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Swedish Typo-Morphology-Morphological Conceptualizations and Implication for Urban Design

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Abstract

Typo-morphology is a branch of urban morphology that understands physical form, formation and transformation in cities with use of types and typologies. This paper describes three Swedish typo-morphological approaches and discusses urban morphology and typologies in a context of urban design and planning practices. One approach describes architectural styles and typical buildings for different historical periods. The second focuses on classifying neighborhood types and their physical attributes. The third complements the second and argues that the Swedish neighborhood typology describes not only physical spaces, but also social structure.

Keywords: urban morphology, typo-morphology; building type, neighborhood type, urban design, Sweden

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INTRODUCTION

Cities are complex and there are many ways to describe and understand them morphologically (Kropf, 2009). The typo-

morphological tradition looks at urban history and emergence of architecture and urban forms as a process of creating types. The spatial practices of any society both structure and are structured by the activity of creating and classifying types (Franck & Schneekloth, 1994). Society creates types (of streets, buildings, neighbourhoods and so on) to simplify communication and promote values (Franck 1994, p.345). Urban morphologists recognize and identify types of buildings, streets, neighbourhoods to build theory of inform architectural and urban design practices (Moudon, 1997). The process of urban design can be guided by typologies (of buildings, streets, neighborhoods and so on) as a theory or doctrine of types (Steadman, 2014).

Swedish typo-morphology has a long tradition (Abarkan, 2009; 2013). Many architects and geographers have created urban models of typical cities and typologies of buildings, streets and neighborhoods. This paper focuses on three Swedish typo-morphological approaches and discusses morphology and typologies in a context of urban design and planning practices. It is structured in the following manner. The following section describes the theoretical framework of typo-morphology and how it links to architectural and urban design practices. The third section describes three typo-morphological approaches in Sweden. The fourth presents application of these approaches in Swedish urban planning and design practices. Many municipalities like Stockholm, Malmö and the Region Gotland with historic Visby use building and neighborhood typologies as a background for design codes or building regulations. A new workshop method for participatory planning based on building and neighborhood types was also proposed by Swedish architects and urban designers. The fifth section discusses typo-morphology and typologies in a context of urban design. The last section presents conclusions concerning typo-morphological conceptualizations and implication for urban design.

Theoretical Foundations of Typo-Morphology and Its Urban Design Application

Typo-morphology is a branch on urban morphology that focuses on types and typological processes (referred to as typo-processual and historico-geographical approaches in Kropf, 2009). Creation of type is an act of abstraction to identify what is same about a buildings, street or neighborhoods and disregard what varies (paraphrased from Mitchell, 1990, p.87). Goethe wrote that is important to postulate a prototype against which all forms could be compared as to points of agreement or divergence. It is an archetypal form, in essence, the concept or idea of the form (Goethe, 1988 [1817]).

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Type and typology are commonly used among architects, urbanists and historians (Rossi, 1982 [1966]; Vidler, 1977; Panerai et al., 2004 [1977]; 1980; Caniggia & Maffei, 2001 [1979]; Steadman, 1979; 2014; Cataldi et al., 2002; Cataldi, 2003). The earliest references to type is done by Quatremère de Quincy in the Encyclopédie méthodique. Architecture and Dictionnaire Historique D'architecture (translated as Historical Dictionary of Architecture) from 1825 and 1832. Gianfranco Caniggia, a student of Severio Muratori and one of the pioneers of the Italian typo-morphological approach (referred as Muratorian School among morphologists, Cataldi et al., 2002; Cataldi, 2003), argues that cities grow incrementally with many elements being juxtaposed. An understanding of the formation and transformation of cities needs analysis of the mutation of the elements through both time and space (Moudon, 1994).

Types are abstractions about city elements (e.g. of apartment block). Similar to concepts in linguistic terms, a type packs much information into one icon: a set of architectural or environmental attributes; a set of rules for construction and for organisation of space; a set of behaviours and defined roles that take place within it; and a set of qualities it should exhibit (Schön, 1988; Robinson, 1994). The types have history and they tell histories (Southworth, 2005). Types are not static. They change over time and vary considerably between cultures and between different groups within the same cultures. Even though the typologies vary across cultures, the activity of creating types lives within all societies (Schneekloth & Franck, 1994).

Typology is inventory of different types of buildings, streets, neighbourhoods, cities, etc. including processes and rules to create types. There is no right or wrong way to create a typology. The types can derive from societal conceptualizations about spatial knowledge. They become words with very specific meaning in the language and they can vary even within a same language (e.g. “terrace or terraced houses” in the UK and “townhouses” in the USA). Types can be created by architectural professionals and geographers to emphasize relationships between elements. When making building typologies, architects conventionally focus on the building elements and their configurations e.g. types of windows and doors and their configurations, design of the façades and organization of the rooms, orientations of the building and its relation with surrounding spaces, and so on (e.g. Caniggia & Maffei, 2001 [1979]). On a neighborhood scale, geographers have focused on the morphological structure of cities and the relationships between streets, lots and buildings (Conzen 1960). The typical

morphological structure of neighborhood types includes: plan elements (streets, lots and buildings); historical layering of the urban fabric; and building and land utilization (Conzen, 1960; Moudon, 1997; Whitehand, 2001; Kropf, 2011; 2018). Even though there are many possible combinations, only few building, street and neighborhood types are preferred, emerge and proliferate in specific historical eras.

Urban design can be regarded as an art to create assemblies of design elements (streets, lots, buildings, open spaces and so on) in urban space (Taylor, 1999). There are many typologies (Panerai et al. (2004 [1977]; Southworth & Ben-Joseph, 1995; 1997; Southworth, 2005). The urban design can be guided by typologies of design elements as a theory or doctrine of types (Steadman, 2014). Many architects and urban morphologists have argued for critical application of typologies in morphologically-informed urban design (Samuels, 1990; 1999; 2008; McGlynn & Samuels, 2000; Marshall & Caliskan, 2011; Hall & Sanders, 2011; Sanders & Woodward, 2015; Sanders & Baker, 2016). Cities are the result of the interaction over often long periods by many actors with their own interests, sets of values and objectives. Urban design is an art that enables this complexity and does not looks for quick aestetic fixes (Talen & Ellis, 2004; Marshall, 2016).

Swedish Urban Morphology and Typo-Morphological Approaches

The geographers started the Swedish typo-morphology tradition in the beginning of the 20th century by classifying neighbourhoods and cities. Inspired by the French, German, British and American schools of geography and sociology (particularly the Chicago school), the city was defined geographically as "agglomeration of neighbourhoods clearly differentiated by their character/type" (bebyggelseagglomeration med tydlig inre differentiering" in Swedish, Ahlmann at al., 1934, p.7). The Geographical Institute at Stockholm's University under professor Hans Ahlmann, made extensive geographical studies of Stockholm's morphology (e.g. William-Olsson, 1984 [1937]; 1940). Gregor Paulsson (1950) later wrote two tomes of *Swedish city* (or *Svensk stad*) describing in detail the development of Swedish cities in the XIX century. Paulsson illustrated "idealtypisk" or typical cities, social groups, household structures and urban lifestyles. Elias Cornell (1970; 1977) continued this tradition focusing on building technologies.

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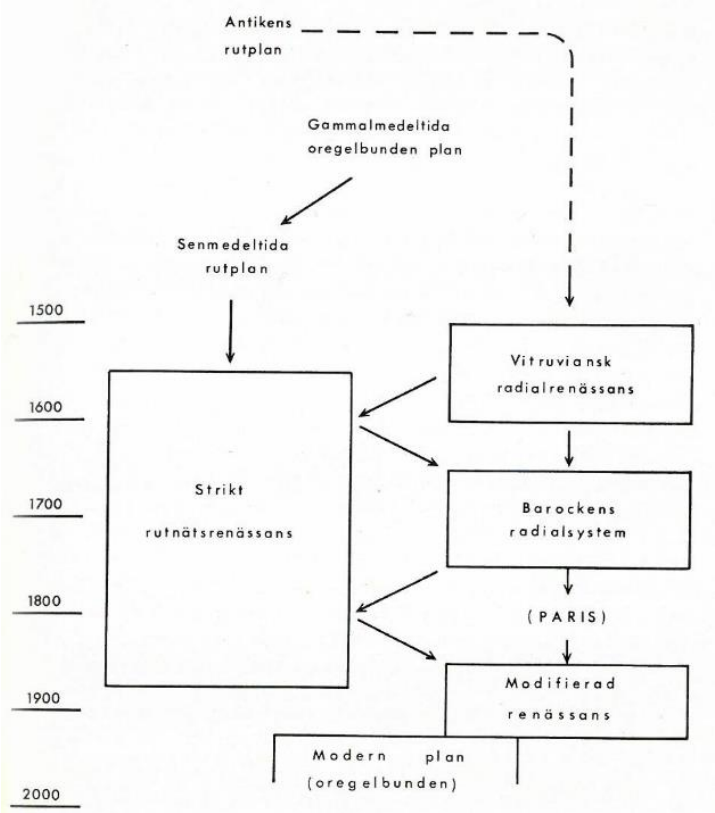

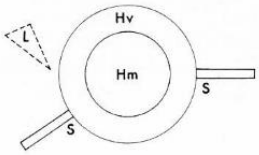

Fig. 3. Modell av den förindustriella staden.

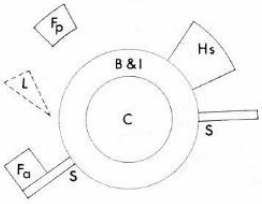

Fig. 4. Modell av stadens utveckling under industrialismen fram till 1930.

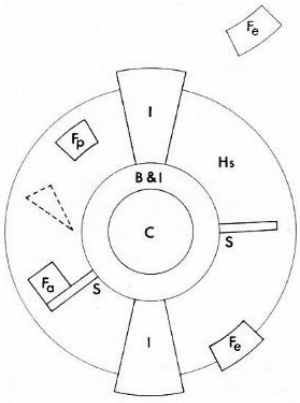

Fig. 5. Modell av stadens utveckling efter 1930.
I fig. 3—5 använda beteckningar:

Hm = Handelsmannazon
Hv = Hantverkarzon
S = Småfolksstråk
L = Landeri
C = City
B&I = Bostads- och Industrizon
F_a = Arbetarförstad
F_p = Patricierförstad
F_e = Egnahemsförstad
Hs = Hyreshuszon
I = Industrizon

Figure 1. Historical epochs in Swedish urbanization (source Ameén, 1964, p. 43) and a hypothetical urban model of a Swedish city (ibid, p.47)

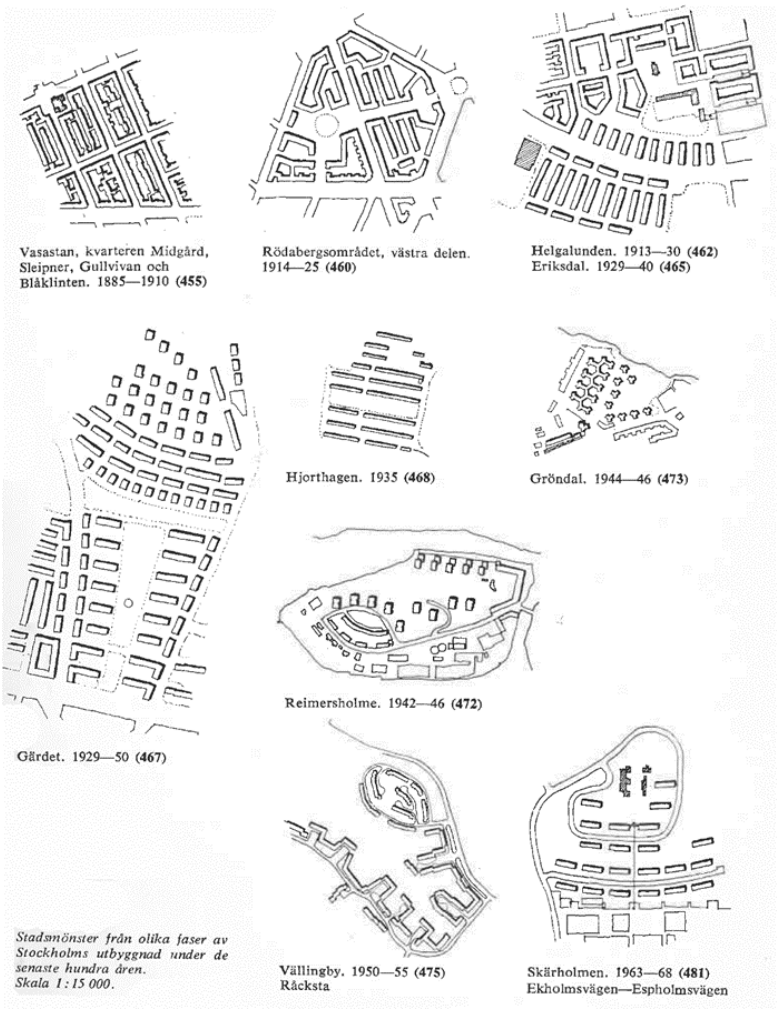

Figure 2. Typical neighborhoods in specific historical periods (Andersson & Bedoire, 1973, p.35).

Björn Linn was an architect who used morphological and historical analyses to understand the emergence, inspirations and proliferation of a specific neighborhood type ("storgårdkvarter" or translated in English "enclosed urban block with a large courtyard/inner garden") in Sweden and other European countries (see Linn, 1974). Linn used the term "bebyggelsemönster" (translated as "pattern of settlements") to describe a typical spatial structure in a formation of city. The spatial structure starts with a typical building, but the pattern includes relationships of the building with the surrounding spaces (Figure 2). The surrounding spaces include public streets and semi-private courtyards (such as the inner garden in a typical "storgårdkvarter"). The typical building can stand alone, it can create an open of enclosed city block assembly or can be part of a neighborhood with similar or different city blocks. Linn particularly emphasizes the relational structure between the elements of patterns (the typical building and surrounding spaces). Additionally, the pattern is recognized and experienced as spatial structure of elements (the typical building and its relations). These experiential qualities of the pattern as relational

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symbolism are more important than the geometry of the physical space (Linn, 1991).

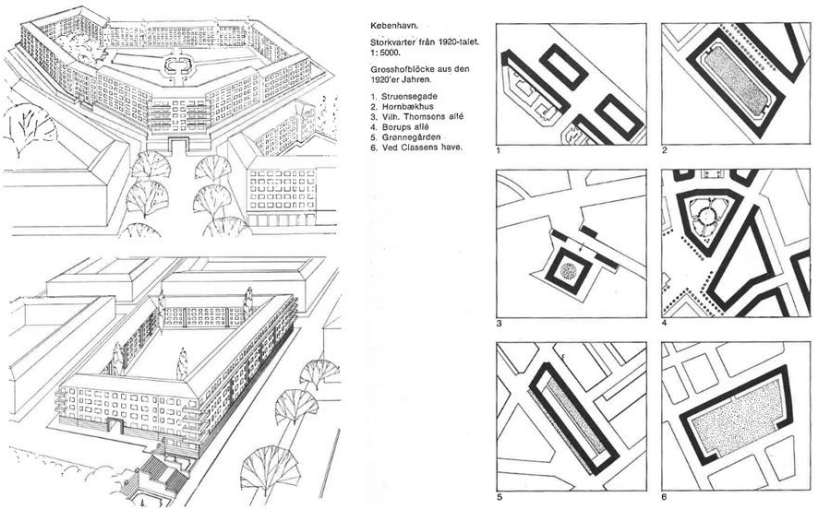

Figure 3. The building as leitmotif in the "bebyggelsemönster" (translated as "pattern of settlements") of typical "storgårdkvarter" or translated in English "enclosed urban block with a large courtyard/inner garden" and variations on a scale of a city block as perspective, cases in Stockholm on the left and on the city plan, cases in Copenhagen on the right (source Linn, 1974; 1991).

The writings of Björn Lynn and the urban models and typologies of Lennart Ameén and Henrik O. Andersson inspired new typo-morphological research and conceptualizations in the 1980s aimed not only to contribute to urban history, but also to understand and guide urban planning and design practices. Terms such as, "typområde" ("typical places" or "place types", in Engström et al., 1988), "stadstyper" ("urban types" in Rådberg, 1988; Rådberg and Friberg, 1996; Arken Arkitekter m fl., 2011), "stadskaraktär" ("urban characterss" in SSBK, 1997; 2000; SLL, 2009; MSK, 2001) were used to describe types of neighborhoods or city blocks (as configurations of buildings). Since the 1980s, typologies have been developed according to building types and architecture styles specific for historical periods (Björk et al., 2003 [1983]; 2009; 2018 [2000]); planning and development paradigms (Rådberg, 1988; Rådberg & Friberg, 1996); and industrialization epochs (Engström et al., 1988). The following subsections describe these three approaches.

Building Types and Architecture Styles Specific for Historical Periods

The trilogy Så byggdes (translates Thus was built in English) includes books that focus on apartment buildings, villas and cities (Björk et al., 2003 [1983]; 2009; 2018 [2000]) focuses. These books aimed to illustrate typical Swedish architecture and present it as part of the urban history. The authors argue that historical period affects the whole society and causes many people to be interested in and enjoy same things and lifestyles at the same time. The architectural style is usually established through innovative architecture. As a prototype it becomes popular among other architects in specific historical periods that last around ten

years. The architectural style remains for a longer period, though on a more modest scale as new styles become more fashionable. The books illustrate the dominant architectural styles for apartment buildings and villas for every decade in from the end of 19th century until today (Figure 4). The first two books on apartment buildings and single or multi-family villas have a strong focus on architectural design, building materials, construction technology and details, but also on illustration of hypothetical neighborhoods that would correspond to the building type (Björk et al., 2003 [1983]). The last book puts the architecture into a planning perspective (Björk et al., 2018 [2000]).

Figure 4. Typical apartment buildings presented as representative exemplars and in city blocks (Björk et al., 2003 [1983]) on the top and typical villas for each decade (Björk et al., 2003) on the bottom.

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Swedish Planning Paradigms and Urban Types

Inspired by the writings by architects Uno Åhren and Björn Lynn, and particularly the architectural historian François Choay, Johan Rådberg (1988) proposed a Swedish urban typology based on three major planning doctrines: the regularism (represented by Baron Haussmann's 19th century renewal of Paris), the Garden City (promoted by Ebenezer Howard on the end of the 19th century) and the functionalism (urbanism proposed by Le Corbusier and the modernists in the 20th century). Rådberg argued that "urban types" ("stadstyper" in Swedish) emerge during these periods that are consistent in terms of density, Floor Space Indexes (FSI), Open Space Indexes (OSI, in Sweden an inverse measure of building coverage (100% - OSI) is commonly used instead of OSI) and building heights (Figure 5).

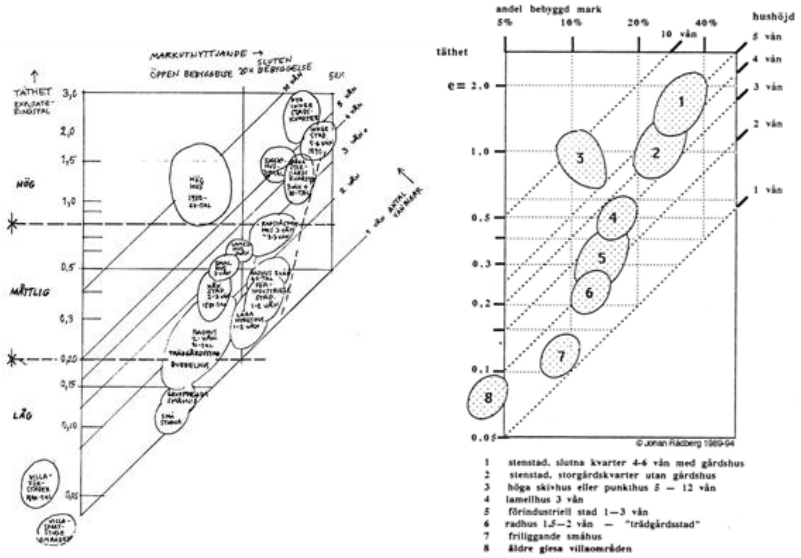

Figure 5. Johan Rådberg's (1988; Rådberg & Friberg, 1996) hypothesis about density: urban types emerged under specific planning doctrines are consistent in terms of density, Floor Space Indexes (FSI) and building heights

Subsequent research drew upon typo-morphological theories from Britain, Italy and France, (e.g. Conzen 1960; Panerai et al., 2004 [1977]; 1980; Moudon, 1986). Rådberg and his associates proposed a detailed classification of Swedish neighborhoods (Figure 6) that consists of forty urban types showing representative examples and minor variations in plans, FSIs, OSIs and building heights (Rådberg & Friberg, 1996). In the consecutive studies, e.g. in the city of Vasteras (Västerås), Rådberg and his associates explored the relationship between the proposed urban typology and urban quality as housing preferences (Rådberg & Johannsson, 1997; Rådberg, 2000).

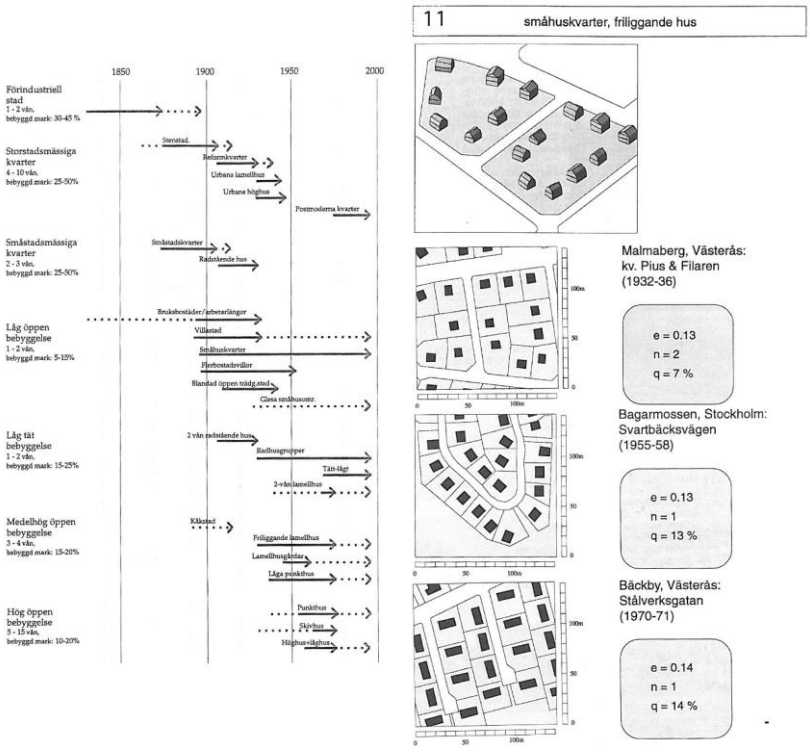

Figure 6. Periods of Swedish urbanization and typical neighborhoods (Rådberg & Friberg, 1996, p. 46) and neighborhood type 11 defined in terms of density, Floor Space Indexes (FSI), building coverage (100% - OSI) and building heights (n).

Place Types and the Typical Swedish City

Carl-Johan Engström, inspired by the work of Greger Paulsson, Elias Cornell and Björn Linn, proposed a typo-morphological urban model based on "place types" ("typområde" in Swedish), urbanization and industrialization in the book Swedish city (Svensk tätort in Swedish, see Engström et al., 1988). Engström's analysis starting points are technology and economy. The transportations technology improves accessibility while economical conditions create specialization of labor. Together they create new urban forms and reshape the existing city and lifestyles. Table 1 presents the epochs in Swedish urbanization from the pre-industrial city, the city during the industrialization, the modern/industrial city to the postmodern/post-industrial city. These cities had specific requirements in terms of accessibility, communication and transportation technology and urban structure.

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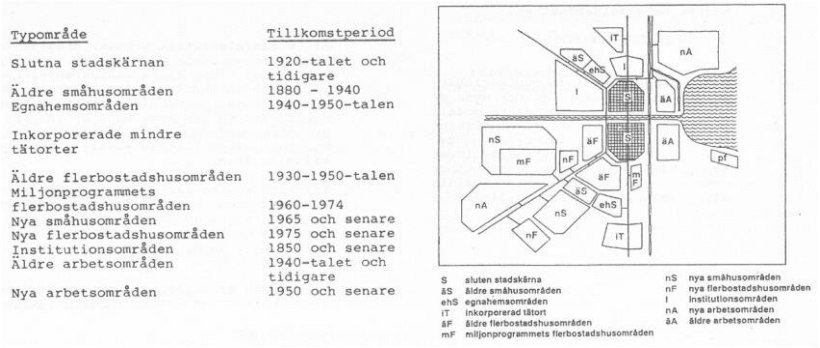
Table 1. Epochs of the Swedish urbanization in respect to development of the economy, industrialization and society (expanded from Cars & Engström, 2008; Engström 2018)

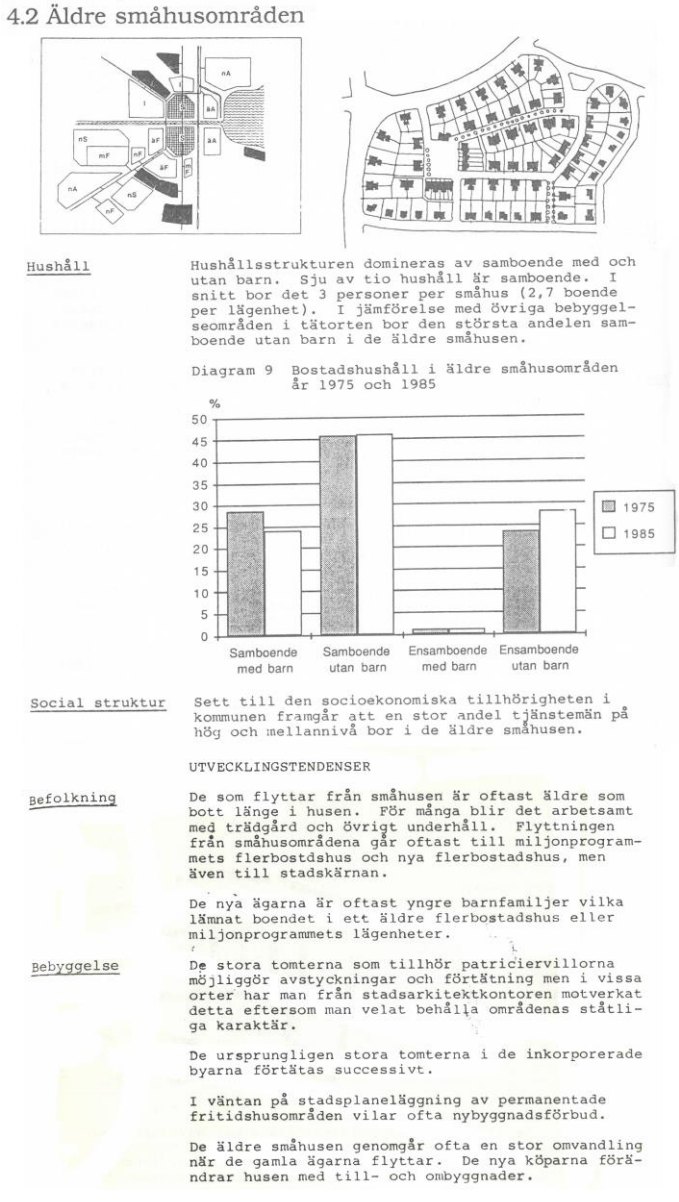
Epoch	Economy and industry	Need of access	Communication and transportation technology	Urban structure
Traditional society	Labor division	Spatial proximity	Narratives and stories, private carts and carriages	City and villages
Industrial society	Mechanization of labor	Spatial proximity	Newspapers and telegraph, public omnibuses, trams and trains	City and region
Welfare society	Specialization of processes and automation	Temporal proximity	Television, radio and telephone, private cars and public buses and trains	Urban region
Knowledge society	Specialization of services	Proximity to a network	World wide web, private and public cars and jets and high speed buses and trains	Urban network with global reach

Historical periods in Swedish urbanization, changes in economy and society reflect on the emergence and spread of neighbourhood types in Swedish cities. Carl-Jöhan Engström argues that place types or typical neighborhoods that emerge in these periods do not only explain variables such as FSI, OSI and building heights (Rådberg 1988; Rådberg & Friberg 1996), but also social structure in the neighbourhoods, residential and employment densities and urban development tendencies that change over time (Figure 7). Subsequent research shows that social structure in the neighbourhoods, residential and employment densities changed consistently over time especially in the historical cores of Swedish cities following changes in economy and society presented in Table 1 (Engström & Legeby, 2001; Engström, 2008; 2018).



Typområde	Tillkomstperiod
Slutna stadskärnan	1920-talet och tidigare
Äldre småhusområden	1880 - 1940
Egnahemsområden	1940-1950-talen
Inkorporerade mindre tätorter	
Äldre flerbostadshusområden	1930-1950-talen
Miljonprogrammets flerbostadshusområden	1960-1974
Nya småhusområden	1965 och senare
Nya flerbostadshusområden	1975 och senare
Institutionsområden	1850 och senare
Äldre arbetsområden	1940-talet och tidigare
Nya arbetsområden	1950 och senare

S sluten stadskärna
äS äldre småhusområden
ehS egnahemsområden
iT inkorporerad tätort
äF äldre flerbostadshusområden
mF miljonprogrammets flerbostadshusområden
nS nya småhusområden
nF nya flerbostadshusområden
I institutionsområden
nA nya arbetsområden
äA äldre arbetsområden



4.2 Äldre småhusområden

Hushåll

Hushållsstrukturen domineras av samboende med och utan barn. Sju av tio hushåll är samboende. I snitt bor det 3 personer per småhus (2,7 boende per lägenhet). I jämförelse med övriga bebyggelseområden i tätorten bor den största andelen samboende utan barn i de äldre småhusen.

Diagram 9 Bostadshushåll i äldre småhusområden år 1975 och 1985

Social struktur

Sett till den socioekonomiska tillhörigheten i kommunen framgår att en stor andel tjänstemän på hög och mellannivå bor i de äldre småhusen.

UTVECKLINGSTENDENSER

Befolkning

De som flyttar från småhusen är oftast äldre som bott länge i husen. För många blir det arbetsamt med trädgård och övrigt underhåll. Flyttningen från småhusområdena går oftast till miljonprogrammets flerbostdshus och nya flerbostadshus, men även till stadskärnan.

De nya ägarna är oftast yngre barnfamiljer vilka lämnat boendet i ett äldre flerbostadshus eller miljonprogrammets lägenheter.

Bebyggelse

De stora tomterna som tillhör patriciervillorna möjliggör avstyckningar och förtätning men i vissa orter har man från stadsarkitektkontoren motverkat detta eftersom man velat behålla områdenas ståtliga karaktär.

De ursprungligen stora tomterna i de inkorporerade byarna förtätas successivt.

I väntan på stadsplaneläggning av permanentade fritidshusområden vilar ofta nybyggnadsförbud.

De äldre småhusen genomgår ofta en stor omvandling när de gamla ägarna flyttar. De nya köparna förändrar husen med till- och ombyggnader.

Figure 7. Urban model of a Swedish city showing periods of urbanization and typical neighborhoods (Engström et al., 1988, p. 46) and neighborhood type 4.2 (similar as on Figure 6) defined as location in the urban model, physical form, household and social structure, and development tendencies.

Application of Typo-Morphology in Swedish Urban Planning and Design

The Swedish typo-morphological conceptualizations presented in the previous section found its application in urban planning and

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design firstly as part of municipal building ordinances on the end of the 1990s. Building ordinances and codes are commonly used by municipalities for conservation purposes, especially in the historical cores of cities that want to preserve the urban character. Inspired by the typo-morphological research from the 1980s and early 1990s, the City of Stockholm proposed "building ordnances" ("byggnadsordning" in Swedish) to understand and discuss the future development of the municipality (the City of Stockholm is a municipality and part of a larger Stockholm Region). Twelve "stadskaraktärer" ("urban characters") were identified that served as background for urban planning, design and development in the 2000. Figure 8 shows a map of the comprehensive development plan for Stockholm. It presents "stadskaraktärer" ("urban characters") on the left side and street types on the bottom. The urban characters served as background and inspiration to preserve the morphological character of these neighborhoods as a part of densification effort with infill developments.

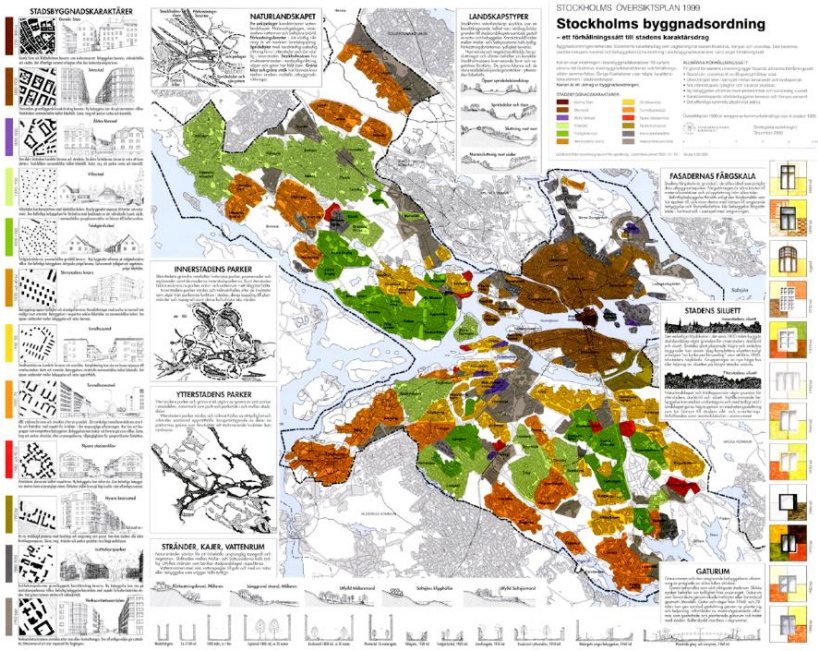

Figure 8. The map of Stockholm including neighborhood types or "stadskaraktärer" (urban characters) on the left and street types (City of Stockholm, 1999)

The City of Malmö created an urban typology with ten urban characters. The urban typologies in Malmö and Stockholm are very similar. Some variations in wording occurs with "stad" or "city" (preferred in Stocholm) and more general "bebyggelse" or "settlement" or "område" or "area" (favored in Malmö) e.g. villastad in Stockholm is referred to as villabebyggelse in Malmö (Figure 9). Region Gotland also established building ordnances for the historical core of Visby on a more detailed scale describing buildings and architectural details. The methodology more closely resembles the architectural elements in the Så byggdes trilogy,

particularly the tomes on apartment buildings and villas (Björk et al., 2003 [1983]; 2009)

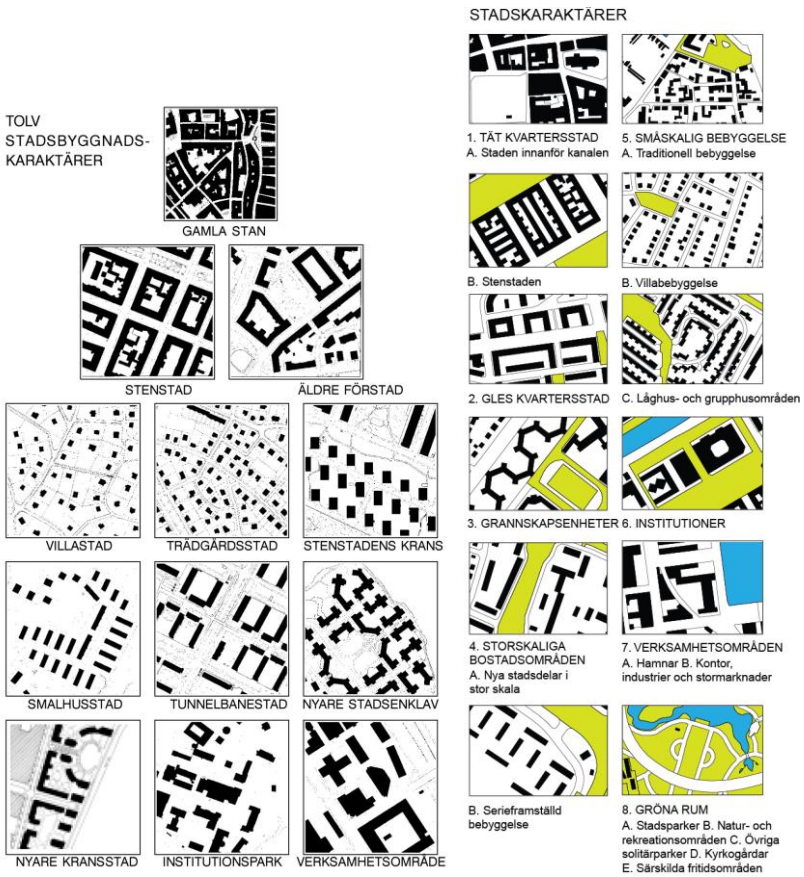

Figure 9. The neighborhood types or stadskaraktärer in Stockholm (twelve on the left) and Malmö (ten on the right).

The research on urban typologies also influenced architectural practices and urban design consultancies in the 2000s. URBAN STEP is a participatory method for urban design and planning based on "stadstyper" ("urban types") developed by Ekologigruppen AB, Arken SE Arkitekter in cooperation with Jerker Söderlind and Håkan Jersenius (Einarsson, 2012). It includes a workshop with a round table with a map, matrix of urban types and value rose diagrams that assesses sustainability of the historical and newly proposed urban types (Figure 10). One of the aim of the workshop to create understanding of the historical development of the city and collaboratively discuss new sustainable urban designs.

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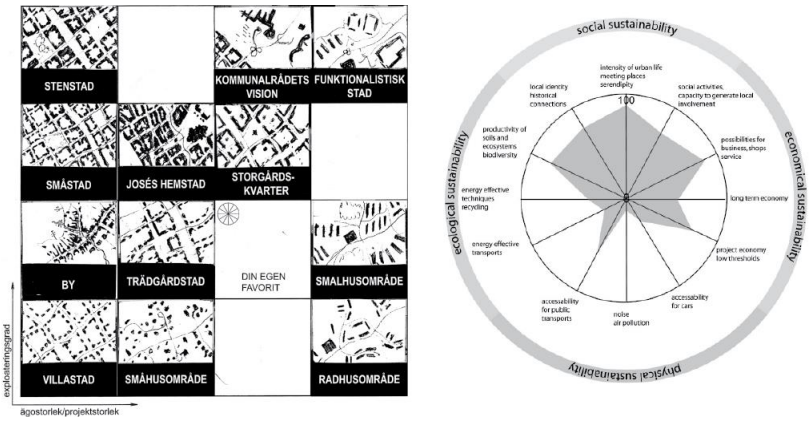

Figure 10. The "urban type" ("stadstyp") matrix and the value roses describing different aspects of sustainability used in the workshops organized by Ekologigruppen and Arken Arkitekter.

DISCUSSIONS

Building upon the typological conceptualization of Greger Paulsson, Lennart Ameén and Björn Lynn, Swedish morphologists developed three complementing typo-morphological approaches in the 1980s and 1990s. These approaches were accepted by municipalities like Stockholm and Malmö and also Region Gotland and the historic Visby. A group of architects and urban designers also developed a participatory method to assess sustainable urban designs by considering urban typologies. The typo-morphological research continued on the academy in two directions. Meta Berghauser-Pont following upon the work on Uno Åhren and Johan Rådberg presented a Spacematrix model (Berghauser-Pont & Haupt, 2010; 2013). Berghauser-Pont proposes generic urban typology that it based on standard morphological elements in English and urban form variables (e.g. building heights, FSIs, OSIs). An urban type as "low-rise buildings" can translate to several Swedish neighborhoods with houses e.g. "villastäder" or "neighborhoods with villas" that designate late 19th and early 20th century neighborhoods with small houses or "småhusområde" or "neighborhoods with small houses" that will refer to late 20th century neighborhoods with small houses that were oriented to the automobile (the term "suburban sprawl" can also be used). As generalist model, Spacematrix model has been widely accepted in morphological research and used to analyze urban elements e.g. lots (Bobkova, et al., 2019a; 2019b). Todor Stojanovski used the Swedish urban typologies proposed by Carl-Johan Engström and Johan Rådberg to analyze the effect of urban form as neighborhood type on travel (Stojanovski, 2018). He used the typology as background for future transformation of Swedish cities (Stojanovski, 2012; 2013; 2019a) together with a typology of public transportation systems (Stojanovski; 2019b).

Typo-morphology and typologies can be very useful to understand urban history. The building and neighbourhood types

can be identified and recognized the general public (as argued by the creators of URBAN STEP). They can be compiled in a typology and described by architectural and urban historians or new types of buildings and neighborhoods can be proposed by architects and urban designers. The types consist of elements and rules to combine these elements in space (discussed by Christopher Alexander and Björn Linn, Figure 2 illustrates how a building type is applied to create different city blocks). Architects and urban designers solve urban problems by entering design worlds and playing with elements, rules and types that characterize design worlds (Schön, 1988; Mitchell, 1990). As such that are appealing to urban design practitioners. The types, elements and rules can easily be turned into building ordinances and codes because typo-morphological conceptualization directly link to design toolboxes and worlds (Talen, 2002; 2009; Marshall & Çalişkan, 2011; Marshall, 2011).

However, there are limitations in using typo-morphology in practice that requires critical understanding and application of typologies. Firstly, the Swedish typologies presented in this paper developed over a century and they are specific for Sweden. Words such "vilastäder", "stenstad" and so on were specifically coined in Swedish language to describe these types of neighborhoods. The typologies cannot be directly transcribed, but it is possible to use the method to create building and neighborhood typologies capturing cultural and linguistic uniqueness. Secondly, the typologies are predominantly historical. The retrograde disposition and nostalgic attachment to specific neighbourhood types can result in repetitiveness and stereotypes. Typologies are usually historical facts, whereas the future is here to be invented. If a historical pattern of a neighbourhood (e.g. a railway suburb of the early 20th century) is replicated as a new Transit-Oriented Development (TOD) today, the neighbourhood type will be different in the historical context and will affect age groups, social grouping, and so on, despite similarities in neighbourhood design, residential and employment densities (as discussed by Engström, 1988; 2018).

In the end, this paper focuses only on the typo-morphological approaches in Sweden. There are other morphological approaches with long tradition in Sweden. Abdellah Abarkan has a research group that focuses on urban history. Lars Marcus, one of the prominent Swedish morphologists, leads a Space Syntax group in Chalmers University. There is a long tradition in urban geography and regional science. The work of Torsten Hägerstrand is highly influential and KTH Royal Institute of Technology has a

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group that works with regional planning and urban modelling. These morphological approaches are not reviewed in this paper.

CONCLUSIONS

Swedish morphologists in the 1980s and 1990s developed three distinctive, but complementing typo-morphological approaches to understand Swedish architecture and cities. These approaches were accepted by municipalities like Stockholm and Malmö, but also Region Gotland and the historic Visby. These municipalities have used these building and neighborhood typologies as a background for urban codes or building regulations. A new workshop STEP method for participatory planning based on neighborhood types was also proposed by Swedish architects and urban designers to assess sustainable urban designs.

Urban morphology and design are intertwined and many morphologist have argued for using typo-morphological approach in architectural and design practices. The typologies can help in understanding urban history. The elements, rules and types that characterize various building and neighbourhood types can be easily applied by practicing architects and urban designers. They can be turned into building ordinances and codes. The building and neighbourhood types can be identified and recognized the general public which makes possible to organize participatory workshops and charrettes as argued by Swedish architects and urban designers who created the URBAN STEP method. However the typologies have to be applied critically. The presented Swedish typologies are deeply embedded in Swedish culture and language and they cannot be transcribed directly to other contexts. The typologies are furthermore historical. The historicity and multiplication of typical designs can result in repetitiveness and stereotypes. Typo-morphology emphasize the importance of morphological information to urban planning, design and development practices, but not replication. Typologies are historical facts, whereas the future can be invented. The typologies are urban visions in dynamic processes of urban morphogenesis or evolutionary incremental processes in achieving good urban forms (Scheer, 2010). The future can be invented without replicating historical urban patterns.

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