlights that assemblage of rules, modest in their individual capacity, presents physical outcomes affecting patterns and forms in explicit and direct ways.

My method for the investigation includes conventional content analysis and diagrammatic development. Content analysis emphasises how a text makes its descriptions explicit and enables the opportunity to evaluate how building regulations reflect an interaction and relation between built environment and society. The method is used to highlights the features by telling both *what* (about the object) the building code describes and also *how* it describes this object. This type of spatial knowledge production is produced through relational thinking and diagrammatic drawing through lenses of assemblage theory. The method borrows from and develops a recent work from Skatland et al (Skatland & Lohne, 2016).

Investigation of the façade-threshold as an analytical parameter requires a first step of *selective and analytical reading* with three different purposes; *overview of the whole legal framework, analytical assessment and coding*. It includes selecting and analysing data into *macro-, meso- or micro-morphological aspects*. *Macro* includes the urban tissue, the grid and structure of the built form, *meso* comprises the simple tissue/street, the urban block and plot series and *micro* includes materials, structures, spaces and buildings within the individual plot. This classification is a simplification inspired by Kropf’s generic structure diagram (Kropf, 2014; Kropf, 2017) presenting relations consisting of part-to-part, and part-to whole connections. In the second step data is *sorted, refined and visualized* into a 12-field matrix, representing *what* (three categories of morphological scale) and *how* (four categories of modality) it describes. This step of examination reveals the degree of explicitness, of recommendation and/or enforcement, in the description of façade-threshold. Each of the relevant paragraphs selected is analysed by their linguistic modal degree. I am using Skatland’s approach of 4 distinct degrees expressing an interval spanning from vague possibility to unambiguous necessity including *Recommendation, Cohesive recommendation, absolute and quantified regulation*. In the last step the whole process is repeated for the different acts and presented in a *time-series diagram* (figure 1) as a collection of comparable diagrams showing both description and modality of the façade-threshold.

The spatial knowledge production in my research comprise diagrammatic development of timelines produced through relational thinking and drawing. Kim Dovey and Elek Pavka suggest the language of urban thinking includes knowledge embodied in diagrams and central to discourses of spatial knowledge. They emphasise that the development of diagrams are funda-

mentally relational rather than reductionist and reveal general patterns of both sociality and spatiality (Dovey & Pafka, 2019). As such, this method relates well to an assemblage perspective within the research.

HOW: MODALITY STRENGTH	WHAT: MORPHOLOGY SCALE	LEGISLATION	MACRO GRID / STRUCTURE	MESO BLOCK, PLOT STRUCTURE	MICRO	
					FACADES	ENTRANCE TYPE
LOW		BUILDING ACT 1924 TEK28/TEK 49 First building act for all the cities. All built form should be connected in urban blocks		\$26 The relation between built and unbuilt space should be established: 1 By distance regulation for the independent buildings, 2 By regulation of site coverage 3. By building lines in the inner yards of the blocks	"\$124_4 The Building Council may issue special rules for roof shapes, height and architectural equipment in addition to specific areas or parts thereof"	R
				\$23 The character of the buildings (open or dense), the distance from neighbouring plot and how much of the inner yards can be built		CR
				\$26 Buildings shall be organised in an architecturally appealing way, and in such a way so that the new and old buildings are in harmony with each other	"\$70_1 Railings, poles, rejects, buffaloes and the like, must not be placed in the street or pavement without the building council's permission."	AR
HIGH		BUILDING ACT 1965 TEK69/TEK 85 First planning and building act for the whole country. All built form should be freestanding. Governance and support		\$79 The building council may prohibit buildings which, by their nature or size, deviate significantly from what is common in the district, when... makes it difficult to properly develop the district in the future	\$69_2 the municipality may agree that a common area be set aside for two or more properties.	R
				\$74_2...any work that is subject to the provisions of this Act is planned and carried out in such a way that, in the municipality's opinion, it satisfies reasonable aesthetic requirements	74_2 Unightly colours are not permitted and may be required to be changed.	CR
				\$66 can only be split or built if the building site (s) is either secured by legal access to road open for ordinary traffic, or by registered document or otherwise secured road connection ...	"\$103_1 Fencing. 1. In urban areas and in areas where by-laws so require, a lot shall be fenced off from roads when not fully developed right up to the road line."	AR
1900		BUILDING ACT 24			\$70_2 Detached building shall have a distance from neighboring boundary which at least corresponds to the building's half height and not less than 4 m	QR
1910		PLANNING & BUILDING ACT 1985 TEK87/TEK 97 Revised planning and building act. Governance and negotiation. Planning from private actors included		\$105 The municipality may lay down provisions concerning lighting and cleaning of yards, passages, stairways, and lighting and ventilation pits, and for the placing and design of house numbers.	\$69_2 the municipality may agree that a common area be set aside for two or more properties.	R
				\$74_2...any work that is subject to the provisions of this Act is planned and carried out in such a way that, in the municipality's opinion, it satisfies reasonable aesthetic requirements	74_1 1. Any building with rooms intended for human habitation shall be satisfactorily arranged, with satisfactory lighting, insulation, heating, ventilation and fire prevention.	CR
				\$104 In urban areas, undeveloped land shall be kept tidy and in proper condition.	"\$103_1 Fencing. 1. In urban areas and in areas where by-laws so require, a lot shall be fenced off from roads when not fully developed right up to the road line."	AR
1920		BUILDING ACT 65 PBL 85		\$70_1 1. The location of the building, including the level of location, and the height of the building shall be approved by the municipality.	\$70_2 Unless otherwise decided..., the distance of the building from the boundary of adjoining property shall be equal to at least half the height of the building and not less than 4m.	QR
1930		PBL 08				

R - RECOMMENDATION CR - COHESIVE RECOMMENDATION AR - ABSOLUTE REGULATION QR - QUANTIFIED REGULATION

Figure 2. From prescriptions to recommendations – regulation of facade-threshold.

3. Analysis/Results Description of the façade-threshold in legislation and how enforced through modality

The first overarching building act for Norwegian cities, the *1924 building act*, defined corresponding boundaries between street, plot demarcations and building line where all facades face the street, in the frontage. *Relations* between private building and public space were regulated through form-direct and absolute regulations. Forty years later, the *1965 building act* changed the law significantly, presenting an antithesis of the previous one. The new law defined an offset between street, plot and building line in which buildings were defined as free-standing objects on a plot of land with defined land-use. Detailed focus on the relation between building and street disappeared as the act shifted the focus to size regulations and the individual built objects instead. This radical change in legislation reflects changes in societal ideas at that time in which the original compact city form of work/dwelling/leisure transformed into functional and geographical displacement of form. It also reflects the transition from a relational to an object-based understanding of city building (Figure 2). This chapter links the morphological development of the urban block with the legislation of the building acts, through description of their character and modality.

This first type (1) comprised the clearly defined and enclosed urban form of *the perimeter block* (example of Grünerløkka built between 1870-1890), closely knit with the street network. A regular street grid structure defined areas for development in which plots were regulated, sold and speculatively built as individual units next to each other. The urban block comprised multiple buildings facing the street with a defined space inside and outside. Outward facing functions such as shops had direct entrances facing the street while residential units were accessed through a gate with a communal closed entrance room (courtyard). Parks were developed in “empty” areas within the street grid, and parking made use of this grid. The façade-threshold included stairs projected out into the pavement. 25 years after the *large court block* (example Torshov built 1915-1923) with enlarged green courtyard emerged as the next type (2). A key difference with type 1 is that these took the form of publicly governed housing provision developed on a plot. A modified grid-structure included curves responding to landscape elements, which defined parks, views and squares within a hierarchy, whilst parking utilized the existing street network. The urban block was connected to and defined by the street with open communal entrance rooms, facades and similar entrances to residential flats from both street and the yard. With this change in the development of similar facades, it also presented the first step in a movement defining either space/relations or buildings/objects.

The year after Torshov was built, the *1924 act* represented a breakthrough for modern city-planning in Norway. It included rules and regulations about street patterns, façade lines, building lines and plot division as in previous city-specific regulations, and introduced economic, functional, social and aesthetic characteristics. It set stronger quantified and absolute regulations directly affecting the micro-morphology of the urban frontage, including setbacks and projections from the building line, as well as windows and doors which were defined by intervals, minimums or maximums. Examples of rules producing the façade-threshold at meso-level included the location of the building in relation to the street, where building lines must coincide with street line. In the *1924 Act* knowledge about city building, buildings and their relations was clearly embedded in regulations and rules.

The *street-related slab blocks* (examples Ila built between 1935 and 1948), comprising one plot and set in the landscape, form the third type (3) of the morphological chronology, built under the regulations of the *1924 Act*. A differentiated street network was placed into the existing

landscape, not as an equal part of the urban structure but as an imposed pattern. Building and streets were still connected, however the façade-threshold removed itself slightly from the street. The road law regulated a minimum distance from the street edge to the building, with a minimum of 5 metres, and provided space for communal entrances as setbacks and/or sub-accesses facing the street. The facades of the street- and park-side were equal, and buildings rather than forming a defined yard or communal garden were instead related to an open space or park. Parking was provided in the related street network.

The three initial urban blocks and their façade-thresholds all relate to street, even though the form, plot division and street network changed. Post-war developments from the early 50s onwards saw a shift from focus on *relations to the street* to focus on the buildings as *objects*. This happened at the same time as car use increased, and functional distinctions developed. While the three first types were built within close vicinity of the city centre and work places, the free-standing *lower slab blocks and tower block* type (4) (example Valle built between 1953 and 1960) removed the housing further away from the city. These blocks were built as housing estates and placed more freely in the landscape. The road networks included cul-de-sacs and hierarchical systems, from pedestrian routes to major arteries which served principally as functional connections alongside which parking was provided in separate areas or garages. The road law regulated a minimum distance from the street edge to the building of a minimum of 7.5 metres which impacted the relationship with façade-threshold by removing it from the street. As a result of this the building *lost its relation to street*, causing a *rupture of the Façade-threshold*.

This shift in focus from street relation to built-object within land-use zones reflects a wider change from prescription and regulation to discretion and recommendation in the 1965 Act, which was also significant as the first building act to cover the whole country. This act provided a change where legislation of *city building* transformed into legislation about *city planning*. With the 1965 Act, the precedent set by the morphological shift seen in type 4 was implemented into legally enforceable regulation. Following which technical demands and knowledge shifted toward processual knowledge of planning process. While the 1924 Act focused on regulating detailed technical solutions within an urban context, the 1965 law shifted focus to the use of planning types, such as general and regulation plans for the whole country. The prescriptive demands of the 1924 act transformed into discretionary demands, but which included the option to include prescriptive zoning and land-use plans.

The manner in which the regulation of urban frontage transformed into recommendations corresponds with Skatlands' conclusion that the main tendency in regulations develops from high to lower specificity as an interaction between a society and its built environment (Skatland & Lohne 2016). As such, the 1965 Act included to a lesser extent regulation that affected the micro-morphology of urban frontage. Knowledge about the micro-morphological frontage element decreased in the building act, both through the implementation of ideas from changes already built in the urban block and societal ideas of good housing provision through zoning and size regulations. This happened within corresponding timeframes as the buildings lost their connection to the street in urban form. Within this, some absolute regulations prevailed or were added, with examples concerning location of the buildings on the plot. These included demands to build fences between streets and buildings in urban areas and saw increases in minimum distances to neighbouring plots etc. Indirect recommendations concerned the provision of daylight and places for outdoor recreation, such as play-areas for kids and parking were implemented in legislation. Parallel to this a radical shift to requirements for building lines took place in the 1964 Road Act, where the minimum distance from mid street-line to building line was

		MAP	MACRO GRID / STRUCTURE	MESO BLOCK STRUCTURE	PLOT STRUCTURE	MICRO FACADE TYPE	ENTRANCE TYPE	MODEL & RELATION
1870	1880	1890	1900	1910	1920	1930	1940	1950
densification (original compact city)			Gridiron					
dilution (urban sprawl)			Modified gridiron					
densification (intended compact city)			Differentiated road network according to terrain					
INTERFACE			Differentiated road network, cul de sac					
RUPTURE			Differentiated road network, Ringroad. Car-free community					
2000	2010				Modified gridiron "Perimeter shaped" free standing slab blocks around a yard, podium type			

Figure 3. Typological dilution of urban form.

12.5 metres for communal and county roads and 30 meters for state roads. This presented another size-increase regulation affecting the façade-threshold.

It was in this new legislative climate the aggregated *slab blocks and tower blocks* around a range of yards on a single (big) plot/field (example Romsås built between 1970 and 1974) were built type (5). This type forms the last phase of geographical displacement of urban form, from city-centre to suburb. They were typically built for planned communities responding to professional critique of earlier morphological types which emerged post-war (i.e. Jacobs, Alexander etc.) Access was provided by a differentiated road network including a ring-road for cars outside the development, with parking in separate garages, and a car-free pedestrian structure inside the residential development. Both smaller units and tower blocks were mixed to form sequences of yards in a natural landscape, whilst these outlying developments typically formed complete satellites of the city. Positioning of roads and buildings was typically determined by the existing landscape. Facades were similar with communal entrances facing the different yards. The Façade-threshold is lost in this case as buildings and streets completely disconnect.

The beginning of the '80s saw a redirection of geographical focus moving back towards the city centre. A range of smaller privately owned plots and potential large transformation areas within the city centre opened up for development as factories closed, and piecemeal and project-based development started. (Børrud, 2005) When the knowledge of the suburban form of slab blocks and towers was reintegrated into the compact urban tissue, new hybrid solutions developed. A major contributor to these new morphological forms was the car, and its integration *within* the building. While cars had plenty of space for parking houses or garages in the suburban context, the compact urban tissue had space restrictions requiring the car to be housed within the residential block.

At the same time the *planning and building Act from 1985* captured a focus on knowledge about and protection of existing environment. Local democracy was strengthened with the municipality operating as land-use government. Private developers could now initiate detailed plans for approval by politicians in the municipality. The law introduced planning on state, regional and local level, where state government could deliver formal opposition to locally decided plans, requiring negotiations to take place. Socio-economic and physical planning were integrated and renewed every four years. Significant changes from the 1965 Act were largely processual, whilst the knowledge of the building-street relation from the former act hardly changed. The small number of paragraphs regulating micro-morphology and the location of a building in relation to its plot became a processual responsibility, leaving the decision to the municipality to accept or decline.

The road law regulated a minimum distance from the street edge to the building, increasing to a minimum 15 metres for communal and county roads, and more than 50 for state roads in cases where no other regulations decide. Within these conditions a new urban block, the podium type (6) arose, taking inspiration from the perimeter blocks in the traditional compact city, whilst creating completely new relational structures (Zurovac, 2019). The free standing *slab blocks and tower block on top of a podium* (example Løren built in the 2000) around a yard and on a single plot formed this hybrid urban block. The modified grid structure supports building types of "perimeter"-style, whilst also creates *islands of slabs* (Berghauser Pont & Haupt, 2009) separated from the grid. Whilst the earlier perimeter block was constructed over a system of speculative buildings on a range of plots, this new hybrid podium block is built as one form and one development on a single large plot. Buildings are *partly connected and partly separated from the street*. Parking is provided as a podium on the lowest floor and can be positioned in different ways; above street level or entirely or partly underground (Zurovac 2019). The type of

podium and the connection to the grid define the façade-threshold of the block, and has a hybrid nature. Sometimes residential or commercial units “wraps” the parking, thereby creating conditions for relations through visual and permeable façade-thresholds, other times parking fills the whole ground floor of the plot with the consequence of a direct blank frontage.

The planning and building act, 2008 forms the current act of the Norwegian planning system. It introduces a range of new topics, including universal design, sustainability, public health and human rights. While the 1985 Act presented regulation plans which regulate utilization and protection of land, water, sea, settlements and the outdoor environment, the 2008 law defines regulation plans as indicating use, protection and *design of land and physical surroundings*. Additionally, the mission statement for the Act has a strong focus on *universal design and aesthetic design* of the environment. What becomes clear through this investigation is that the law is mainly concerned with the regulation of objects. The façade-threshold as a relation is hardly addressed by the current legislation, with the exception of the focus on universal design. Regulation of universal design and *accessibility* includes the relation of moving from one place to another, and represent the main area affecting the production of the façade-threshold in current regulation. Elsewhere regulations indirectly affecting the facade-threshold typically relate to an activity, for example *fire prevention* dependent on relations such as: *access road, entrances and movement, emergency access (windows and doors)*.

Other legislation that affect the production of the façade-threshold is the road act. It regulates a minimum distance from mid street-line to building with a minimum of 15 metres for communal and 50 metres for county and state roads, where no other regulations decide.

4. Discussion/Conclusion

In this paper I have presented a story about rules that define and is defined by urban forms, about societal ideas of legislation gradually transforming the historic city into urban sprawl by *geographical displacement* and *typological dilution* resulting in an *interface rupture*. I have used the cases of Oslo to reflect these legislative changes along a diagrammatic timeline, a knowledge producer equipped to reveal relations embedded in form.

My analysis and synthesis of the regulatory description addressing frontage rules reveal that the body and scope of legislation increases in size and content, it changes focus from form to process (Figure 2) Legislation transforms from a focus on *form-direct regulation* to *form-indirect recommendations*. This indicates that the clear early focus on the urban frontage reduces over time both as a regulatory and societal concern. Absolute and/or quantifiable regulations directly addressing components and spaces of the façade-threshold developed into vague recommendations, requiring discretionary interpretation and adjudication. Loss of the capacity for prescription based on technical knowledge in the 1924 act, was gradually replaced by the opportunity to prescribe by zoning-plan, based on processual knowledge from the 1965 Act onward. Within these zoning plans, size requirements for objects such as land, buildings or street were given focus at the expense of the relation between these objects. With the 1965 Act, the main form of current planning legislation for development emerged, whose regulations survive today through subsequent revisions as persistent legal structures. These revisions have added new paragraphs and new topics (such as accessibility) whilst very few earlier aspects have been removed. This revelation supports Talen’s view that rules once put into law, are not easily gotten rid of, even were policies change and new development paradigms appear. Within this, the façade-threshold is one of those relations, quintessential

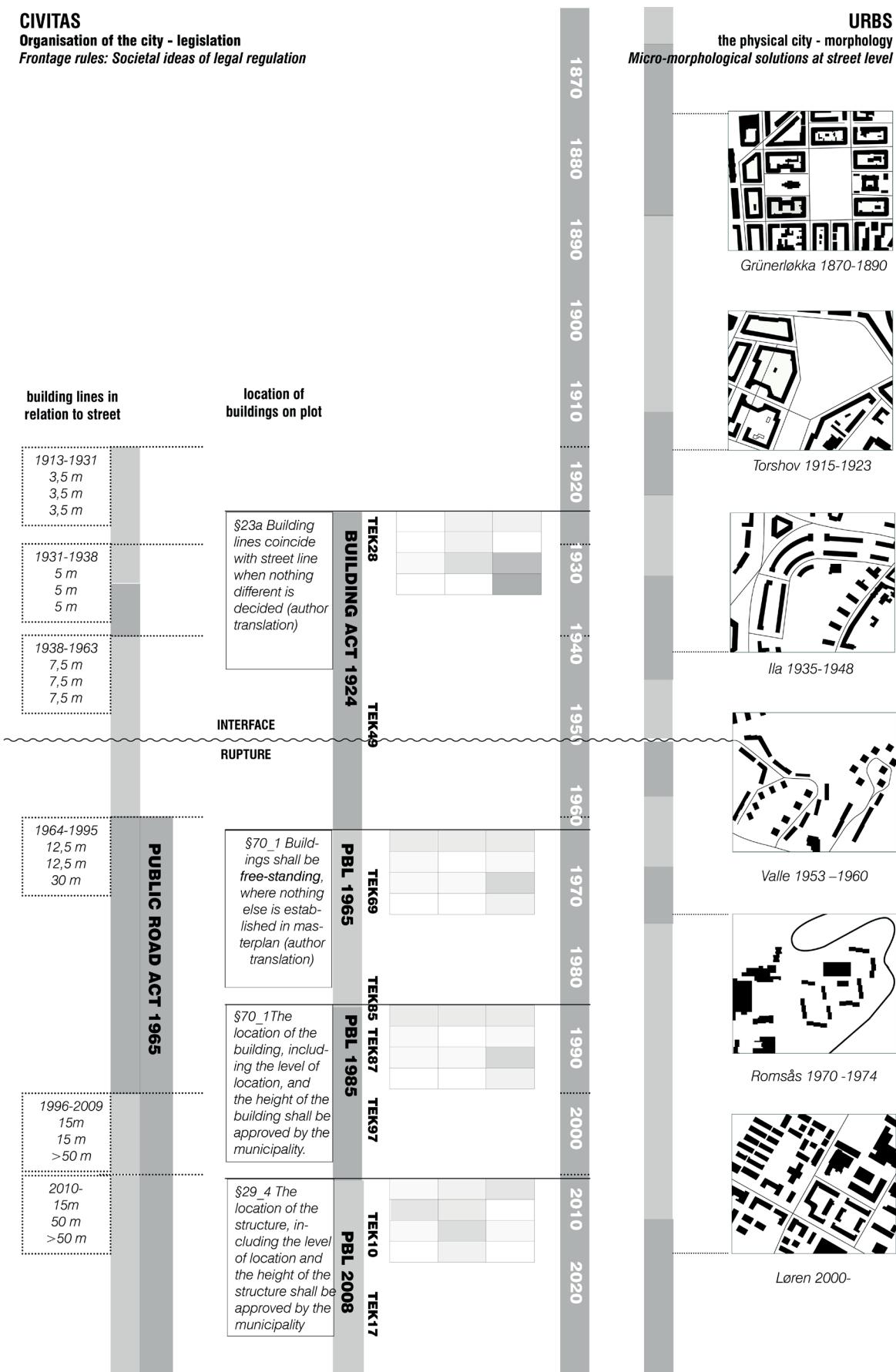


Figure 4. Synthesis – morphological form seen in relation to legislation in road act and building act.

for urbanisation, which have lost their place and terminology within current legal framework.

Oslo's housing development moved from the city centre to the suburbs and back again. (Figure 1) With this *geographical displacement* the knowledge about house-building increased and knowledge of city building decreased. When housing moved back into the city centre in the early 80s, this brought with it new challenges. The *good dwelling*, regulated within the demands of open-space and light, parking and recreation, met the dense city, with a morphology that was unsuited to the density of the compact city. From generosity of space to restricted space, this new habitation created new morphological forms with challenging relationships through their disconnection between dwelling and city.

Typological dilution of the urban block changed a spatial pattern based on continuity of solids to a pattern based on continuity of voids, in which the constructed elements dispersed (Figure 3). This typological dilution presents the preconditions of the *façade-threshold rupture* that occurred between building and street. As buildings became larger, free-standing objects and streets became wider and increasingly car-based, this relationship was compromised. The road act and its changing building line requirements play a vital role in this, increasing from a demand for 3.5 metres for all roads in 1917-1931 to a current demand of 15 meters for communal roads and 50+ metres for county and national roads. The aggregation of these increasing size requirements can be perceived as modest in individual cases but present physical outcomes with significantly impact in determining urban patterns and form cumulatively. The Type 6 podiums represent suburban typologies brought back into the urban tissue but with little or no relation to that context. Whilst critique of these forms has started to emerge in recent years resulting in policies of compact, active cities, different solutions are developing which have a higher emphasis on the relationship of the *façade-threshold*. These include efforts to redress the vague and problematic popular concept of active facades, which rely heavily on commercial use at ground-floor.

This paper has highlighted a relational approach to an important aspect of city-building, the production of the *façade-threshold*. It has shown that current production of urban form remains governed by ideas implemented by legislation decades ago, with ever increasing size requirements which work in direct opposition to the aspirations of the compact-city. (Figure 4) At the same time current projects presents a renewed focus and intention to connect house and city. As the research through history tells us, legislation responds to morphological results and societal ideas already present, moving slower than ideas and policies. As such, legislation is both affected by and affecting urban form, it is both a *result of* and *providing prerequisites* for development of form. The aspirations presented by current building projects has potential to inform the next revisions of legal constructs.

The authors of the book of the Urban Block, introducing this paper, suggest that only by investigating the urban tissue it is possible to understand the complex relation between plot and built form, between streets and buildings, and *between these forms and design practice*. In this paper I investigate this complex relation between form and society, read through legislation. I suggest that the patterns revealed and knowledge produced through this chronological journey can, in addition to the typology and terminology developed in a parallel paper (Standal & Børrud, 2019), contribute to the revision of legal framework and thereby ensuring better future city-building. I also suggest that the current technical regulations for buildings should be supplemented by a technical regulation for city building, which is able to address relations that govern urban experience. *The future of the façade-threshold in legislation* has a potential to implement and precisely regulate in a way that supports Cerdá's idea of the quintessence of

urbanization. The first Norwegian building act of 1924 presents important regulations and recommendation that can inspire such a revision. So let's get started!

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