Indiscernibility and form

The design of Unit C as a critical inquiry into the guidelines for historical preservation

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Abstract

This article explores the intersection between the indiscernible forces of urbanisation and the materialisation of architectural form. Taking the design of architectural concept for an Accessory Dwelling Unit (ADU) at Råå in Sweden as an applied research project, the article argues that new techniques are needed to analyse interactions between artistic intentionality and indiscernible forces, and to critically evaluate their impact on the form of buildings and places. The ADU is an emergent building type. Dubbed Unit C at Råå, the ADU was designed to be attached to a neo-classical villa. Unit C did not comply with the single-family residential codes in the zoning plan, thus a zoning amendment was necessary. As Råå has been designated a heritage site, this article takes the guidelines for historical preservation of buildings implicit in the zoning plan as an agent of the indiscernible forces of urbanisation. Adhering to critical practice, the article proposes architectural theory to be utilised as a pragmatic tool in innovative design processes. When designing the architectural concept of Unit C, the architects encountered a space for experimentation and negotiation in the guidelines for historical preservation. By critically analysing this space through architectural theory, the architects clarified relationships between the visual characteristics and the cultural heritage at Råå, which served to usher the architectural concept through the zoning amendment.

Key words

Accessory Dwelling Unit; Emergent Building Type; Critical Practice; Zoning; Historical Preservation; Montage Theory; Design Research
The common understanding of the contemporary city arises from a mediated image, which illustrates urban form through a multifaceted composition of buildings and infrastructures. Even as city building has been understood as a process ever since Ildefons Cerdà published his plan for Barcelona in 1859, the pictorial representation of urban form provides an illusion concerning the complexity that characterises urbanisation (Choay, 1997). This is particularly true for the contemporary city, which cannot be described solely by its visual presence. Instead, it has to be comprehended as a process of merging what Paul Virilio refers to as “the two extreme poles of the seen and the unseen” (Virilio, 1991, p. 14). Indeed, the urban fabric that has been materialised into physical space, and which responds to social and tectonic interaction, has been constructed from a dynamic matrix of discernible and indiscernible forces. What makes this so compelling is that they constantly mutate and evaporate while they adopt new formations for incessant performance.

The fluctuation of forces includes zoning laws, economy, culture, and social attributes. These forces, as Mary McLeod clarifies, “typically play a stronger role in explaining the nature of a place and its evolution in time than the intentions of any designer” (McLeod, 1987, p. 5). Yet, the visual result cannot be divorced from this flow of forces, which call for a variety of analytic techniques. To elaborate on different categories and techniques relevant to the analysis of public places, McLeod asks if criticism should “deal with the object analysis as a static event, frozen in time, or should it consider the object in time, how it came to be?” Referring to this dichotomy, she differentiates between “explanatory criticism” and “operative criticism,” arguing that the latter “attempts to affect, not simply to explain, the evolution of architecture” (McLeod, 1987, p. 4).

A common denominator in both techniques refers to issues of artistic intentionality. While explanatory criticism “bracket out issues of artistic intentionality,” operative criticism “implies a selective historical account of architecture, whose stages of evolution makes the historian’s desired development the next logical step” (McLeod, 1987, pp. 4-5). But how do we deal with criticism when artistic intentionality draws on disciplinary attributes, such as geometry, type, and materiality, to intervene with, and amend, the constituting principles of forces? While the visual result – the house, the block, or the landscape – can be analysed objectively, the materialisation of design processes may depend on the designer’s artistic ability to intervene and negotiate the intersections of fluctuating forces, as well as their impact on the shaping of fields and objects. Thus, techniques are needed to analyse interactions between artistic intentionality and indiscernible forces, and to critically evaluate their impact on the form of buildings and places.

To explore alternative techniques, this article takes the design of the architectural concept at Unit C as an applied research project to extrapolate intersections between architectural intervention and the sole indiscernible force of urbanisation, which is zoning. Unit C is an attached Accessory Dwelling Unit (ADU), designed by the Malmö-based architecture office, smog studio, for a neo-classical villa, built 1931 on a single-family lot in Råå, Sweden. The ADU encompasses an emergent building type, which encountered disciplinary grounds in the late 1970s, primarily in south Canada and the American West. Defined as an autonomous living unit and built as a complementary structure to the main building on a single-family residential lot, the ADU challenges universal zoning by adding density to suburbia (Dahl, 2014). The realisation of ADU architecture continues to be difficult due to the restrictions in single-family residential zoning, thus the emergent building type tends to encounter skepticism from the normative forces in culture and jurisdiction. This situation was repeated in Råå, where the architecture of Unit C didn’t comply with the zoning plan.
While the author of this article is a co-founder of smog studio, the methodology adheres to design research which “can be described as the processes and outcomes of inquiries and investigations in which architects use the creation of projects (...) as the central constituent in a process which involves the more generalised research activities of thinking, writing, testing...” (Fraser, 2013). Producing new insight and knowledge through design practice, the article demonstrates that the design of the architectural concept at Unit C comprises a critical evaluation of the administrative forces that usher historical preservation. It draws on research in preservation codes and building type in order to steer negotiations between the design of architectural form and the logics of zoning. Utilising design to explore the divergences between these two practices, the project extrapolates the disciplinary boundaries of architecture to reflect on a specific contemporary suburban condition. By critically analysing negotiations between architectural practice and planning praxis, this article proposes the means with which to operate at the intersection between the indiscernible character of planning processes and the materiality of architectural form. Questions to be asked include: Are the disciplinary connections between regulation and place relevant for planning objectives in historical preservation? Can we use architectural design as a platform for negotiation within the indiscernible forces of urbanisation? How can we address the discrepancies between form and regulation in a historical single-family residential area?

The context

Råå is a significant fishing village in the south-west of Sweden. While the designated name dates to 1405, Råå matured into its current setting during the eighteenth and nineteenth centuries. During the twentieth century, the village was incorporated as a suburb by the city of Helsingborg. Evolving primarily as a residential area, Råå is today dependant on the economic and administrative structures of Helsingborg.

Unit C is therefore contextualised in tendencies that often characterise the contemporary suburban condition in Sweden and elsewhere. The spatial premises of historical buildings, which have been developed in accordance with the twentieth century zoning tradition, fail to meet current expectations in comfort and performance. While the size of nuclear families remains similar to those in the mid-twentieth century, their daily routines and social behaviors have changed. More space is needed to support new requirements for solitude, flexibility, storage, rituals, and hygiene. Because the suburban form has evolved as a picturesque and spacious antithesis to urban life, correlation between expectation and space may be organised through incremental densification (Fishman, 1987).

In 2010, smog studio was commissioned to investigate the possibility of adding space to a single-family residential house in Råå through ADU architecture. Incremental densification of urban and suburban space is generally guided by the zoning plan, which regulates the size and use of buildings on a lot. For the lot on which Unit C was to be built, the zoning plan allowed for one main building for residential use, with a maximum of 90 sqm. It also allowed for supplementary buildings for storage use, with a total area of maximum 35 sqm. Since this lot was fully built, a zoning amendment was needed.

In Swedish jurisdiction, a zoning amendment comprises alteration, removal, and introduction of new regulations within a specified geographical area of the zoning plan (Boverket, 2016). As elsewhere, it stipulates that regulations can be updated without the provision of a new zoning plan. The zoning amendment is prepared by the Department of City Planning and adopted by the City Council. To calibrate the magnitude of modified regulations, the architectural design characteristics, such as plot distribution,
geometry, and building materials, must be verified by the Department of City Planning. Hence the architectural concept is implicit in the zoning amendment.

The architectural concept is established through protocols of practice. As zoning is grounded in empirical observations and data, it tends to “conceive the city as an end state object, rather than an ever-evolving organism” (Dahl, 2017). To explore transitions in the logics of zoning, a protocol of practice is needed feasible to prompt malleable solutions. Stan Allen’s discourse on practice is useful when addressing such endeavor. Allen distinguishes between “conventional practice” and “critical practice,” and argues that the two protocols operate with different relationships to the design of concept (Allen, 2009, p. XII). In conventional practice, Allen states that concept adheres “to a series of enabling codes, which themselves comprise a random sampling of the dialectics of professional practice.” Drawing on the learned habits of normal design culture, “the unstated [theoretical] assumptions of conventional practice enforce known solutions and safe repetitions.” Critical practice, on the contrary, is theoretically driven. “Not a static reflection of concepts defined elsewhere, [the critical practice protocol is] flexible enough to engage the complexity of the real, yet sufficiency secure in its own technical and theoretical bases to go beyond the simple reflection of the real as given.” Thus in critical practice, theory becomes a pragmatic tool feasible “to confer unity on the wildly disparate procedures of design and construction” (Allen, 2009, p. XII).

Allen’s distinction between conventional practice and critical practice is useful when extrapolating the design of the architectural concept for Unit C. Conventional practice correlates with zoning praxis, because such protocol enforces known solutions which can be referred to a posteriori. For the design of an emergent building type, however, the rather limited access to empiricism requires a priori assumptions. As critical practice may go beyond empirical reflections, such protocol seems feasible to use when positioning the design of architectural concept for emergent building types, such as ADUs. However, when a zoning amendment relies on a priori assumptions, weak empiricism tends to obstruct decision-making in city agencies. This creates a space for design experimentation and negotiation between the architectural concept and the zoning administration. As we will see, theory would prove to be imperative for negotiating that space at Unit C.
Råå was designated a National Heritage Site (Riksintresse) by the Swedish National Heritage Board (Riksantikvarieämbetet), thus architectural design is regulated by guidelines for historical preservation. These guidelines are extrapolated in the conservation program, which is a 64-page provision compiled by the Helsingborg Museum (Helsingborgs museum) and adopted by the City Council on 27 August 1991. The main purpose of the conservation program is to delineate the neighbourhood character and historic values, which were imperative for the designation of Råå as a National Heritage Site.

The conservation program is one of several documents that regulate development at Råå. As the protection of cultural heritage is implicit in the Planning and Building Act (PBL), the guidelines for historical preservation are moulded into planning objective. When reading the conservation plan, one can conclude that its aim derives from an anxiety that “the requirements of our age of comfort and space tend to modify the nineteenth century building, and new additions and alternations have many times had negative impact on the historic milieu” (Helsingborgs museum, 1991, p. 7). Thus the planning objective is to preserve the fisherman’s village character through the regulation of architecture. Indeed, it is by safeguarding building elements and tectonic specificities such as the aesthetics of brick walls, the continuous use of tar paper roofing, and the plan organisation of the historic houses that the character of the fisherman’s village is preserved. The conservation program hence resonates Aldo Rossi’s interest in the city as an autonomous entity that is feasible to be studied “only when we take it as a fundamental given, as a construction and as architecture” (Rossi, 1982, p. 22).

In a close examination of the regulations of the conservation program, two main design guidelines for historical preservation occur. One is urban, the other architectural. The urban guideline states that “the organization and form of buildings should relate to the visual characteristics and the cultural heritage of the place.” The architectural guideline states that “additions, renovations, and alterations should obey the style of the main building” (Helsingborgs museum, 1991, p. 35). While several buildings in Råå have been modified, the conservation program includes a survey that identifies all building objects that are considered specifically valuable for historical preservation. Visualised through a plan drawing, a total of 294 houses have been classified as “specifically valuable buildings” by PBL 3kap 12§ (Fig. 1). Governed by the highest degree of preservation, these buildings may not be altered, and all maintenance must obey the historical characteristics.

While most of the identified buildings comply with the architecture of the traditional fisherman’s house, the plan drawing also detects buildings of a different style that are considered historically significant and important to preserve (Fig. 2). These buildings consist of a small stock of neo-classical villas built during the years between the first and the second World Wars (Fig. 3). Characterised by plaster walls with ornaments, steep roofs, and delicate detailing, the architectural style of these buildings differs radically from the style of the traditional fisherman’s house. As the main house to Unit C encompasses one of these neo-classical villas, an important question is raised. Should the aesthetics of the ADU comply with the urban approach to cultural heritage, or should the new addition comply with the architectural approach to the preservation of style? Due to the universal criteria of urban planning, this distinction, which is disciplinarily explicit, produced levels of uncertainty for both design and administration. Thus, at Unit C, the space for design experimentation and negotiation emerged in the guidelines for historical preservation.
The space for design experimentation and negotiation was imperative for the design of the architectural concept of Unit C. If we adhere to Allen’s definition of critical practice, architectural theory may be utilised to extrapolate such space by means of discipline. Thus we need to analyse the two different styles implicit in the conservation program through architectural theory.

The neo-classical villa, to which Unit C was added, can be analysed with reference to the discourse on tectonics. Tracing the scope of the tectonic, Kenneth Frampton describes the analysis of the Caribbean hut which Gottfried Semper pursued after encountering the primordial dwelling at the Great Exhibition of 1851 in London (Fig. 4). Frampton clarifies the “theoretical departure from the Vitruvian triad of utilitas, fermitas, and venustas,” which Semper undertook when dividing his primordial dwelling “into four basic elements: (1) the earthwork, (2) the hearth, (3) the framework/roof, and (4) the lightweight enclosing membrane” (Frampton, 1996, pp. 4-5). Reconceptualising architecture into an art of joining the basic elements of building with “the material as physical matter,” the neo-classical architecture at Råå can be understood by the tradition of generating form through the assemblage of taxonomies (Semper, 1989, p. 269).
A different approach to creating form was articulated by Adolf von Hildebrand, who argued that space is a product of movement, vision, and touch, rather than the genesis of material conditions. With his book *The Problem of Form in Painting and Sculpture*, von Hildebrand argued that the principles governing the construction of forms “cannot be arbitrary, but must come from our perception of space” (von Hildebrand 1907, p. 14). Stanford Kwinter utilises the term plasticity to describe von Hildebrand’s approach to form – a terminology that can be clarified with reference to von Hildebrand’s sculptures in which the human face lost its organic corporality, the clear articulation of its parts (Kwinter, 1986) (Fig. 5). Thus, von Hildebrand’s theory does not support the understanding of architecture through differentiation between basic elements, but rather through our ability “to combine the piece-work of perception into an ideal whole” (von Hildebrand, 1907, p. 12). Referring to the morphological attributes of form, von Hildebrand’s discourse goes beyond the idea of the assemblage, and introduces a kinetic approach to the perception of space.

When analysing the traditional fisherman’s house at Råå, the relationship between form and architecture complies with von Hildebrand’s continuous form rather than with Semper’s congregation of material as physical matter. Even if the brickworks and roofing surfaces tend to imply a tectonic clarity, the building elements at the traditional fisherman’s house do not comply with an assemblage of taxonomies. Their relationships are, on the contrary, often blurred with roofs morphing into walls and details, resulting in a unity of form that counteracts the idea of clear joints and explicit elements. By congregating the disciplinary distinctions of building form, the architectural concept for a zoning amendment can be pursued with reference to theory rather than to style. In this case, the design of the architectural concept becomes a critical practice in which theory is used as a platform for negotiation with the zoning administration.
The negotiation between architectural practice and planning praxis

Deciding to comply with visual characteristics and the cultural heritage of the place, smog studio discarded the mere normative way to approach the design of architectural concept, which is to comply with the architectural guidelines in the conservation program. Deciding instead to connect the design to the characteristics of the place, the cultural heritage was referenced through the distribution of objects on the lot and their cumulative relationship to the spatial characteristics of the surroundings. smog studio extrapolated three possible lot distributions, which were discussed with client and authorities. The consensus – a corner location was preferable. The reasoning also determined the building footprint for Unit C to be 40 sqm.

The programmatic requirement of an ADU is rather basic as it includes only the necessary dwelling functions. However, the form is more complex, as it ought to draw from its “position on the site to camouflage itself with reference to the surrounding neighborhood” (Dahl, 2014, p. 75). The corner position allocated for Unit C encompasses the prime location of the lot, with maximised exposure to the intersection of two public...
streets. Camouflaging a building at such a location therefore cannot rely solely on the disguising aspects of surrounding buildings and foliage. Indeed, when a building can’t be hidden, its appearance may be manipulated through the artistic intentionality of form. It can be manipulated through scale and index: scale establishes connections between subject and object, and index establishes connections to the memory of place because it relies on the traces of prior building forms (Eisenman, 2007, p. 134). The conceptual strategy for Unit C was to alter the experience of scale through geometry, and to alter the indexicality of building form through tectonics.

With scale and index as the conceptual paradigm of Unit C, the negotiation between architectural practice and planning praxis required a transition from concept to design. A zoning amendment in Swedish jurisdiction is a political decision, so the mere abstract realm of architectural concept needed to be explained through representation. Only by evaluating the implication of a building’s appearance in the public space could the City Council justify transitions in the conservation program, hence the artistic intention of Unit C to utilise the specific qualities of the corner site as a form generator. The corner, as Eisenman denounces, “reflect a thought-to-be generic problem” in architecture (Eisenman, 2007). Hence, the act of turning a corner – the shifting of directions implicit in such an endeavor – signifies motion, which can be articulated with reference to von Hildebrand’s discourse. In his scholarship on montage theory, Stan Allen discusses “construction with intervals” as a design approach that recognises “the discontinuities that are [...] built into the fabric of time and space” (Allen, 2009, p. 28). Challenging the classical references to Euclidian geometry, the montage “no longer tries to model depth, either the finite depth of perspective or the infinite depth of axonometric” (Allen, 2009, p. 28). Working rather with surfaces and images, montage echoes a kinetic experience, a “compressed space, unfolding in time and linked together by the perception and recall of the observer” (Allen, 2009, p. 30).

**FIGURE 7** Negotiating architectural practice and planning praxis at Unit C.
The montage approach to space construction complied not only with the disciplinary connections of the corner problem, but also with the characteristics of the fisherman’s houses discussed previously. When the configuration of a building counteracts the idea of clear joints and explicit elements, its disciplinary references discard the traits of classical geometries, thus the use of topology for the design of Unit C, which is a geometry of position based on the “relationships between component spaces or activities of buildings” (Burry & Burry, 2010, p. 158). Topology does not depend on the exact form of an object, but rather on the way an object is put together. It therefore supports an architecture based on malleable relations between scale and index, which matched the conceptual strategy of the project. The transition from concept to design at Unit C proceeded accordingly, as a shaping of surfaces in topology.

The site-specific qualities and spatial composition at the corner lot framed the artistic intentionality at Unit C. Articulating the corner experience, the shifting relationships between the building and the public space that unfolded through montage, were constantly measured and analysed to alter the experience of scale. Combinations of smaller and larger surfaces created a dynamic object that was in stark contrast to the neo-classical architecture of the main building (Fig. 6). The volume was big enough to instigate aesthetic variety in manifold surfaces, yet small enough to correlate with the expectations from the Planning Department. By cladding most surfaces in tar paper, the architecture of Unit C referenced the historical fisherman’s houses by morphing roofs, walls, and details through the tectonic qualities of a traditional building material. Thus, the conceptual strategy was met accordingly by altering the experience of scale through a dynamic form in topology, and by altering the visual references of building form through the tectonic qualities of tar paper cladding.

Conclusions

This article has utilised the design of architectural concept for an Accessory Dwelling Unit at Råå, Sweden as an applied research project to critically analyse the guidelines for historical preservation of buildings in a Swedish zoning plan. The article has demonstrated discrepancies within the guidelines between the objectives of urban planning and those of architecture, which created a space for experimentation and negotiation in the conservation program. While conventional practices may continue to operate in accordance with the logics of zoning, such an issue is problematic for any attempt to improve the building stock through innovation, because innovation may not evolve through a posteriori hypothesis, which remains implicit in building and planning regulations. Utilising architectural theory to analyse the planning objectives in the conservation program, this article has demonstrated that disciplinary connections between regulation and place may serve to clarify the intent in historical preservation, and thus to articulate ways to correlate artistic attributes with administrative processes. The indiscernible forces of urbanisation, to which building and planning regulations belong, are generally imperative for the designer’s ability to implement innovation. This article concludes, therefore, that innovation and administration may encounter common grounds at the intersection between regulation, place, design, and theory.

For the administration of urban planning at Råå, the architectural concept was implicit in the zoning amendment. By operating through a critical practice protocol, the architects consulted theory to negotiate relationships between planning objectives, building forms, and materiality (Fig. 7). Mobilising the architectural discipline to rethink the heritage, the architects articulated new connections between historically disparate building forms – connections that were unidentified in the zoning plan and therefore difficult to incorporate through conventional practice protocol. While these connections can be described
through various techniques, such as writing or image sampling, the administrative process of zoning amendment required the representation of building form through architectural drawing. Thus informing the decision to develop the concept at Unit C by means of architectural design, which can accommodate both the abstract premises of concept and the indexical premises of representation. As the zoning amendment was approved by City Council on 20 August 2013, this article demonstrates that architectural design might function as a critique of zoning laws and preservation guidelines.

While the zoning amendment focuses on the urban aspects of space construction, the building permit encompasses a second level of administration necessary for the designer to approach when materialising the indiscernible forces of urbanisation. As the conceptual building form may or may not extend from the administration of zoning amendment to the granting of building permit, malleable connections between concept and design are imperative for the architect’s ability to usher an artistic intention from representation to fabrication in complex zoning processes. Because the restrictions in planning regulation tend to increase in Sweden and elsewhere, the creation of form ought to operate beyond the rigidity of universal geometries. Alternative geometries to the metric Euclidian or Cartesian, therefore, offer solutions to engage with complex, or unclear, objectives through negotiation. Such a procedure is particularly useful for design in historical single-family residential areas, because the preservation codes may be extrapolated through interpretations in scale, visual depths, indexicality, and tectonics. This article concludes, therefore, that the discrepancies between form and regulation can be adjusted through negotiations between the geometrical configuration of the building and the disciplinary re-configuration of the place.
References


