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Handbook, Standard, Room: The Prescription of Residential Room Types in Sweden Between 1942 and 2023

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Abstract

Norms and handbooks have played a key role in the design of residential rooms in Sweden since the 1940s. Ever since, changes in housing policies have led to varying definitions and regulations of residential rooms, allowing their existence, defining their configuration, and framing their performance. And yet, none of these rooms has been built; they are prescribed room types that belong in the pages of handbooks that validate the framework in which housing design can operate. What are these prescribed room types? What do they look like? Who and what do they include? Have they changed over time? In response to these questions, this article follows the evolution of a set of residential room types in the design handbooks that have accompanied housing policy bills in Sweden from 1942 to 2023. These manuals are not the law itself but operate as an interface for professionals and designers by reflecting the practical consequences of the norm. Diagrams, dimensions, texts, and references to housing literature vary from handbook to handbook to define the specific traits of each type of room. By studying these traits in relation to key moments of Swedish housing politics, the article reveals the role that norms and standards have played in the establishment of the regulatory regime in which housing design in Sweden operates today.

Keywords

housing design; housing regulations; housing standards; residential rooms; room typology; Sweden

1. Introductory Remarks on the Room as a Subject of Study in Housing Research

In architectural design, history, and theory, domestic architecture is often anchored in typology, an intellectual tool that facilitates the systematization, organization, and navigation of housing as a body of work. The specific

characteristics that classify residential projects through this lens are as varying as the very notion of type (Tostões & Silva, 2022), and it is not the purpose of this article to delve into them. Regardless of this variety, however, there seems to be a remarkable consensus around the typological levels that drive classification and analysis, most notably the building form and the dwelling unit (Leupen & Mooij, 2022). As a result, we can find extensive literature on housing that is organized around these two levels (Gameren, 2023; Heckmann & Schneider, 2017; Karakusevic & Batchelor, 2017; Lapuerta et al., 2021; Ledent & Porotto, 2023; Nylander, 2018; Pierini et al., 2023), while other scales and spatial components of a residential project, particularly the rooms, have been rarely the subject of typological studies.

One exception is the recent work of Kärrholm (2020), who has conducted extensive research on the typological evolution of residential rooms in Sweden. Kärrholm's approach to type considers both form and use and results in the characterization of room types as "territorial sorts," that is, as spatial entities connected to specific uses and meanings, whose emergence, transformation, or disappearance in the residential architecture of a country involves significant material and cultural changes. In his own words:

Types...are in fact a way of turning a certain space into a socio-material actor with a certain effect, i.e., into a territory. One could also describe them as "sorts" to make clear that they are not defined by a standard set of entities (like prototypes might be), but must be seen as a more fluid assemblage where no entity is in itself obligatory. (Kärrholm, 2020, p. 2)

In this article, we add to Kärrholm's line of research by focusing on the residential room types included in the design handbooks that have accompanied housing policy bills and norms in Sweden in the last nine decades. The reason why we focus on these manuals and not the bills is because of the particularities of their format. Unlike strictly textual norms, handbooks include explanations, drawings, tables, and references to guide designers through the field of action established by legislation. By reflecting the practical consequences of the norms and offering compliant examples, these manuals constitute a unique source for professionals and operate as an interface that bridges regulations, research, and design. In so doing, they have defined the types of rooms legislated and prescribed by the Swedish nation since 1942—their spatial traits, designated functions, and, going back to Kärrholm, their socio-material scope.

2. An Account of Swedish Housing Design Handbooks

Housing norms and standards have been subject to many accounts in Swedish historiography (Berger et al., 2007; Nylander, 2018; Nylander et al., 2018; Thiberg, 1990). In the last decade, different scholars have studied these standards in detail (Carrai, 2021), as well as their socio-cultural effects (Mattsson, 2010, 2023; Pries, 2022), that is, their performative capacity in the construction of what Perers (2020) has defined as an ideal image of the Swedish apartment home. By studying the design handbooks that have accompanied these norms and standards since 1942, we aim to shed light on the role these manuals have played in the construction of the meta-project that has guided the manifold spatial outcomes of Swedish residential architecture in that period.

Our account starts with a 28-page blue-covered handbook called *Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans* (Westholm, 1942; see Figure 1). The manual, widely identified as the first national directive for housing, was issued by Statens byggnadslånebyrå (the Swedish Building Loan Agency) as a set of minimum standards that developers should comply with to obtain cheap

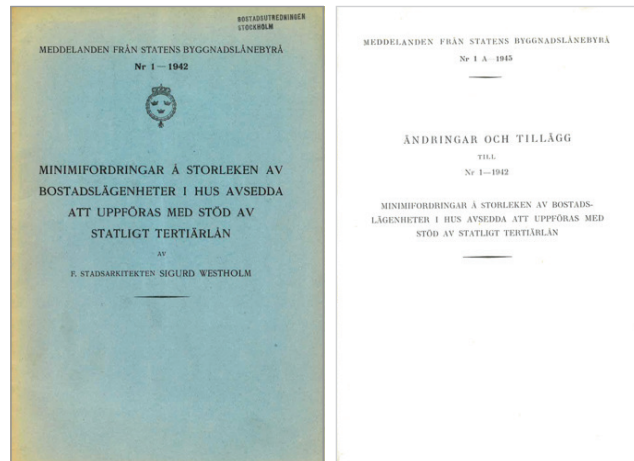


Figure 1. Cover of *Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans*, published in 1942 by Statens byggnadslånebyrå (left) and cover page to the 1945 amended version (right).

loans for the construction of residential projects. It came as an outcome of a broader state initiative led by the social democrats to stimulate housing from a non-speculative approach after a period characterized by broad political agreements and emerging social reforms, which laid the foundations for the welfare state housing policy. Westholm's handbook, or bible, as is commonly referred to, strove for good design, hygiene, and practicality in the home without including any floorplan or picture, only through well-structured and easy-to-read tables, authoritative text, and prescriptive measurements (see Figure 5).

Westholm's publication came right after the birth of a new genre in architectural literature, the design handbook. The early Ramsey and Sleeper's *Architectural Graphic Standards*, published in the US in 1932, or Ernst Neufert's *Bauentwurfslehre*, published in Germany in 1936, had marked a starting point for recurring editions that would soon be identified with normative architectural practice (Emmons & Mihalache, 2013). Enrooted in Taylorist notions of domestic standardization and household efficiency, both in language and ideology, these books of practice established a clear framework for architectural design. They were produced to be widely read, assimilated, applied, and reproduced, and, in so doing, they normalized ideas on how to design, use, and evaluate domestic architecture (Carrai, 2021).

Following this same spirit, a new version of Westholm's handbook was published 12 years later. With the title of *God Bostad (Good Housing)*, the new handbook was issued in 1954 by Kungl. bostadsstyrelsen (the Royal Housing Board of Sweden), a central government authority tasked with providing housing and managing state loans in the two decades that followed (see Figure 2). The board updated and expanded the manual with reasoned recommendations and diagrams prepared after the results of interview studies and laboratory experiments. Among these were the *Utredningen för hem- och familjefrågor* (the Investigation Into Home and Family Affairs) or the latest studies by Hemmens Forskningsinstitut (the Home's Research Institute), which established national standards regarding lighting, furnishing, and room dimensions. By providing instructions for spatial organization and disseminating new housing standards, *God Bostad* was manifestly intended to regulate Swedish domestic space, but also to install the home at the epicenter of Swedish politics. Through the manual, the powerful Housing Board funnelled the social democrat's ideal of spatial justice, i.e., the equal provision of a generous range of life's necessities, synthesized in a set of standards tied to the state housing credit system.



Figure 2. Cover of *God Bostad*, published in 1954 (left), 1960 (middle), and 1964 (right) by Kungl. bostadsstyrelsen.

The aspirations for good and egalitarian planning that were characteristic of Sweden’s folkhem (Carrai, 2021; Mattsson & Wallenstein, 2010) were mediated by the handbook, which acted both as a design guideline for the new residential environments and as evaluation criteria for the needs of the residents populating them. The drawings with furniture arrangements, the room designations, and the measurements contained in the 32 glossy pages of *God Bostad* permeated the projects that landed in the office of the Housing Board to receive a state loan since its first publication in 1954. The national standards, updated in the subsequent editions of 1960 and 1964, spread and solidified in the domestic spaces built during the 1950s and Miljonprogrammet (Million Housing Program), the state-led housing program from 1965 to 1974. For two decades, the construction of new dwellings in Sweden hit a record high, and so did the purchasing power of Swedish residents.

Interestingly, the standards coded in the manual were not alien to the logic of consumerism, despite its connection to the decommodification of housing. Every new edition of *God Bostad* evolved according to knowledge produced through prototype testing, ambitious consumer surveys, and the ensuing redefinition of standards to better meet the needs of certain “types” of households. As Pries (2022) has suggested, Sweden’s standard relationship with consumer groups and research on product design was inspired by earlier debates on Fordist standardization and mass production. In this context, the handbook contributed to the transformation of precise spatial arrangements into predictable consumer goods tied to mass production and national planning, as well as the creation of a predictable Swedish consumer aligned with the market (Mattsson, 2010).

Another edition of *God Bostad* was prepared in 1970 but never published. Instead, a new handbook came in 1977 with a new title—*Bostadsbestämmelser (Housing Directives)*—in a new format and under a new authorship by Statens planverk (the Swedish National Board of Urban Planning; see Figure 3). The standards of the 1964 edition of *God Bostad* had been in force until they were incorporated in the legally binding Svensk byggnorm of 1975 (the Swedish Building Code), a code that got rid of many of the texts that justified the qualities and dimensional standards for new constructions and introduced a significant shift from prescriptive to performance-based regulations. In other words, the new Building Code focused on what Swedish domestic space should do rather than on its spatial qualities (Mattsson, 2023, pp. 123–130).



Figure 3. Cover of the first (left) and last edition (right) of *Bostadsbestämmelser*, the handbook published by Statens planverk in 1977 and 1985.

Lacking the solutions and reasonings of its predecessor, the norms were exposed to increasing debate and criticism, also by those who did not seek housing loans. To counteract this perception and resist the turn by the performance-based code, the handbook published by the National Board of Urban Planning presented the regulations and standards in a reasoned and accessible fashion: a richly illustrated A5 catalogue printed in uncoated paper with a table of contents and a subject register to look up specific information, as well as a few ruled-pages at the end for own notes and completions.

Despite its renewed, handy appearance, *Bostadsbestämmelser* sought continuity with *God Bostad* and focused on spatial knowledge. To that extent, the Board of Urban Planning prepared the handbook in consultation with the Housing Board and Konsumentverket (the Swedish Consumer Agency), as well as practicing architects who examined, translated, and evaluated norms and recommendations. The architectural imprint sought by the director of the board, Lennart Holm, became evident in the drawings that spread across the 128 pages of the new manual, including diagrams, floorplans, axonometric views, urban plans, or construction details. In hindsight, the handbook and its later editions, published in 1979, 1984, and 1985, could be seen as the highpoint of the welfarist implementation of housing standards through planning since, contrary to the previous manuals and their connection to the state loan system, the underlying regulations applied to all new projects. Moreover, the spatial solutions prescribed in the handbook served as a template for evaluation that reinforced the multi-scalar production of housing that had been enabled by Westholm's manual and *God Bostad* (Pries, 2022, pp. 298–299). While the national bodies detailed the norms and standards that were required to get a housing permit, municipal planners were responsible for evaluating the compliance of the projects they received. Following Pries (2022), it could be argued that the standards contained in these handbooks shaped domestic space according to a technocratic view of social justice that simultaneously served to measure the needs and to evaluate the responses of housing projects.

In 1997, a new handbook was published. It was also titled *Bostadsbestämmelser* but, albeit it shared the name, format, layout, internal structure, and style of its predecessor, it was the first manual not issued by a Swedish public authority but by an information company for the construction sector, Svensk byggtjänst (see Figure 4).

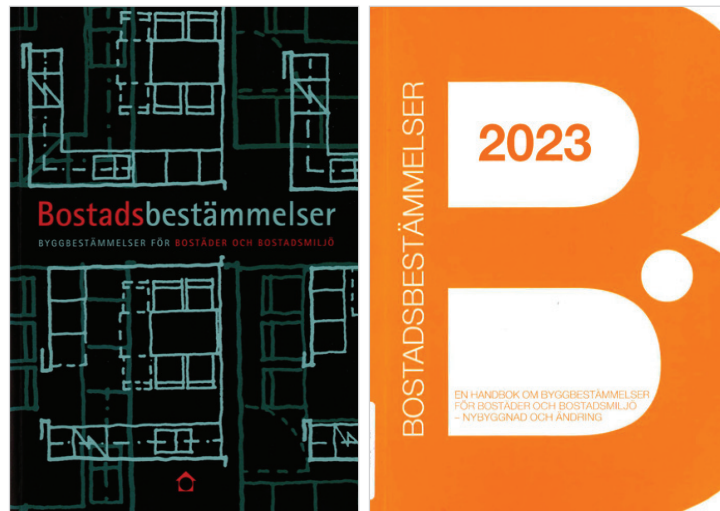


Figure 4. Cover of the first (left) and last edition (right) of *Bostadsbestämmelser*, the handbook published by the company Svensk byggtjänst in 1997 and 2023.

Since the 1997 edition, Svensk byggtjänst has published 12 more editions of *Bostadsbestämmelser*, the last one in 2023. Like the previous handbooks, they compile regulations and recommendations from various sources and institutions in an easily understandable manner, providing the readers with explanations of their purpose and context. However, the level of detail in relation to drawings and dimensions is substantially reduced, in line with the evolution of the underlying housing norms. In this regard, the transition from detailed requirements to performance-based regulations had taken a step further in 1993 with Boverkets Byggregler, the building regulations issued by the current Swedish National Board of Housing. In them, instructions to meet the law were softly worded, and dimensioned spatial solutions were removed and replaced by general advice referring to the standards decided by private and public actors through the Swedish Institute for Standards. Now, it was the builder who was expected to take responsibility for the planning of domestic space, even when the detailed standards disseminated by the previous handbooks were no longer in place.

Despite the new manual still casts an image of authority, accuracy, and universality that normalizes a national domestic doctrine characterized by *good* housing—functional, proportionate, beautiful, and easy to furnish, clean and maintain—the period when design and regulations went hand in hand was over in 1989. All the national institutions that provided a welfare system through planning, including the Housing Board, the Board of Urban Planning, and the Swedish Ministry of Housing, closed at the turn of the decade. The gradual process of deregulation and subsequent reregulation of the building codes, characterized by a state-led neo-liberalization of residential architecture as described by Mattsson (2023), signaled a new political era in terms of housing that was embedded in the new *Bostadsbestämmelser*.

As we have succinctly observed, the main traits of the handbook as a genre are essential to the ways in which these publications perform their role. Together, in a sequence of overlaps rather than replacements, these handbooks have shaped an evolving artefact that mediates housing design in Sweden, turning standards into both guidelines and evaluation criteria. In so doing, the handbooks articulate a multi-scalar network in which we can point at three main actors: the ordinary residential consumer (those members of the household whose practices are enrooted in consumerism and codified in the manuals, but also those who come to visit or use domestic space as a workplace, such as home helpers), the architect (those who apply the information of the

manuals to produce architectural projects), and the state and municipal bureaucrats (turned into legitimate supervisors of the resident's rights). Although it is never explicitly said in them, these manuals became one of the tools of a political and social project that was meant to be translated into domestic space.

To know more about it, we have selected one edition of each of these handbooks as the main source of our analysis (Table 1). From the two versions of the one published by Statens byggnadslånebyrå, *Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans*, we have selected the first as the original prototype of this type of publication (Westholm, 1942). For the other three—*God Bostad*, published by Kungl. bostadsstyrelsen; *Bostadsbestämmelser*, published by Statens planverk; and *Bostadsbestämmelser*, published by Svensk byggtjänst—we have selected the last editions as the most evolved ones of the series, that is, the ones that have been subject to more changes and amendments (Kungl. bostadsstyrelsen, 1964; Statens planverk, 1985; Svensk byggtjänst, 2023).

Table 1. The main traits of the four selected handbooks.

	<i>Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans</i> (1942)	<i>God Bostad</i> (1964)	<i>Bostadsbestämmelser</i> (1985)	<i>Bostadsbestämmelser</i> 2023 (2023)
Content	Normative regulations and recommendations that had to be considered in the design and construction of the interior of apartment buildings that intended to obtain a tertiary loan	Normative regulations and standards that had to be considered in the design, construction, and technical aspects of the interior of apartment buildings, as well as planning and outdoor spaces, that intended to obtain a tertiary loan	Regulations and recommendations that apply to housing in Sweden, from design to management and use	Regulations and recommendations that apply to housing in Sweden, from design to management and use, including European construction standards
Purpose	Prevent the design of technically unusable apartments and promote good design in new apartment buildings	Update the previous handbook, offer up-to-date information, and promote a sustained increase in housing standards	Simplify and clarify an expanded normative framework to facilitate that housing design meets the regulations	Ensure that knowledge is not lost and facilitate legal compliance for housing design according to an updated collection of norms and regulations
Audience	Architects, building contractors, and municipal bodies	Architects, building contractors, municipal officials, and other agents who have to do with housing construction	Professionals, tenants and owners, and regulating bodies	Not specified
Format	C5	C5	A5	A5 and digital

Table 1. (Cont.) The main traits of the four selected handbooks.

	<i>Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans (1942)</i>	<i>God Bostad (1964)</i>	<i>Bostadsbestämmelser (1985)</i>	<i>Bostadsbestämmelser 2023 (2023)</i>
Pages	28	65	123	199
Table of contents	No	Table of contents including room types and functions	Table of contents including room types and functions	Table of contents including room types and functions
Index	No	No	Alphabetical index containing room types	Alphabetical index containing room types
Tables, illustrations, and measured drawings	Tables included in the main body of text addressing a selection of room types; no illustrations nor measured drawings	Tables, illustrations, and measured drawings included in an appendix addressing furniture arrangements and a selection of room types	Tables, illustrations, and measured drawings included in the main body of text addressing a selection of room types	Tables, illustrations, and measured drawings included in the main body of text addressing furniture arrangements
References	No	References to norms included in the main body of text, plus research literature on a selection of room types	References to norms included in the main body of text and in an appendix, both containing research literature on a selection of room types	References to norms included in the margins and references to research literature included in the main body of text

3. The Room in the Handbook: A Short History

The reading, analysis, and comparison of the four manuals listed in the previous section articulate a brief history of the use of the residential room as the basic component of multifamily housing design in Sweden. In this section, we follow this history by focusing on two main aspects: the approach of each manual to the room and its functional mandate, and the different types of rooms included in each manual.

3.1. *Statens Byggnadslånebyrå's Handbook: Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans (1942)*

The first of the manuals in this short history is the one that more clearly presents room types as territories in Kärholm's (2020) sense, that is, as spatial actors connected to a wide range of socio-material projections (see Figure 5). In the 28 pages of the handbook, room types guide the author's arguments on the necessity of rationalizing and improving residential architecture in Sweden, both in terms of content and structure. The specificities of each type of room are determined by precise spatial and functional definitions, but also

by crisp reflections on their history, limitations, and societal roles. As an example, the manual makes a difference between one-room apartments for men and for women, stating that the latter should include kitchens, while the former should not (Westholm, 1942, p. 6). Also, the kitchenette is described as a response to the difficult period that followed the First World War, and it is deemed limiting and not competitive in relation to “*det verkliga köket,*” or the real kitchen of the modern home (Westholm, 1942, p. 13).

These and other reflections exemplify the cultural dimension assigned to room types in the manual, as well as their role in organizing Swedish society at large. To the authors, the proper selection of rooms in residential architecture is a fundamental tool to address a particular national problem:

It is widely known that the population issue in our country is in a critical situation. Its close connection with the housing issue is probably not unknown either. Under such conditions, it is in the nature of things that the government measures, which intend to support the housing construction industry, should primarily focus on housing suitable for full-fledged families, i.e., for those with at least five members....Through the advent of new apartments with several rooms, which better meets the need for space in the family home than is the case with the apartment with only one room and a kitchen, existing apartments of the latter type will now be freed up, whereby the need for such is met to a certain extent. From the public's point of view, the availability of suitable family housing must first and foremost be ensured. (Westholm, 1942, p. 26)

The family apartment is the corrective tool, and the functional room is the unit that shapes it. A modern apparatus that was to be applied throughout the Swedish territory, regardless of existing geographic and cultural differences. Knowledge and well-informed experience make the case for universality and justify the response to the demands of a national citizen with normal wishes:

Since in this context only the normal need for housing is of interest, one does not have to count on individual wishes that go beyond this need or lie alongside general conditions for good and purposeful housing of simple nature. (Westholm, 1942, p. 15)

The general conditions of good and purposeful housing are established in the manual by means of room types, since, as noted on pages 5 to 12, the rational layout of an apartment implies the division into spaces for different purposes. The number of divisions depends on the floor area available, and the production of spaces that are well-proportioned, well-lit, well-furnished, and can be accessed independently. According to the authors, “the different spaces within the home must have a size that corresponds to their purpose” (Westholm, 1942, p. 21). In some instances, like the kitchen, the allocation of specific equipment is also referred to as a defining condition.

This equation of space and purpose not only results in the use of room types as the fundamental component of the family apartment but also in a specific selection. In other words, the manual defines the rooms that are deemed adequate for the production of the modern family apartment. In the first part of the booklet, devoted to the minimum requirements for residential apartments in buildings intended to be built with the support of a tertiary loan, the following room types are listed and specified: *badrum* (bathroom), *WC-rum* (water closet), *tambur* (lobby or antechamber), *kök* (kitchen), *kokvrå* (cooking nook), *matrum* (dining room), *vardagsrum* (living

Room Type	Minimum Size (kvm)
Rum	12,0
Bad och we-rum	2,5
Tambur	2,5
Garderob	0,5
Lätta skiljeväggar	0,5
Hela lägenheten	18,0

Room Type	Minimum Size (kvm)
Rum	15,0
Kök	2,0
Bad och we-rum	2,5
Tambur	2,5
Garderob	1,0
Lätta skiljeväggar	1,0
Hela lägenheten	24,0

Room Type	Minimum Size (kvm)
Rum	18,0
Kök	6,0
Bad och we-rum	2,5
Tambur	2,5
Garderob	2,0
Lätta skiljeväggar	1,0
Hela lägenheten	33,0

Room Type	Minimum Size (kvm)
Rum	18,0
Kök	8,0
Bad och we-rum	2,5
Tambur	2,5
Garderob	2,0
Lätta skiljeväggar	1,0
Hela lägenheten	35,0

Figure 5. Tables specifying the minimum size requirements for each room type in apartments and houses built using tertiary government loans, published by Statens byggnadslånebyrå. Source: Westholm (1942, pp. 6–7).

room), and *sovrums* (bedroom). Interestingly, these are not the only room types the authors address in the manual; others are discussed in other sections of the handbook as rooms to be replaced, such as the *finrum* (the “nice” room), the *salong* (the salon), the *sällskapsrum* (the parlour), or the *jungfrukammare* (the maid’s room). It could be argued, then, that the listed rooms were the ones that made apartment buildings eligible for tertiary loans—a purposeful selection of spaces and functions that guided residential architecture in the decades that followed the publication of the handbook.

3.2. Kungl. Bostadsstyrelsen’s Handbook: God Bostad i Dag och i Morgon (1964)

God Bostad is triangulated around research, law, and design experience. In the introduction to the manual, the authors declare that housing research has allowed them to know the practical inner workings of many types of housing projects at multiple scales (Kungl. bostadsstyrelsen, 1964, p. 7). As a result, the manual covers a wide design spectrum, from overall planning to functions, spaces, and equipment in the apartment, as well as sound insulation, electrical installation, and climate. The appendices at the end of the manual, between pages 51 and 65, summarized the most relevant requirements and recommendations, with detailed drawings of furniture, tables with the Swedish standard for doors, windows, and cupboards, and, finally, a selection of tables with the minimum dimensional standards related to room types (see Figure 6). The measurements given for the dining area, the kitchen work area, the living room, the hygiene area, storage areas, and outdoors for playgrounds, amongst others, became a guide for architects at the drafting board and set the basis for the review for government loans. Interestingly, the standards included in the handbook did not always correspond with the minimum requirements established by the underlying law. Supported by housing design experience and research literature, the reasonings presented in the text favored the prescribed dimensional standards being higher than the legal ones.

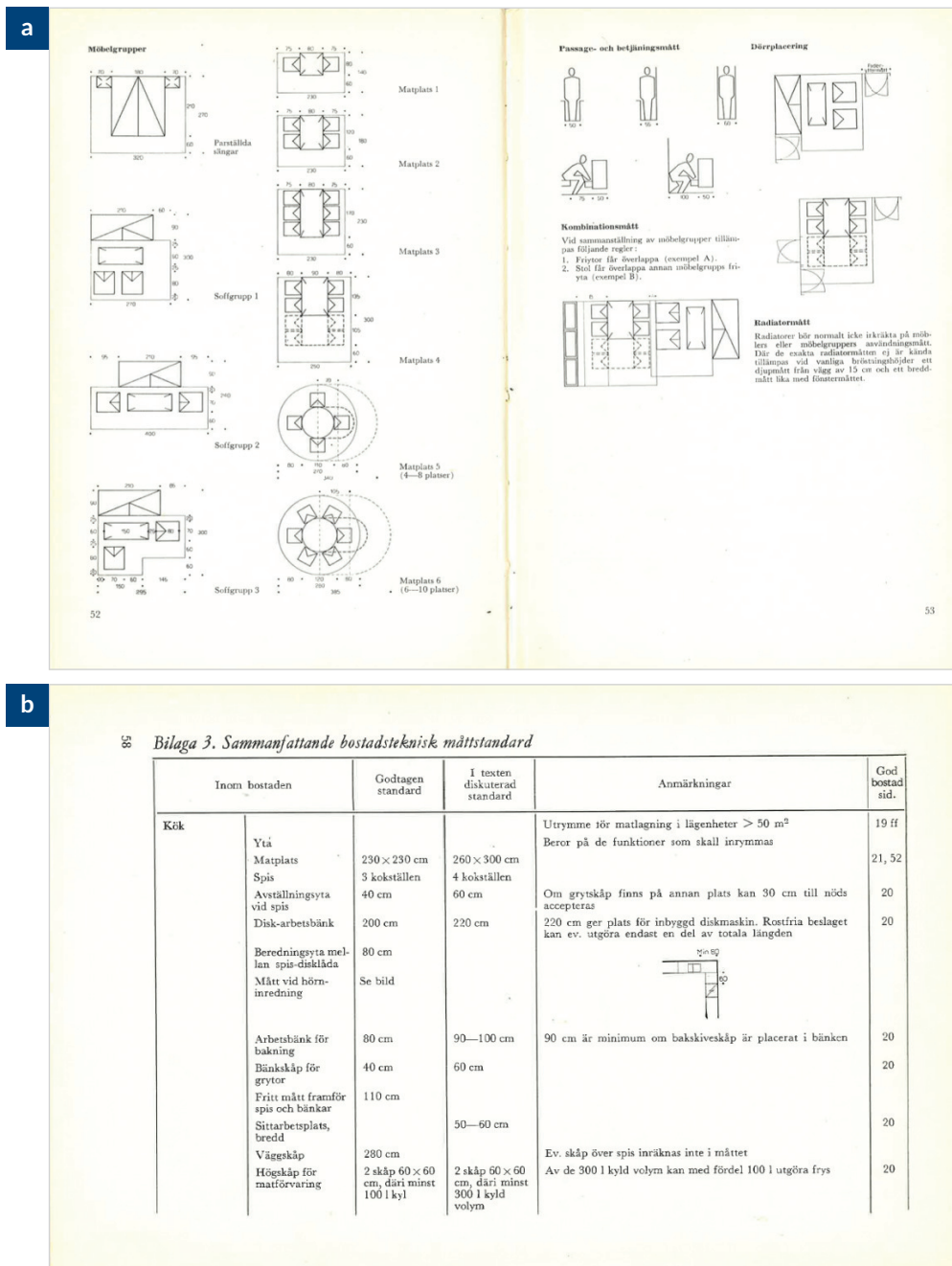


Figure 6. God Bostad: (a) Appendix 1 including detailed drawings and dimensions of residential furniture and (b) Appendix 3, including a table specifying the minimum size requirements for a residential kitchen, published by Kungl. bostadsstyrelsen (1964, pp. 52–53 [a], 58 [b]).

The manual is explicit in its purpose: It reports on the functions that homes must fulfill and the spatial standards that must be met. In other words, functions and spaces are once again related in an equation with a clear solution, the room type, or the room that accommodates a specific function:

The number of rooms should under any circumstances be at least so large that no more than two people need to share a room, that children over 12 of different sexes can have separate bedrooms and that no one needs to sleep in the kitchen or living room. The size and dimensions of the various living spaces

must be such that there is enough space for the required furniture and furnishings without neglecting the requirement for sufficient open spaces. (Kungl. bostadsstyrelsen, 1964, pp. 8–9)

Like Westholm's handbook, *God Bostad* makes use of the room type as an instrument that shapes functions at multiple scales. Moreover, as in its predecessor, the required number of rooms is determined by the need for privacy, which is equated in the handbook to the night function. As a result, the manual can be read to a certain extent as a perfected version of Westholm's work, expanding on the range and precision of the aspects and spatial entities that shape good quality housing, including a selection of rooms exterior to the apartment.

In addition to these exterior rooms, there are two remarkable aspects in which *God Bostad* differs from the 1942 handbook. The first is the selection of the room types of the apartment. While Westholm justified the selection of certain rooms over others, somehow setting the basis for their legitimacy, *God Bostad* is built around a predetermined set: the *badrum* (bathroom), the *tambur* (lobby or antechamber), the *kök* (kitchen), the *kokvrå* (cooking nook), the *vardagsrum* (living room), and the *sovrum* (bedroom) remain in the list of prescribed room types. To wrap the list up, three more rooms are timidly added, the *sovalkov* (sleeping alcove), the *balkong* (balcony), and when appropriate, the *tvätt rum* (washroom). The *matrum* (dining room) is removed, and the *WC-rum* (water closet) becomes the *separat wc* (separate water closet).

The second aspect has to do with the factors that determine the definition of both the apartment and the room types. In Westholm's handbook, the type of apartment was defined by the amount of rooms—1 RK (one-room apartment), 2 RK (two-room apartment), etc.—and the standards of each room depended on the type of apartment. In *God Bostad*, on the contrary, the basic constraint is not always the number of rooms. As an example, the different standards for the kitchen depend on the area of the apartment—whether it is bigger or smaller than 50 m² (Kungl. bostadsstyrelsen, 1964, pp. 58–60)—and the standards for the bathroom refer to the people sleeping in the apartment and not to the number of rooms (Kungl. bostadsstyrelsen, 1964, p. 62).

In short, *God Bostad* consolidates the room type as the spatial entity at the core of residential architecture, while it loosens the link between room and apartment, somehow accepting a certain degree of variability and adaptation in the overall design. This shift towards the autonomy of the rooms was motivated by the expertise developed on each type through research and reflected the handbook's endeavor to establish the room as a primary scale of housing design.

3.3. Statens Planverk's Handbook: Bostadsbestämmelser. Information om Nybyggnadsbestämmelser för Bostaden och Grannskapet (1985)

The handbook published by the National Board of Urban Planning, Statens planverk, addresses the minimum requirements that are to be met by any new housing building for permanent use in Sweden, whether it receives a state loan or not. Like *God Bostad*, it offers a multifaceted approach to housing design, expanding its focus to aspects such as maintenance, safety, energy, adaptability, or administrative management.

The first of the four chapters of the manual presents a new version of the interplay between apartment, function, and room. Much like its predecessor, the sections of this chapter are named according to functions and room types. In contrast to the two previous handbooks, however, examples of room types are drawn with detailed dimensions and furniture arrangements (see Figure 7). The tables with standards from *God Bostad*

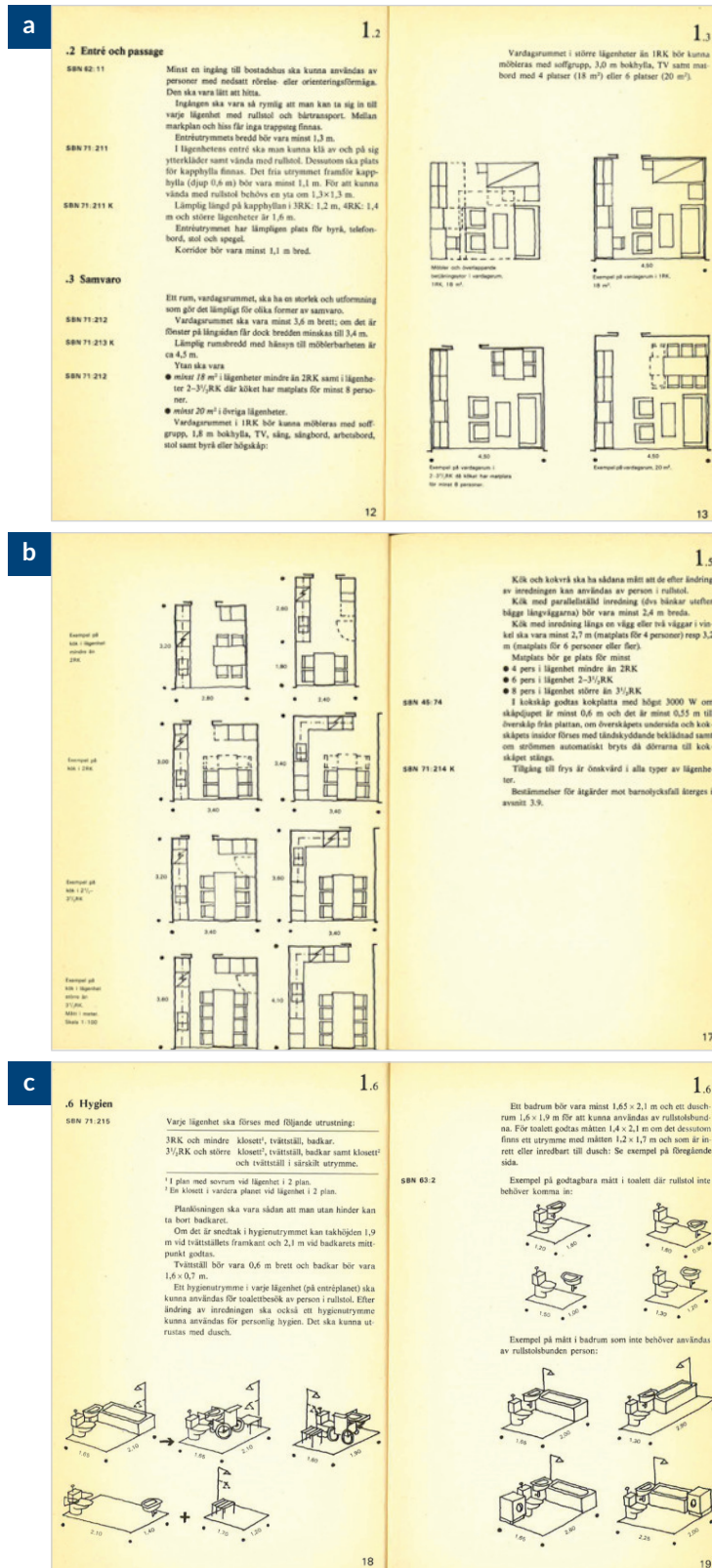


Figure 7. Examples of (a) residential living rooms, (b) kitchens, and (c) bathrooms, shower rooms, and toilet rooms with dimensions and furniture arrangements to meet the regulations from the Swedish Building Code, published by Statens planverk (1985, pp. 12–13 [a], 16–17 [b], 18–19 [c]).

have disappeared, and the minimum dimensions for equipment and furniture configurations have become tied to specific examples of rooms that meet the regulations of the Swedish Building Code. In a way, then, *Bostadsbestämmelser* presents rooms as elemental design components. The underlying logic is that, if each type of room meets the Building Code, the apartment will. In line with this logic, a standard height from floor to ceiling of 2.40 m applies to all the room types—except for the 2.30 of the attic rooms—so they can be easily combined (Statens planverk, 1985, p. 11), as well as a standard request for windows towards open air and good daylight in rooms for living and cooking.

The handbook also introduces a new system to count these rooms and to qualify apartments. For example, a living room and room that can be furnished as a bedroom for two people is counted as one room if it is bigger than 10 m². A bedroom for one person counts as half a room and has to be at least 7 m² big (Statens planverk, 1985, p. 8). The introduction of the half room responds to a general reflection on the flexibility of the apartment, deemed as a desirable quality in housing design. Examples of a basic form of flexibility are that one-person rooms can be combined into larger rooms and that the parents' bedroom can be divided into two smaller rooms. According to the authors, the flexible apartment allows for variations in the number of sleeping places or the use of living areas (Statens planverk, 1985, p. 10), a condition that is facilitated by the definition of certain circumstances under which different functions can take place in the same spatial entity.

The capacities that link function and space in a room are surface area, light and ventilation, height, accessibility in the overall configuration of the apartment, and furnishability, that is, the possibility of accommodating certain furniture arrangements. The latter is of particular relevance, for it defines space as a function of furniture: "Room design, door and window placement must be such that the rooms can be well furnished for their purpose" (Statens planverk, 1985, p. 10). Consequently, the examples of room types included in the manual are bound to specific furniture arrangements.

In addition to the definition of the rules for a residential room to meet the Swedish Building Code, Statens planverk's handbook persists in prescribing a certain selection of room types. The *badrum* (bathroom), the *kök* (kitchen), the *kokvrå* (cooking nook), the *vardagsrum* (living room), and the *sovrum* (bedroom) remain on the list; the *balkong* (balcony), which had made its appearance in *God Bostad*, consolidates its presence. The *duschrum* (shower room) firmly enters the selection; the *bastu* (sauna) makes a timid appearance; the *sovalkov* (sleeping alcove) leaves it; the *tambur* (lobby or antechamber) transforms from a room type into a place, the *entré* (entrance); and the *separat wc* (separate water closet), once again, changes name to become the *toalett* (toilet room).

The design of the apartment is not just based on the configuration of these room types, but also their relation. To meet the requirements of the Swedish Building Code, the placement of rooms must create a suitable context in terms of function and maintenance. In this regard, the handbook offers certain tactics to facilitate cohabitation, starting with the general consideration that every room should be accessible through a neutral connection, i.e., from a space that does not have a specific program, such as the hallway, so that the apartment is less locked in its use and conflicts between household members are avoided (Statens planverk, 1985, p. 9).

Furthermore, the rules that delimit the ways in which room types can be combined and/or accessed vary according to the number of rooms in an apartment. For example, in a 2 RK apartment, the bedroom can be

accessed via the kitchen if it can also be accessed through the living room; in a 2 1/2 RK or larger, one of the bedrooms may only be accessed via the kitchen; and, under any circumstances, a bedroom can be the only passage to another room (Statens planverk, 1985, p. 9). In Statens planverk's handbook, in short, these tactics enhance design thinking based on rooms as the basic component of an apartment.

3.4. *Svensk Byggtjänst's Handbook: Bostadsbestämmelser 2023. En Handbok om Byggbestämmelser för Bostäder och Bostadsmiljö—Nybyggnad och Ändring (2023)*

In *Bostadsbestämmelser 2023*, the last version of the handbook published by Svensk byggtjänst, previous directives are considered excessively detailed, and a less regulated framework is meant to inaugurate new design possibilities. The argument is grounded on the perceived necessity to prevent the regulatory system from hindering technological development (Svensk byggtjänst, 2023, p. 10). Interestingly, this necessity has a dual regulatory effect: While detailed spatial requirements for rooms dissolve, technical requirements such as accessibility or energy performance solidify.

This new direction becomes apparent in the content of the handbook. A first look at the index does not reveal significant changes: The division into four chapters from the homonymous handbook published by Statens planverk is maintained, the first of them being devoted to the design of the apartment and the residential building from a spatial and functional perspective. The epigraphs from this chapter refer to both functions and certain room types, such as the *vardgasrum* (living room), the *allrum* (family room), or the *sovrum* (bedroom). However, a reading from pages 9 to 80 quickly reveals that room sizes, their relation to one another, or their furnishability no longer guide the transmission of the norm. The previous requirements regarding the dimensions, sizes, and shapes of rooms are replaced by functional demands, with drawings focusing on furniture and equipment, such as beds, sitting groups, or cooking benches, all of them decontextualized from the rooms they might belong to (see Figure 8). In other words, rooms seem to disappear as the basic spatial component in the design of apartments, whereas functions are strengthened.

There is, however, one room that remains as an identifiable spatial entity mandatory for all apartments: the *personlig hygienrum* or *hygienrum* (the room for personal hygiene). The handbook refers to regulation Boverkets Byggregler 3:22, about the general design of dwellings, in which Boverket states that in the dwelling there must be at least one separate room for personal hygiene: "Personal hygiene is the only residential function which according to the building regulations requires a separate room." (Svensk byggtjänst, 2023, p. 21). In the section devoted to this function, the drawings illustrate different examples of the dimensions of the room, furnishing, and equipment (see Figure 9). The only other space that includes similar drawings is the balcony, while other spaces within the residence are prescribed as mandatory to allow for cooking, meals, togetherness, rest and sleep, hygiene, and storage (Svensk byggtjänst, 2023, p. 15). But these spaces are no longer named as they were in the previous manuals; they are not qualified as rooms. As an example, the use of the word *kök* (kitchen) is avoided in the section of the handbook corresponding to the general design of a dwelling, as well as the design concerning the specific function of cooking (Svensk byggtjänst, 2023, pp. 9–26, 35–40). The selection of room types made by Westholm in 1942, consolidated in Kungl. bostadsstyrelsen's and Statens planverk's handbooks, is wiped out in the 2023 manual. Together with the *balkong*, the *hygienrum* is the only room that remains.

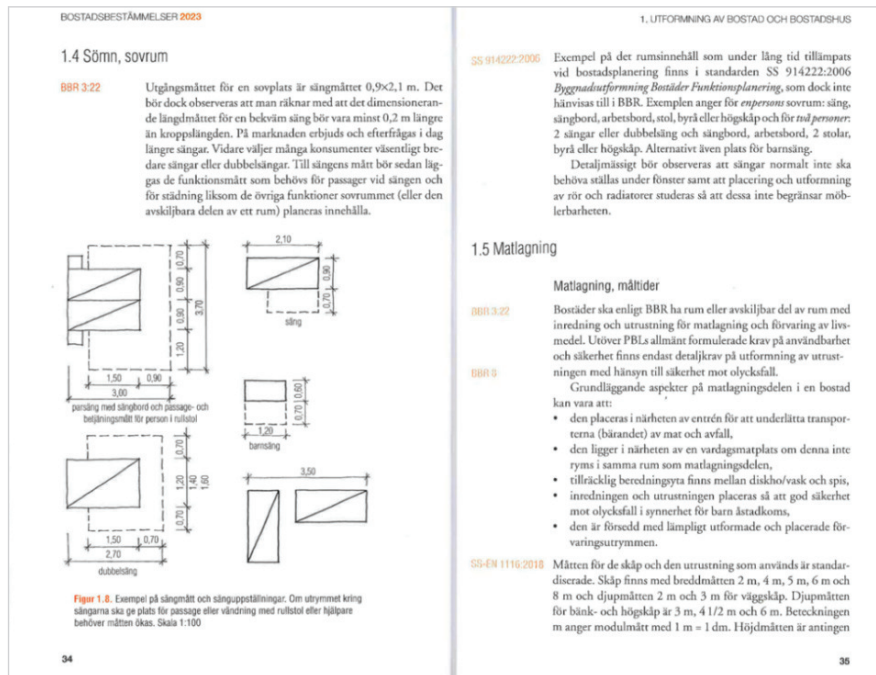


Figure 8. Examples of bed dimensions and bed arrangements published by Svensk byggtjänst (2023, pp. 34–35).

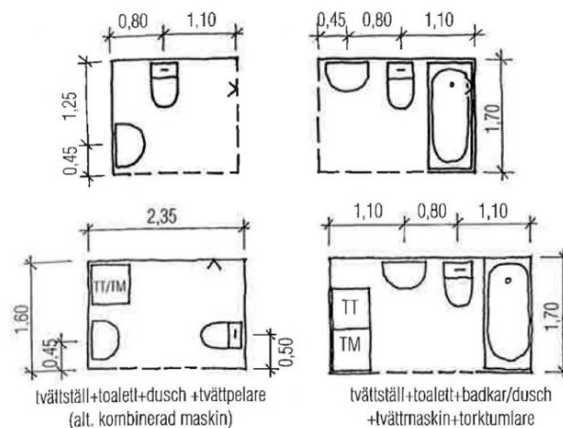


Figure 9. Examples of dimensions for an accessible *hygienrum* and possibilities for its equipment and furnishing published by Svensk byggtjänst (2023, p. 45).

To break the bond between function and room in the definition of the spaces of an apartment, a new spatial entity is born: the *avskiljbar del av rum* (separable part of a room). It is described as a space that must have windows towards the exterior and must be designed so that the function for which it is intended can be separated with walls from the rest of the room (Svensk byggtjänst, 2023, p. 20). However, the walls do not have to be provided from the beginning. Rooms, understood as separated spatial entities, are thus presented as a possibility instead of a starting point. In return, functions can extend over different spaces and find new arrangements. With the exception of the *hygienrum*, in the 2023 manual, it is the apartment that turns into a room, separable into different parts depending on size and functions.

This shift entails a new model for the definition and classification of apartments. Since rooms other than the *hygienrum* are no longer mandatory, apartments are typified and regulated according to their floor area. For apartments bigger than 55 m², one room or a separable part of a room for sleep and rest must be provided with enough space for a double bed. For apartments between 35 and 55 m², either the space for cooking or the space for sleep and rest has to be a separable part of a room. In this case, it is not necessary to provide space for a double bed. For apartments smaller than 35 m², the functions of togetherness, sleep and rest, and cooking can exist in the same space and overlap (Svensk byggtjänst, 2023, p. 20).

3.5. A Changing Selection of Room Types

Table 2 in this section synthesizes one of the main findings of the reading and comparison of the four handbooks studied in this article: Together, they articulate a history of crystallization and dissolution of residential room types. The first manuals made a strong attempt to define a set of spatial entities linked to specific functions, whose insertion into an apartment was meant to produce good quality housing. These room types crystallized by means of naming, indexing, detailed design, and, above all, recurrence from one manual to another. Beginning with Westholm's first publication, where rooms were openly presented as types, or spatial entities with meaning in Kärholm's (2020) sense, Table 2 traces an evolving process in which the initial selection of rooms is sharpened, perfected, and complemented.

This process confirms Kärholm's (2020, p. 15) reflection on the historical stabilization of a set of room types and its relation to a stabilized type of home. The inclusion and enforcement of a consistent selection of room types in the first three handbooks is inseparable from the construction of collective imagination and

Table 2. Room types prescribed in the four handbooks analyzed in the article, their minimum required areas, and main requirements.

<i>Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans (1942)</i>	<i>God Bostad (1964)</i>	<i>Bostadsbestämmelser (1985)</i>	<i>Bostadsbestämmelser 2023 (2023)</i>
Bathroom/WC (2.5–4 m²) <ul style="list-style-type: none"> Includes washing and drying of clothes Not mandatory in apartments not intended for families 	Bathroom/separate WC (>3 m²) <ul style="list-style-type: none"> Accessible from neutral space A shower, instead of a bath, can be accepted in certain circumstances Should not include washing clothes, other than socks and underwear Heavier laundry tasks can be accommodated in a distinct washroom inside the apartment 	Bathroom/shower-room/toilet (dimensions based on accessibility) <ul style="list-style-type: none"> Wide range of technical considerations, including waterproofing or appliances 	Room for personal hygiene (>1.7 × 1.9 m) <ul style="list-style-type: none"> Must include basin, toilet, and shower Must enable use by a person sitting in a wheelchair Can include a washing machine and water heater A bathtub is recommended for families with children

Table 2. (Cont.) Room types prescribed in the four handbooks analyzed in the article, their minimum required areas, and main requirements.

<i>Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans (1942)</i>	<i>God Bostad (1964)</i>	<i>Bostadsbestämmelser (1985)</i>	<i>Bostadsbestämmelser 2023 (2023)</i>
<p>Lobby (2.5–6 m²)</p> <ul style="list-style-type: none"> • Described as a neutral space • Should include a <i>städskrubben</i> (cabinet for scrubbing and sweeping) and a wardrobe 	<p>Lobby (140 × 170 cm or 120 × 140 cm)</p> <ul style="list-style-type: none"> • Described as a neutral space • Includes mirror, chair, and storage • Desirable to include an alcove for coats 	–	<p>Separable part of a room (dimensions not specified)</p> <ul style="list-style-type: none"> • For all the functions listed in the handbook: sleep and rest, togetherness, cooking, meals, laundry, and storage • Must have a window towards the exterior
<p>Kitchen/cooking nook (6–9 m²)</p> <ul style="list-style-type: none"> • Cited as the most important room in the home • Includes space for a stove, food storage, preparation and arrangement, dishes and storage, baking, and ironing • The cooking nook is considered for certain types of 1 RK apartments 	<p>Kitchen/cooking nook (standard dimensions depending on the size of the apartment)</p> <ul style="list-style-type: none"> • Cited as the central space in the home • Supervision of children must be considered • Designed based on the Swedish standard for kitchen equipment • Sleeping is not allowed • A place for meals or <i>matplats</i> has to be included in the kitchen or in connection to it • The cooking nook is allowed in apartments smaller than 50 m² 	<p>Kitchen/cooking nook (standard dimensions depending on equipment)</p> <ul style="list-style-type: none"> • Must accommodate a <i>matplats</i> or be connected to a dining area • Must be dimensioned so it can be used by a person in a wheelchair • The size of the <i>matplats</i> depends on the number of rooms • The cooking nook is considered and described 	
<p>Dining room (6 m²)</p> <ul style="list-style-type: none"> • Connected to the kitchen • It can be used temporarily as a place to rest or do homework 			
<p>Living room (17–20 m²)</p> <ul style="list-style-type: none"> • Used for gatherings, socializing, entertainment, or work • Occasionally, it can serve as a bedroom or as a dining room 	<p>Living room (>18–>20 m²)</p> <ul style="list-style-type: none"> • Cited as the family's gathering place • Used for rest, amusement, light work, and socializing • Includes sofa group, table group, storage, radiogramophone, and TV • It may include a <i>matplats</i> 	<p>Living room (>18–>20 m²)</p> <ul style="list-style-type: none"> • Suitable for different forms of togetherness • Dimensions depend on furnishing • In bigger apartments, it should include a group sofa, bookshelf, TV, and eating table 	

Table 2. (Cont.) Room types prescribed in the four handbooks analyzed in the article, their minimum required areas, and main requirements.

<i>Minimum Size Requirements for Apartments and Houses Built Using Tertiary Government Loans (1942)</i>	<i>God Bostad (1964)</i>	<i>Bostadsbestämmelser (1985)</i>	<i>Bostadsbestämmelser 2023 (2023)</i>
<p>Bedroom (7–12 m²)</p> <ul style="list-style-type: none"> • The number of bedrooms should attend to the gender separation of youngsters • In small apartments, it can accommodate functions other than sleeping, but not eating 	<p>Bedroom (7–15 m²)</p> <ul style="list-style-type: none"> • Provides separate and undisturbed sleeping space • Not intended for more than two people • Children over 12 and different sexes must have separate bedrooms <p>Sleeping alcove (210 × 145 cm, one bed; 210 × 260 cm, two beds)</p> <ul style="list-style-type: none"> • Does not need to include a window • Connected to the dining room (with an opening >210 cm) 	<p>Bedroom (7–12 m²)</p> <ul style="list-style-type: none"> • Single includes bed, bed table, working table, chair, bureau, or tall cabinet • Double includes two beds, two bed tables, a working table, two chairs, a bureau, or a tall cabinet 	
—	<p>Balcony (140 × 200 cm)</p> <ul style="list-style-type: none"> • Protected from wind and view from the neighbors • Provides space for a small <i>matplats</i> • A balcony that is recessed or protected by side screens is preferable to a fully open one 	<p>Balcony (140 × 200 cm)</p> <ul style="list-style-type: none"> • Mandatory in all apartments bigger than 1 RK • Accessible to the sun but protected from visibility and wind • Should be next to the kitchen or living room 	<p>Balcony (dimensions based on standards)</p> <ul style="list-style-type: none"> • Ideally located to capture the evening sun • Protected from visibility and wind • If smaller than 140 × 200 cm, it only provides space for single-sitting furniture and airing clothes
—	—	<p>Sauna (dimensions based on safety regulations)</p> <ul style="list-style-type: none"> • Not mandatory 	<p>Sauna (dimensions based on safety regulations)</p> <ul style="list-style-type: none"> • Not mandatory

residential culture at large through reading, assimilation, rehearsal, and reproduction. The rooms included in the handbooks were necessary for a dignified life, lived in a typical home. In other words, the history of the crystallization of rooms is also a history of the crystallization of roles: those of the household members and also those of the architect or the municipal officer.

In the last handbook, however, this selection of room types dissolves in favor of residential functions no longer bound to specific spaces. Here, dissolution is carried out through abstraction and loss of graphic definition;

rooms disappear as separated entities and as legally binding deliverables of a project, with only one exception—the room for personal hygiene. If there is one thing we can learn by looking at the transformation of room types in these publications, it is that the development of a residential culture is as unstable as the fate of the rooms that host it.

4. Conclusions

This article has aimed to investigate the prescription of residential room types through the design handbooks that have mediated the transmission of housing norms and standards in Sweden in the last nine decades. By focusing on four of these manuals, the article discusses the changing role that room types, understood as territorial sorts (Kärrholm, 2020), have played in the configuration of Swedish residential architecture. Looking at the rooms included in these handbooks rather than specific built cases has allowed us to scrutinize two main areas of reflection.

The first is the dual condition of the handbooks, simultaneously a designed product and a design tool. The handbooks were a tool and a product of the modernization project of Sweden, an essential interface to both coding and normalizing the residential culture of the country. As Pries (2022) identifies, the Swedish domestic landscape has been quietly but steadily shaped, for decades, by architects who systematically built for the needs that the standards included in these handbooks sought to measure. Studying a comprehensive selection of residential projects from the last century, Nylander (2007) has noted that the useful room—a separate spatial entity performing a specific function—characterized Swedish residential architecture since the 1930s, as well as the perspective of what constitutes a good home. A more recent review of housing projects shows that the tendency towards a more performance-based regulation is evidenced in the design of new apartments, where traditional names of rooms are kept, but physical limits start to dissolve (Runting et al., 2021).

The second area is the tension between prescription and innovation present in the handbooks, for it reflects wider tendencies in national regulations. This tension is evidenced if we look at the reception of the standards that originated, shaped, and modified the room types included in the manuals. In *Bostadsbestämmelser 2023*, an explicit note is made on the pressure exerted by designers and the construction industry to simplify building regulations (Svensk byggtjänst, 2023, p. 7). This pressure has led to *Möjligheternas byggregler, MöBy*, a project promoted by Boverket for a new regulatory model consisting of fewer rules, formulated as functional requirements and not dimensional standards, and containing only binding regulations. In this model, general advice, references to standards, or other guidelines disappear, and the majority of room types as spatial entities bound to dimensional and organizational qualities.

This disappearance culminates in a change in trend undergone by the norms that have legally framed the production of residential architecture in Sweden since 1942. Originally, the handbooks that accompanied these norms made an explicit effort to set dimensional standards to raise the quality of housing architecture. As it has been analyzed in the manuals from 1942 and 1964, this effort had a twofold strategic effect. First, standards were decoupled from the minimum requirements included in the norm, offering solutions and examples that exceeded and improved those required by the law, all sustained by arguments and comparison to the most basic, complying solutions. In so doing, these manuals used standards that were more prospective than prescriptive, that is, as a replicable model meant to enhance the possibilities of the

residential architecture that was to come. Secondly, this model was grounded in the standardization of room types, or, in other words, in the definition—graphic, dimensional, and nominative—of a set of rooms in relation to different functions. An increase in the dimensional standards signified an increase in the housing standard, an explicit governmental goal by the time the last edition of *God Bostad* was published, as announced by its contemporary report from Bostadsbyggnadsutredningen (the Housing Construction Inquiry), *Higher Housing Standard* (Dalén & Holm, 1965).

In the 1985 handbook, the difference between standard and minimum requirements was blurred, and no separation was made between norm and standard. Yet, rooms and furnishing arrangements are very detailed, offering themselves as readily available examples that bring together what is desirable and what is required in the design of housing architecture. As a result, the manual presents itself as a turning point in relation to the research and development of Sweden's residential architecture, focusing innovation on aspects other than space, such as building performance and construction, while fostering compliance with a standard that is considered to be good. The steady relationship between housing research, regulations, and design seems to have reached a level of stability in which quality, standards, and rooms belong together: The standard makes the room inasmuch the room makes the standard.

The 2023 handbook replaces rooms with functions and introduces a new spatial category, the separable part of a room. In so doing, the manual points to a new direction for the design and development of Swedish residential architecture guided by reflections on flexibility and adaptation. When referring to the Swedish Standard SS 91 42 21, the authors declare that, even if the standard constitutes a suitable basis for assessing the long-term usability of an apartment, it reflects a solution that exceeds the requirements of the norm, implicitly inviting designers to challenge the standard, and redefining their ability to innovate as a task of optimization (Svensk byggtjänst, 2023, p. 15). Such an invitation is sustained by a renouncement to graphically translate the norm in relation to the selection of rooms made in the previous handbooks. The rules, now mostly abstract, textual information, promote a design approach that is no longer connected to a set of functional rooms and standard configurations.

The dissolution of the room as the basic unit of a dwelling in the current manual, grounded on several decades of private discomfort with the limits and requirements of the housing norms established in the 20th century, defines a new framework that seems to increase the freedom to think, design, and develop domestic space. Arguably, this freedom is wrapped around notions of optimization and reduction, given that it is in apartments with reduced areas (between 35 and 55 m², and below 35 m²), where the overlay and combination of functions not only becomes a possibility—for developers—but presents itself as a challenge—for designers. In 1942, Sigurd Westholm grounded his arguments on the necessity of clearly defined, separated rooms, on a question of privacy. Rooms addressed different subjects—the adult, the toddler, the near-adult child, etc.—and separation and privacy were presented as a precondition for the different needs, rhythms, and rituals of different peoples. Revisited today, some of the examples that sustain these arguments—like the need for separating near-adults of opposite sexes—read archaic and fusty. However, when confronted with the need to work from home or take care of a relative, privacy and separation, or a different room, still make a difference. An unsatisfied need for privacy is for many a source of lack of comfort in the home and one of the most tackling consequences of overcrowding and optimization.

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Conflict of Interests

The authors declare no conflict of interests.

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