On the Interaction Between Frail Older People and the Built Environment

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Architecture *and* Ageing

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Titel: *Arkitektur och Åldrande. Om samspelet mellan sköra äldre personer och den byggda miljön.*
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COVER: *Transspatialité (Trans-spatiality).* This image encapsulates the essence of the conclusions that this study postulates. Based on interviews, environmental assessments, and other research methods, the appropriate architecture for the frail ageing has the capacity to transcend from one type of space to the other, from the inside to the outside, from the built space to the natural space and back again. Aquarelle by the author. Other figures, photographs and tables presented in this study are made by the author, with the exception of figures 7, 8, 9, and table 2.

Plus on examine l'espace et mieux on le considère (pas seulement avec les yeux et l'intellect, mais avec tous les sens et le corps total), plus et mieux on saisit les conflicts qui le travaillent, qui tendent à l'éclatement de l'espace abstrait et à la production d'un espace autre.[9]

(Lefebvre, 1985, p. 450)

The more one studies space and the longer one contemplates it (not only with visually and intellectually, but by involving all the human senses and the entire body), one acquires a better and broader understanding of the conflicts that are active in space. These conflicts aim to dismantle the existing abstract space and to realize another space.[q]

(Lefebvre, 1985, p. 450)

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Acknowledgements

I realize that, in retrospect, writing a doctoral thesis offers more than an occasion to concentrate fully on a certain topic that since long has challenged one's imagination. In autumn 2002, when I first began this research endeavour I could hardly imagine that nine years later the last piece would be added to this research project. It is a long time span. One reason for this is the fact that Swedish technical universities apply a two step procedure in the realization of a doctoral thesis: In 2005, the invigorating feeling of having assembled scattered ideas about appropriate architectural space for frail older people into a legible text that was presented as a licentiate thesis, written in Swedish, was a full recompense for the work invested. This experience had expanded my architectural training into presenting ideas about architecture for older people in writing, which until then had mainly been realized through drawing or sketching. The first step towards the doctorate degree was accomplished. However then, the thought of advancing things into the next step of realizing a doctoral thesis did not seem to be possible, although some research applications were made with this intention. Instead, I resumed my career as a practicing architect, and contented myself with what had been accomplished. This could be the second reason for the considerable time that it has taken me to finalize this thesis.

Gradually, I had the feeling that the research topic had adopted me, since unforeseen circumstances created opportunities for me to continue to reason about appropriate architecture for frail older people in various contexts in spite of the fact that my professional situation rarely offered me the occasion to conceive an architectural design for a residential care home on a regular basis. In 2007, the research foundation J. Gust Richerts Stipendiestiftelse granted my application for a research scholarship. This substantial contribution supplied means to initiate the second step in the process towards the doctorate degree, and I am grateful that the foundation has continued to support the project with even more funding. At the same time, the municipality of Järfälla was concluding the architecture competition "Flottiljen—Future-oriented habitats for the elderly, senior housing and sheltered housing" in which I had participated as a member in of one of the two referential committees. These committees were at the disposal of the competition jury in case a second opinion about a certain competition entry was deemed necessary. From this, a research interest with a focus on the outcome of an architecture competition that concentrated on housing for older people with or without frailties materialized.

Graciously, the Administration for Social Welfare (ASW) of the Järfälla municipality decided to contribute to the research project. These two major research grants supplied the fundament for the continuation of the previously accomplished research papers of the licentiate thesis on the doctorate level. I send my grateful thoughts to other research sponsors who have had added means to this fundament and the project fully realizable: the Research and Development Centre FoU NU of the Stockholm County; the National Property Board (Statens Fastighetsverk), Stockholm; the Association for Research in Care Architecture (Forum för Vårdbyggnadsforskning), Göteborg; the Research foundation Estrid Ericsson stiftelse, SE Förvaltning AB, Stockholm; the Research foundation Anders Mortners Arkitektfond, the Royal Swedish Academy of Fine Arts (Kungliga Konstakademien), Stockholm, and the Administration for Social Welfare and Eldercare of the municipality of Haninge.

Of course, I would not have been able to discern the logic of these odd circumstances without the great help and the never-ending enthusiastic support by my supervisors. Therefore, I would like to start to express my gratitude to Associate Professor Magnus Rönn, the School of Architecture, the Royal Institute of Technology, KTH, Stockholm, for his numerous advices on the case studies and his supervision of the research project. Our discussions on architecture, archi-

Research grants

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List of original publications

   This doctoral thesis is based on seven research papers that focus on aspects of architecture for frail older people.

Andersson, J. E. (2011): Habitat privé, hôtel ou hôpital ? L'architecture relative à l'hébergement de personnes âgées et dépendantes (EHPAD) en Suède (Home, hotel or hospital? On Swedish architecture used in twelve residential homes for frail older people).   SUBMITTED

Andersson, J, E. (2011): *Appropriate Architecture for Ageing, on the use of architecture competitions as a social-political instrument to improve space for dependent seniors in the Twentieth Century Sweden.*   SUBMITTED

Andersson, J. E. (2011). *Appropriating space in an assisted living residence. On architecture and elderly frail people's spatial use.* Paper presented at the Conference Considering research. IN: Proceedings of the ARCC Spring Research Conference, Detroit, April 20-23, 2011, pp. 1-21.

Andersson, J. E. (2011). *"Touching up" Communal Space of a Residential home setting. A Comparative Study of Tools for Assessing Changes in the Interior Architectural Space.* IN: Journal of Housing for the Elderly, 25(2), pp. 175-216.

Andersson, J. E. (2011). Creating Empathetic Architecture for the Frail Elderly. Socio-political Goals as Criteria in an Architectural Competition. IN: M. Rönn, R. Kazemian & Andersson, J. E. (Eds.), *Architectural Competition. Research inquiries and experiences.* Stockholm: Axl Books, pp. 261-301.

Andersson, J. E. (2011): *Public competitions and competition briefs: Implementing welfare goals for dependent seniors in the architecture competition context.*
      SUBMITTED

Andersson, J. E. (2011). *Architecture for the Silver Generation - Exploring the Meaning of Appropriate Space for Ageing in a Swedish Municipality.* IN: Journal of Health & Place, 17(2011), pp. 572-587.

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Summary

This doctoral thesis deals with the type of architecture that materializes when age-related problems become a long-term condition (LTC) and gradually restrain the individual's ability to perform activities in daily life (ADL). Their life situation necessitates a support from relatives or municipal eldercare staff in order for them to continue to participate in everyday living. In addition, the architectural space requires a close adjustment to the personal panorama of cognitive or functional impairments. The habitat can be a flat appropriated many years previously or in a residential care home for dependent and frail seniors. Architecture for ageing with dependency demonstrates how space can be used either to affirm or oppress the older person's attempts to maintain an independent life style. By use of design theory, case study methodology and a heterogeneous research strategy, this study uses a threefold approach—*a retrospective, a contemporaneous, and a future-oriented approach*—to explore frail older people's interaction with the architectural space of residential care homes. This has resulted in seven papers that focus on aspects of these human interactions with the built environment.

Based on twelve exemplary models, Research Paper I concludes that national guidelines result in a homelike, a hotel-like or a hospital-like environment. Research Paper II is a retrospective study that examines the use of architecture competitions as a socio-political instrument to define architectural guidelines. Research Paper III focuses on dependent seniors' spatial appropriation of the communally shared space of a ward in a residential care home. Research Paper IV employs two environmental assessment methods from the architecture profession and gerontological research (TESS-NH) in order to evaluate the use of interior colouring when refurbishing two residential care homes while the residents remained in place. Research Paper V displays a municipal organizer's considerations to opt for an architecture competition as a means of renewing architecture for the ageing population. Research Paper VI examines competition documentation of three municipal architecture competitions organized during the period of 2006 to 2009. Research Paper VII, the final study, explores notions concerning the appropriate space for ageing found among a group of municipal representatives, and people from organizations defending older people's rights. It supplies a model for understanding the appropriate space for ageing.

This study illustrates the absence of older people with frailties in the public discussion about appropriate architecture for ageing. During the 20th century, the multi-dimensional idea of an architectural space with a homelike appearance has been used to contrast the negative complete and austere institution. The overarching conclusion of this doctoral thesis is that architecture for the frail ageing constitutes a particular type of space that requires a trans-professional approach involving dependent seniors, architects, building contractors and care planners in order to conceive empathic architectural designs for the ageing society. This approach is active as well as on a conceptual level as on a level of realization.

Keywords: architecture, residential care home, architecture competition, user values and planning considerations, appropriate space for ageing, homelikeness.

Résumé

Cette thèse traite de l'espace qui se matérialise quand les problèmes du vieillissement deviennent chronique et provoquent une capacité défaillante dans les activités de la vie quotidienne (AVQ). Il s'agit des conditions de vie qui nécessitent le soutien régulier des proche ou des services souciaux de la commune. En plus, l'architecture requiert un ajustement fin à l'eventail individuel des déficiences cognitives ou fonctionnelles. L'habitat peut être un appartement approprié des années auparavant ou un établissement d'hébergement pour des personnes âgées et dépendantes (EHPAD). L'architecture pour une situation de dépendance exemplifie un espace qui peut affirmer ou étouffer l'effort de la personne âgée pour maintenir une vie indépendante. En employant la théorie de la conception, la méthodologie d'études de cas, et une stratégie de recher-che hétérogène, cette thèse active une perspective tripolaire—la rétrospectivité, la contemporanéité, et l'avenir—pour étudier l'interaction des seniors dépendants, condi-tionnée par des problèmes dus au vieillissement, avec l'architecture de l'EHPAD. Cette approche a produit sept articles sur quelques aspects de cette interaction avec l'espace bâti.

Basée sur un échantillon de douze EHPAD exemplaires, l'Étude I conclut que des conseils de conception promeuvent soit un milieu d'habitat, soit celui d'un hôtel, soit celui d'un hôpital. L'Étude II est une étude rétrospective qui examine l'emploi du concours d'architecture comme instrument socio-politique pour définir des conseils de conception. L'Étude III examine l'appropriation des seniors dépendants qui vivent dans une unité d'un EHPAD de l'espace communément partagé par les résidents. L'Étude IV emploie deux méthodes d'évaluation, celle de l'architecture et celle de la gérontologie (TESS-NH), afin d'évaluer l'impact d'un projet de réfection des peintures de l'espace commun de deux EHPAD, un projet réalisé sans reloger les résidents. L'Étude V présente les considérations d'un organisateur municipal d'opter pour un concours d'architecture afin de renouveler l'espace bâti pour les seniors, qu'ils souffrent ou non de déficiences. L'Étude VI examine la documentation dans trois concours municipaux organisés pendant la période allant de 2006 à 2009. L'Étude VII est la dernière étude qui fait l'inventaire des notions de l'espace optimal pour le vieillissement présentées par un groupe de représentants d'une administration municipale et des organisations pour la défense des droits des personnes âgées. Ce groupe propose un modèle pour com-prendre l'espace òu vieillir.

Cette thèse illustre l'absence de la personne âgée et dépendante dans la discussion sur une architecture ajustée au vieillissement. Pendant le 20ième siècle, l'idée plurivalente de l'habitat personnalisé et accueillant a été employée pour faire contraste avec l'aspect négatif de l'institution complète et austère. La conclusion générale de cette thèse soutient que l'architecture pour le vieillissement fragile est un type d'espace particulier qui nécessite une approche trans-professionnelle impliquant les personnes âgées et dépendantes, les architectes, les entrepreneurs de construction et les planificateurs de soins afin d'arriver à réaliser une architecture empathique pour le vieillissement. Cette approche est active aussi bien qu'au niveau conceptuel qu'au niveau de réalisation.

Mots-clés : architecture, EHPAD, concours d'architecture, valeur d'usage et considéra-tions du planificateur, espace optimal pour vieillir, ressemblance à l'habitat privé.

Abstrakt

Denna avhandling handlar om den arkitektur som kan komma ifråga när åldersrelaterade problem blir ett långvarigt sjukdomstillstånd och medför en tilltagande oförmåga att utföra aktiviteter i dagligt liv (ADL). En ny livssituation uppstår som förutsätter ett ökat stöd från anhöriga eller äldreomsorg för att kunna delta i vardagslivet. Även det arkitektoniska rummet behöver anpassas till det personliga funktionella eller kognitiva funktionshindret. Detta kan ske inom det ordinära utbudet av bostäder, i en lägenhet som har bebotts under flera år, eller i en särskild boendeform för äldre personer med stora omsorgsbehov. Arkitektur utformad för ett åldrande med stora omsorgsbehov visar på hur det byggda rummet kan användas för att bejaka eller motarbeta den äldre personens försök att upprätthålla ett självständigt liv. Denna avhandling använder designteori, fallstudiemetodik och olika forskningsstrategier för att i ett tredelat tidsperspektiv – ett tillbakablickande, samtidsbeskrivande och framtidsblickande – utforska samspelet mellan äldre personer med sådana åldersrelaterade problem att stora omsorgsbehov uppstår och den byggda miljön. Detta arbete har resulterat i sju artiklar kring olika aspekter i denna samverkan med det byggda.

Genom ett urval av tolv förebildliga exempel, drar Artikel I slutsatsen att riktlinjer för den byggda miljön ger upphov till tre utformningslösningar som kan beskrivas som hemliknande, hotellinriktat eller sjukhusliknande miljöer. Artikel II är en tillbakablickande studie om arkitekttävlingen som ett socialpolitiskt instrument för att definiera riktlinjer avsedda för arkitektur inom äldreomsorgen. Artikel III undersöker äldre personers tillägnelse av det gemensamma rummet i särskild boendeform. Artikel IV använder metoder från arkitektpraktiken och gerontologisk forskning (TESS-NH) för att utvärdera en intervention med invändig ommålning av det gemensamma utrymmet på två särskilda boendeformer, där de boende stannade kvar under ommålningsarbetena. Artikel V presenterar de utgångspunkter som en kommunal aktör övervägde före utlysandet av en arkitekttävling kring en förnyelse av arkitektur för äldre med eller utan åldersrelaterade problem. Artikel VI undersöker tävlingshandlingar som använts i tre arkitekttävlingar med fokus på arkitektur för äldre under perioden 2006 till 2009. Artikel VII är den avslutande studien som undersöker föreställningar om god arkitektur för åldrande inom en grupp av kommunanställda, politiker och representanter för äldreorganisationer. Här presenteras en analysmodell för god arkitektur för åldrande.

Denna avhandling beskriver hur den äldre personen med stora omsorgsbehov är frånvarande i den allmänna diskussionen om arkitektur anpassad för åldrandets problem. Under 1900-talet har det mångdimensionella begreppet hemlikhet använts som kontrast till den negativa miljön i en stramt reglerad institution. Den sammanfattande slutsatsen av denna avhandling är att arkitektur för äldre personer med stora omsorgsbehov är en särskild byggnadsuppgift som förutsätter transprofessionella arbetssätt som inkluderar den åldrande personen med stora omsorgsbehov, arkitekten, omsorgsyrken, byggnads- och fastighetsentreprenörer för att skapa en empatisk arkitektur för åldrande. Detta arbetssätt är giltigt i det tidiga skisskedet liksom under förverkligandet.

Nyckelord: särskild boendeform, arkitekttävling, brukarvärde, planeringsöverväganden, god arkitektur för åldrande, hemlikhet, byggnader för social omsorg.

Abbreviations

In the present study, the following abbreviations will be used. These are the official translation into English of the original Swedish appellation of a public institution or organization, or an approximate translation that have been made since the institution or the organization lacks an English appellation.

Municipal Administrations

ASW Administration for Social Welfare (Socialförvaltning),

CPO City Planning Office (Stadsbyggnadskontor),

MEO Municipal Executive Office (Kommunledningskontor),

AREM Administration for Real Estate matters (Fastighetsförvaltning)

National Interest organizations

APCP Association of Private Care Providers (Vårdföretagarna)

FAMNA Riksorganisationen för vård och social omsorg utan vinstsyfte (Non-profit providers within health and social care)

SAA Sveriges Arkitekter (Swedish Association of Architects, SAA)

SPF Sveriges Pensionärsförbund, SPF (Swedish Pensioners' Association)

PRO Pensionärernas Riksorganisation, PRO (National Pensioners Organization)

RPG Riksförbundet PensionärGemenskapen RPG (National Association of Pensioners)

National and regional administrations

MSHA Ministry of Health and Social Affairs (Socialdepartementet)

NBHW National Board of Health and Welfare (Socialstyrelsen)

NBHBP National Board of Housing, Building and Planning (Boverket)

SIAT Swedish Institute of Assistive Technology (Hjälpmedelsinstitutet)

SALAR Swedish Association of Local Authorities and Regions (Sveriges kommuner och landsting, SKL)

Former administrations, committees, or organizations (not in use)

NBIPR National Bureau for the Inspection of Poor Relief Aid (Statens Fattigvårdsinspektion).

SPRI Planning and Rationalisation of Health and Social Welfare Services in Sweden (Sjukvårdens och Socialvårdens planerings- och rationaliseringsinstitut, SPRI)

RBSW Royal Board of Social Welfare (Kungl. Socialstyrelsen)

RSCPB Royal Supervision committee of public buildings (Kungl. Överintendentsämbetet)

SAC Social Allowance Committee (Socialvårdskommittén)

SAPRA Swedish Association of Poor Relief Aid (Svenska Fattigvårdsförbundet)

Opening Remarks

This doctoral thesis is based on seven research papers that examine aspects of architecture intended for dependent seniors who live in residential care homes. In colloquial language, this type of architecture has many names, but in this context all of the possible denominations are gathered under the ceiling of residential care home.[1] This type of architecture is designed for a group of frail older people, in the Swedish context the number is approximately 94,000 dependent seniors (NBSW, 2011b), who demand 24-hour care and caring. Architecture for residential care homes encompasses both the older person's private sphere and the communally shared space of a group of dependent seniors; normally the size of the group is six to ten flats per ward. Spatial requirements in order to meet the demands of an appropriate working environment are integrated in both of these contexts. In addition, there is a separate space for the staff.

The thesis deals with the architectural space that is conceived for and used by older people with cognitive or functional frailties. Given the fact that this is a thesis in architecture, the focus of interest is oriented towards architecture and the spatial imprint that these frail older persons leave on the built environment by their pattern of moves and sojourns. The papers derive from empirical findings of three case studies undertaken during the period of 2003 to 2010.

Background

The most recent reform[2] of Swedish older care in 1992 stipulates that home is the ideal setting for an older person (Bergh, 1996; NBSW, 2011a). In the case of a residential care home, this implies a flat that is supplied with a tenancy agreement by the municipality after an individual assessment of personal needs of care and caring. Normally, the layout of this apartment comprises an alcove for sleeping, a bathroom and a kitchenette that are adjusted to cognitive but mainly functional disorders. Moreover, there is a full access to a communally shared space for dining and socialising as well as space for kitchening and other household works that are related to the care of the older residents (NBHBP, 2008a; NBHW, 2008). Included in the tenancy agreement, there is a fee for individually assessed need for care and caring.

The declining number of available flats in residential care home facilities broke the tide of news during the election campaign in 2006. Therefore the resigning left-wing government appointed a parliamentary committee, the Delegation on Elderly Living (DEL),[3] to look into the matter of appropriate housing for the large proportion of the population that were on the verge of entering into retirement age. Still, the focus was on good housing within the ordinary stock of residential buildings. Without changing the committee's two year work period, the entering right-wing coalition government expanded the assignment to also include appropriate housing for dependent and frail older people. The same year the NBHW and the Swedish Association of Local authorities and Regions (SALAR) initiated a project of public performance reports that would allow for the individual to compare the quality and efficiency in health and medical care as well as social services provided by the municipalities and the counties (MHSA, NBHW, SALAR, APCP, & FAMNA, 2006).

Furthermore, state grants were allocated to the construction of new residential care homes and other types of housing that included staff to assist the still able older residents (MHSA, 2007b). In 2008, the National Board of Housing, Building and Planning (NBHBP) assessed the use of this allocation,[4] and reported a slight rise in the number of newly built flats for older frail people, mainly in the vicinity of two large cities, Stockholm and Gothenburg (NBHBP, 2008). The architectural outcome of the reform has not yet been evaluated.

In 2007, the DEL published its first report on housing for older people within the ordinary stock of residential buildings in 2007. The report concentrated on a prolonged ageing in place, and the report promoted a type of housing for older people possible to integrate in the ordinary stock of housing. This type of housing is the so-called *safe-haven residences.*[5] This type of housing is intended for older persons with few frailties or with special needs that can primarily be met by home care services. The idea behind the safe-haven type of housing is to promote a community feeling based on safety and security, since the very thought of being alone inhibits many older people. Normally, these facilities are equipped with some communal spaces for restaurant, training or other types of services for the residents (similar to collective housing or senior housing) (DEL, 2007a). The safe-haven residence can also be seen as an intermediary form of housing, although part of the ordinary housing, it is supposed to be adjusted to cognitive and functional deficiencies that older people might encounter depending on the individual ageing process. If there is a need, the older person can apply for state grants for further home adaptations that are based on the individual panorama of cognitive and functional disabilities. Although the brand new name, this type of housing displays a significant resemblance to the former type of service housing that also supposed a number of flats gathered around a communal space in order to maintain a restaurant or other services and equipped with care staff.

The second report focused on special housing for frail older people. The main conclusion of the committee was that further research on living conditions in this type of housing was required. The committee envisioned a holistic approach that would include human interactions, conditioned by age-related frailties, care, caring and nursing, with the built environment (DEL, 2008). However, the main impact of this report has been a

changed terminology of housing for dependent or independent seniors. This vocabulary updates the existing flora of several obsolete denominations for facilities used as residential care homes that partly dates back to the end of the 19th century.[6] The DEL suggested that the new denomination would be *accommodations with care and caring.*[7] Many local authorities have started to implement this term while others maintain the traditional terms.

The committee's work demonstrates the fact that architecture for both dependent and independent seniors is programmed by the public discussion about appropriate housing for the ageing society. Welfare goals are defined for the built environment. These are implemented through legislation, recommendations, and national guidelines that act as a practical support for both architects and other professionals who are active in the programming phase of a new building to be used by older people. The societal aim is that the individual habitat for the fit or the frail older person shall constitute *an appropriate space for living and any activity in everyday life that is associated with it.*[8] In the case of housing for frail older people, it is assumed that a proportion of the individual space necessary for cooking, eating and socializing can be transferred to a communal space with the same purposes.[9] In building legislation, the key words accessibility and usability become design criteria to implement in the spatial design of new architecture and in the refurbishment of existing built space to personal panoramas of cognitive or functional disorders (Rönn, 2002).[10]

Research perspective

Architecture is an outcome of its constituents, culture, building material, nature and topography (Norberg-Schulz, 1980). This thesis embraces a phenomenological approach towards human interactions with architecture. The chosen approach towards human interactions with architecture does not contain an inclination for normative architecture. When any of the aforementioned parameters changes, the phenomenology of architecture becomes different, since there will be new human interactions with the built environment. The phenomenological approach for understanding the empirical findings in the present study is paired with a transactional worldview. This view promotes a causal relation between human behaviour, culture, social traditions and architecture (Altman & Rogoff, 1987). In the discussion about ageing within the architecture profession, ageing is perceived as an integral part of being; it is a prerequisite for living since ageing means a continuous training of skills and the integration of this new knowledge in order to refine personal competences close to perfection (Messy, 1992).

As a consequence, ageing and age-related problems have an undefined role in the practice of architecture other than general spatial adjustments in order to meet the demand of an accessible and usable built environment. This leads to a conscientious stance by the architect profession to analyze the built environment for various human purposes in terms of good and poor architectural quality. This is also echoed in the professional code of the architects' associations (SAA, 2000). This evaluative process is an ongoing architectural criticism of the perceived appropriateness of a particular architectural design with the aim of creating an improved built environment (Rönn, 2007). However, when ageing, a stronger emotional connection is created to a particular building or

place; in some cases they become a physical necessity for older people to uphold every-day living (Rowles, 1993). The human ageing process does not only change the individu-individual's physical appearance and spatial behaviour, it also influences the perception of space and the amount of space that the older person appropriates. In that sense, age-ing has relevance for the architecture profession and the creation of new architectural space for the ageing society, since the proportion of older people in the western socie-ties is steadily increasing.

Besides the phenomenological approach to the understanding of human interactions with architecture, this thesis expands from the assumption that architecture can be seen as the result of a design process. This suggests a stance that is firmly rooted in design theory (Cross, 1984, 1993, 2011; Lundequist, 1995; Rowe, 1987). In order to pursue this line of thinking, this thesis has assumed the following about architecture and the creation of architectural space: a) architecture shall be understood in its broadest sense that encompasses the architectural design of the building, the interior setting, the land-scape-planning of its immediate situation and the comprehensive physical planning that has determined the geographical location; and b) that the conception of architecture is the result of a creative process similar to the design of an artefact, a car or any man-made tool for permanent use. The fundamental purpose of any design is to generate a novel idea with a set of performance requirements, and to base this idea on the accu-mulated knowledge of established notions and values (March, 1984).

Research scope

This study is delimited to the type of architecture that is intended to be used by de-pendent seniors. The residential care home architecture is subject to welfare goals that are defined by paradigms in socio-politics. These intentions have two consequences: to define ethical values for the care and caring of older frail people that the local eldercare activity has respect, and to supply spatial requirements for the architectural space to realize. The national guidelines promote the idea of a homelike and residential-like envi-ronment as the ideal milieu for frail older people since the beginning of the 20th century. This environment is recommended to have a spatial layout that facilitates for the older person to find his or her way in this space. The spatial configuration creates a spatiality that supplies an overlook of the communally shared space (E. Svensson, 2008). The guidelines are open for a case-to-case based interpretation and an individual implemen-tation in a new building project. The emphasis on the home as the ideal environment is based on cultural, ethical and political values that are supported by experience-based and empirical research findings (Bergh, 1996; Day, Carreon, & Stump, 2000; NBSW, 1983). The realized architectural space is a result of an exchange of social beliefs, cul-tural traditions, experience-based findings, as well as current trends in architectural and social behaviour (Bourdieu, 1972; Lefebvre, 1985).

The scope of this study has been to explore the aforementioned beliefs on the optimal place for ageing with cognitive and functional frailties, and how these established cultural notions have been transferred into an architectonic vision for the silver generation, namely those persons aged 65 years and above. The scope has also included an ambition to expand the architectural knowledge about older people's interactions with architec-

ture and built space, since this relationship is conditioned by age-related issues that affect both cognitive and functional capacities by the older person. Initially, the research project aimed for an arborescent model that would link contemporary architecture for frail older people with a unique building type that found in ancient Greece or Rome. However, the research project has demonstrated the absence of such a universal spatial denominator. The probable reason for this lacuna is that the view on age and ageing has changed over time (L. Andersson, 2002). Before the 20th century, the health parameter of ageing was most parameter, since the functional age implied corporal and mental resources that could be used for personal wellbeing or the benefits of a group of people. Hence, the chronological age is an invention of the 20th century (L. Andersson, 2002).

Once a person's capacity to contribute to common wealth was compromised by declining health or injury, he or she began to appear weak and aged in the eyes of others (L. Andersson, 2002). In order to compensate for the loss of exploitable abilities within the family or the community, other members had to assume a part or whole of the full task that this person failed to realize. Either, this work was performed as an act of caring for the frail person, or as an obligation that could mean the exclusion of the older person from the community (L. Andersson, 2002). In the medieval society, the provincial law-rolls attributed the responsibility to look after the older people to the younger generation, but also religious institutions participated in this rudimentary eldercare. Hence, culture, social background and public opinions about appropriate space for ageing became relevant. The origin of space for ageing relates to how architecture has been designed for residential purposes. All the same, the most significant feature in the evolution of architectural space for ageing with frailties is the transferral of the homelike space, found in residential architecture, to become a variable in a permanent and universal spatial prototype for dependant older people.

The overarching purpose with this thesis is threefold: a) to describe the evolution of architecture for frail older people and its regulating forces found in guidelines and societal ambitions; b) to demonstrate human interactions with built space as perceived mainly by residents with age-related problems; and c) to expand knowledge about older people's interactions, conditioned by age-related issues, with the built environment in order to renew architecture for frail older people. The seven research papers render in detail significant aspects of architecture for frail older people. They supply a condensed picture of human interactions conditioned by age-related problems with the built environment that the residential care home constitutes. This study tries to identify the constituents of this generally acknowledged notion of the homelike architecture as the ideal one for dependent and frail older persons. This purpose has been pursued in a contemporaneous, retrospective and a future-oriented perspective. However, age is not an issue for reading this thesis and the target group for this thesis is other researchers in the trans-disciplinary research field that focus on architecture and ageing, architects and designers that conceive space for ageing with frailties, and planners and staff members in municipal or privately run eldercare activity.

Organization of the thesis

The seven research papers are united under the ceiling of an introductory textual framework that in five separate sections highlights current trends of the ageing society together with a historical backdrop, a theoretical framework for approaching the transdisciplinary research field, the research project, summaries of the individual research papers, and a discussion with concluding remarks and avenues for future research. Hereupon, the seven research papers follow that can be approached by help of this introductory framework or serve as independent entries to the thesis. The appendices contain research protocols and competition entries in three national architecture competitions that have focused on appropriate architecture for frail older people. The organization of the seven research papers that form this thesis has called for a deeper reflection. The landscape of architecture for frail older people offers at least three possible ways to organize these papers can be identified: the chronological order, the thematic classification or the non-hierarchical organization.

The first alternative would be an avenue that allows for a distribution of architecture for frail older people along an imaginary time axis on which significant events for Swedish eldercare could be noted. The use of chronology suggests a law of causality. The second alley to take would introduce a logical order. This hierarchy would give an approximate overview of the landscape. However, the introduction of a chronological, logical or thematic element seems as obtrusive given that the most emblematic characteristics of architecture for frail older people is the search of ad hoc solutions that would universally solve the problem of space for ageing with frailties. Therefore, the third solution has been chosen as the narrative structure for the seven research papers. It affords a non-hierarchical explorative and meandering passage through the architectonic landscape. This structuring order is similar to a rhizome (Deleuze & Guettari, 1980), and permits multiple connections with the field of architecture, and from the field of architecture to other fields of research primarily located outside the research on built space.

This organization evokes a similarity with how the architecture profession accumulates new knowledge about a design task, namely by applying a creative trial and error process onto the matter, and through this broad lens of understanding, then narrowing down the creative work into a precise operation on the vital constituents of a particular space to be conceived. Moreover, the rhizomatic organization is true to the pursuit of the research undertaken, and it demonstrates that in the field of architecture, the chronological, logical or thematic timeframes becomes superfluous since an obsolete spatial prototype can serve as a means of inspiration for a more contemporary architectonic vision. The generator image (Darke, 1979, 1984) is fundamental detail when it comes to understanding how new spatiality for various uses is conceived by architects. The principle for organizing the research papers internally has been the attuned research question that will arise after the reader of this thesis has read a particular research paper that have been developed around one of the seven research questions of this paper. Consequently, the research papers proceeds from the contemporaneous situation into a retrospective look that leads to a future-oriented perspective.

Individual Research Papers

The conclusions of this thesis are based on seven research papers that deal with architecture for frail people in a contemporaneous, future-oriented and retrospective perspective.

I. Habitat privé, hôtel ou hôpital ? L'architecture relative à l'hébergement de personnes âgées et dépendantes, (EHPAD) en Suède (Home, hotel or hospital? On Swedish architecture used in twelve residential homes for frail older people). The first paper holds a bilingual title, since it was prepared in French. It had a contemporaneous approach to the realization of twelve exemplary models of residential care homes. It describes the state-of-the-art situation.

II. Appropriate Architecture for Ageing. On the use of architecture competitions as a social-political instrument to improve space for dependent seniors in the Twentieth Century Sweden. The second paper had a retrospective approach and explored the use of architecture competitions as a socio-political instrument to define guidelines for the architectural space intended for dependent and frail seniors. It demonstrated the absence in the planning process of the older person as the future user of this space.

III. Appropriating space in an assisted living residence. On architecture and older frail people's spatial use. The third paper had a contemporaneous approach with a future-oriented scope. It studied frail older persons' spatial appropriation of communal space in a residential care home. The third paper supplies mental maps of four wards at a residential home.

IV. "Touching up" Communal Space of a Care Home Setting. A comparative study of tools for assessing changes in the interior architectural space. The fourth paper had a contemporaneous approach with a future-oriented scope . It implemented two environmental assessment tools in order to evaluate a colour-based intervention in the interior setting of two residential care homes.

V. Creating Empathetic Architecture for the Frail Older—Socio-political Goals as Criteria in an Architectural Competition. The fifth paper had a contemporaneous approach with a future-oriented scope. It explored a municipal stake-holder's considerations for organizing an open ideas architecture competition.

VI. Optimal competition briefs for a public design process. Three Swedish briefs in architectural competitions on housing for dependent seniors. The sixth paper had a contemporaneous approach with a future-oriented scope. It focused on the documentation used in three municipal architecture competitions for dependent and independent seniors.

VII. Architecture for the Silver Generation: Exploring the Meaning of Appropriate Space for Ageing in a Swedish Municipality. The seventh paper had a future-oriented approach and focused on notions concerning appropriate architecture for the ageing generation among a group of people involved in the organization of an architecture competition that focused on future-oriented habitats for the ageing society.

Key Concepts

In this thesis, some concepts will reappear in a random order with the intent of describing a specific aspect of the ageing process, interaction between the aged person and the architectural space, or other phenomena primarily associated with the architecture profession. The following list gives an overview of how these key concepts are understood and used in this thesis.

ADL—Activities of daily living. It refers to a person's ability to independently perform basic activities that involve bathing, dressing, eating, grooming, leisure activities, and movements (Katz, 1983). Various ADL scales have been developed in order to supply a numeric value of the person's declining ability. Within the ADL assessment there is also a sub-scale called IADL, instrumental activities of daily living (IADL) that refers to the person's ability to perform different tasks with the help of an instrument. It involves cooking, cleaning, making telephone calls, and various work assignments (M. P. Lawton & Brody, 1969). ADL and IADL scales are used by occupational therapists and physiotherapists when they assess the person's abilities. The assessments give an indication of the amount of care and caring required from an eldercare organization as well as the adjustments of the built space needed in order to make it more user-friendly.

Ageing—this refers to two dimensions of human ageing, either to the psychological expansion of mind owing the accumulation of new experiences and knowledge on the one hand and on the other hand to physical ageing process of the human body. In this process, the body composition and physiology change due to ageing. Often, ageing first touches the ability move independently, reaching, thinking, hearing, vision, and dexterity (Seidel et al., 2009).

The concept of "active ageing" was adopted by the World Health Organization (WHO) in April 2002 (WHO, 2002), and is applicable on an individual level as well as on a collective one. It is a process that aims at optimizing older person's opportunities to "realize their potential for physical, social, and mental wellbeing throughout the course of life, and to participate in society according to their needs, desires and capacities, while providing them with adequate protection, security and care when they require assistance" (WHO, 2002, p 12). In opposition with the WHO declaration that assumes that the ageing process begins at the age of 60, this thesis adheres to the Swedish system of defining ageing in relation to the legal retirement age, 65 years.

Ageing in place—The individual notion of place is constituted by dispersed pieces of architecture and raw natural landscapes, which leads to a place-making process created through the rhythm of being (Lefebvre, 1992; A. E. Smith, 2009). Still, as an effect of the ageing process, not primarily depending on age-related problems but due to the older person's increased load of professional commitments and personal obligations, the physical access to these places becomes restrained. To compensate for this loss, the imagination assumes an important role of reliving past places and earlier selves (A. E. Smith, 2009, p184). This is a prerequisite for a comfortable ageing in place, to grow old in a familiar environment and a built space appropriated many years before (Hurtig, Paulsson, & Schulz, 1981; Malmberg & Henning, 2002; Rowles, 1993, 2000).

Architecture—the notion architecture includes any type of built environment for human usage. The four categories of architecture—architectural design, interior decorating, landscape architecture, physical and urban planning—are united in the architecture profession. Architecture is about creating spaces for specific purposes. The conception of architecture is subject to cultural and social beliefs (Bourdieu, 1972; Lefebvre, 1985; Lundequist, 1995). It becomes a collective endeavour and is part of a democratic decision-making process that is an integral part of modern society (Bloxham_Zetttersten, 2000; Dunin-Woyseth, 2001).

Architecture competition—This refers to the policy document for Swedish architecture competitions (SAA, 2008) that has been sanctioned by the official representative of the architecture profession—the Association of Swedish Architects (SAA), and the representative of future stake-holders—the Swedish Federation of Consulting Engineers and Architects (Byggandets Kontraktskommitté, BKK). An architecture competition may be arranged by an individual or a juridical actor. The competition may be of two types, *a design competition* that aims at a realization of the winning entry, or an *ideas competition* that analyzes alternative design solutions.

The architecture competition itself may assume three forms, an *open competition* that welcomes any interested actor to participate; *a restricted competition* in which the participants are pre-selected and then invited; and finally *a two-stage competition* in which the first stage is open for all interested to participate, but the second stage is restricted to the organizers' selection of a limited number of participants. Furthermore, an architecture competition generates competition documents (primarily the competition brief and jury assessment report), and the winner of a competition is designated by a jury with at least two architect-trained representatives nominated by the SAA.

Architecture for frail older people—this is a concept specially constructed for this thesis. It refers to built space for older persons who are in need for regular care and caring provided around the clock by specially trained members of a care staff. The significant feature of this architecture is the harmonization of a compacted private space, the individual flat, with a communally shared space and spatial adjustments in order to create a supportive milieu for the older person and supply an adequate work environment for the staff. If this balance turns out to be supportive for both the older residents and the staff, then *an appropriate architecture* for frail older people has been achieved (Wallenius, 1999).

Design process—Architecture for frail older people is the outcome of a design process (Cross, 1984, 2011; Lundequist, 1995; Rowe, 1987), in which opposing ambitions for the future building are juxtaposed into an aesthetical and functional building solution by the architect's creative work. With this view, architecture becomes similar to the design of various artefacts for common use. Like these tools for instrumental activities, the architecture will undergo three significant phases. An initial phase, the design process, when the architecture, through the influence of other professions—care and medical professionals, engineers, real estate managers, and various experts—evolves into an architectural design.

The design process is followed by a phase that implies a realization of the built environment. In this phase, drawings and other documents are used to describe the technical requirements that the building shall fulfil. Thereafter, the experts leave the architectural design into the hands of the future users. And in the case of architecture for frail older people, this usage will continue for a period of varied length, normally over sixty years with minor changes in the original design (research paper II).

Design criterion—This refers to official guidelines or other types of regulatory parameters that are imposed on the creation of architecture (Rönn, 2002). For instance, the notion of homelikeness as the ideal environment for frail older people acts as design criterion in the conception of architecture for new residential care homes.

Empathic architecture—this refers to a notion that is construed by the findings of this thesis. This type of architecture suggests that the design process of the future residential care home includes an extended dialogue on equal terms between dependent seniors, relatives, architects, building contractors and care planners as well as members of the care staff. The previously mentioned actors elucidate human interactions with the architectural space conditioned by the frail ageing, the older person, care and caring, whereas the latter ones can transform these interactions into an appropriate space for the frail older person suffering from long-term conditions. This exchange supposes an extended co-operation in order to promote trans-professional interactions regarding the design task, and contemplate long-term effects of the chosen solution (Dehan, 2007). It also supposes an extensive use of information technology in order to conceive architecture in virtual reality (VR) so that it can be assessed by trans-professional groups prior to the production of two-dimensional drawings. In this aspect, the notion has resemblance to interactive architecture that also relies on computer aided design, but has an ambivalent approach to the integration of user values in architectural design.

Frail older people—this refers to older persons who, due to age-related problems, have received one or several medical diagnoses. The older person's panorama of medical conditions differs from younger people (Akner, 2004). At least two diagnoses imply a *long-term condition (LTC)* with a cognitive decline, a dementia of any kind, a pronounced functional disorder that necessitates assistive equipment, or any other respiratory or cancerous decline. This medical condition is covered by the term *comorbidity* (Fratiglioni, Marengoni, Meinow, & Karp, 2010). In any of the cases, the condition leads to a progressive deterioration of the older person's ability to perform *activities of daily living, ADL.* Care and caring supplied by family caregivers or an eldercare organization is a prerequisite for the older person's continued existence (Akner, 2004; Fratiglioni et al., 2010; Kylberg & Lidell, 2002). This group of people is aged 65 years and older. They are part of the large generation born after the Second World War, here termed the *silver generation* (J. E. Andersson, 2010).

Health—this refers to the individual experience of health perceived in terms of physical, mental and social well-being. This thesis relies on the *International Classification of Functioning, Disability and Health (ICF)* to classify health and health-related domains (WHO, 2001a). By use of a list of body functions and structure, and a list of domains of activity and participation, health is defined from the perspectives of the body, the indi-

vidual and the society. The ICF classification is contextual, and besides the individual's functioning and disability, it includes a list of environmental factors.

Home—in this thesis the word home is used with reference to the artefacts that are added to the residential habitat. The artefacts include furniture, decoration and other items that are used to appropriate space in order to create a sanctuary for an individual or a family (Östberg, 1906). In addition, there is a connotation of being in direct contact with nature's elements and cultivating the soil. Through the influence of the German Sturm und Drang period by the end of the 18th century, the word has acquired a deep emotional connotation in the Swedish language: Home suggests a feeling of belonging to a particular place. The place of home can be a built environment, an interior or exterior piece of architectural space. It can also be a specific site in the landscape or nature itself (Svenska_Akademiens_Ordbok, 2011). In the Swedish language, the word home has a strong potential as a *poetic image* that generates personal recollections of social places, built spaces and human warmth (Bachelard, 1957, p. 8). The use of this word and its derivatives in this study is impregnated by this Swedish meaning. **Homelikeness**—this refers to a milieu that is similar to, resembles, and suggests home. It is a homely environment, not too fine to use. Homelikeness, (in American English homeliness, or homeyness in Australian English) is closely connected to individual associations and experiences of an architecture that promotes a sensation of being at ease, being in safety and of place-making. Consequently, homelikeness is connected to notions of comfort and familiarity that are found in a certain space at a particular place (Oxford_English_Dictionary, 2011).

Home care service—this is a custodial care that is performed by persons who does not hold any medical licence. These persons are skilled people in domiciliary and social care, and they are employed by a private entrepreneur or the municipality in order to provide this type of service to older people with permanent or temporary minor disabilities. Home care services can also be provided by family and friends who then goes under the term caregivers. In some cases, medical services can be provided in the home environment during convalescence or in late stages of life. This is then a form of home health care that is performed by a doctor, nurse or other licensed medical staff who are employed by the municipal primary health care service. The level of home care or home health service is assessed by the municipality after an individual application.

Inclusive design—this refers to the applied thinking in the design process of either architectural space or of any artefact, conceived for decoration or instrumentalization. The ultimate aim of this process is to realize built environments, object or products that can be used by anyone without regard to age, cognitive or functional deficiencies, ethnical background or gender. It is a barrier-free design that creates universal access to architecture, built environments, information and communication technology, infrastructure and social participation. This is a broad understanding of the notion of universal design (the focus on accessibility and usability for disabled people as defined by the American architect Ronald L Mace); universal access/access for all (assistive information and communication technology (ICT) that allow accessibility and usability for people with a high degree of impairment; Design for all (the European Union's definition of universal design with an emphasis on ICT, and part of general welfare goals). Inclusive

design has a socio-political implication since it is based on current demographic changes in the ageing society (Clarkson, Coleman, Keates, & Lebbon, 2003).

Primary generators—in the design process, mental fragments of various human experiences that originate from other architecture but also from other fields of research act as germane primary generators in the design process. This means that these mental fragments promote thinking about architectural space in general and about the design task at stake in particular. The primary generators are a broad initial objective or small set of objectives that are self-imposed by the architect, the designer or any other who participate in a design process. They contain a personal value judgement rather than rational analysis of the design task (Darke, 1979, 1984).

Place-making—Place-making is created through the rhythms of being. The individual notion of place is constituted by dispersed pieces of architecture or raw natural landscapes (Lefebvre, 1992), which leads to a continuous place-making process with a reappearing sensation of genius loci. The ultimate aim of this spatial appropriation or place-making process is to integrate the perceived genius loci of a certain space into the becoming of a perceived place with deep emotional and existential connotations for the individual appropriator (Canter, 1991; Sime, 1986).

Residential care home—This term is complicated due to the different regulatory statuses found in the European countries and the US (Andrews, 2005), this thesis uses the British term residential homes to describe the Swedish type of sheltered housing for frail older people. The American homologue would be *the assisted living*. The equivalent French term is an abbreviation for housing for dependent and older persons, l' *EHPAD, (l'établissement d'hébergement pour des personnes dépendantes et âgées)*. The Swedish residential homes imply an individual apartment of approximately 20–40 m^2 offered by the municipality after an assessment of the individual's need for assistance and eldercare.

The dependent senior has a lease on the apartment. In addition to the monthly rent, the tenant pays a fee proportional to the assessed need for eldercare. The apartment is spatially optimised, and this type of housing together with special housing for university students, holds a special section in the Swedish Building Act. Here, additional space for cooking, dining, and socializing is found in a communally shared space in order to meet the national guidelines of an appropriate housing environment (NBHBP, 2008). Besides this space for the residents, additional space is required so as to provide an appropriate working environment. The actual assistance and eldercare is provided either by the municipal eldercare or by entrepreneurs in this field of service. The Swedish municipalities define these care commissions, and they imply a time-limited contract open for renegotiation in case of badly provided eldercare.

In the residential care home, the apartments are grouped in two types of units: either a Non special care unit (NSCU) that accommodates older persons with a long-term condition that requires a progressive amount of care and caring; or a Special care unit (SCU) that is intended for older persons who suffer from dementia or other brain degenerative diseases. In the Swedish context, both types of units are designed in a similar

way in order to allow for changes over time that might lead to the conversion of a NSCU to become a SCU and vice-versa.

Supportive architecture—Environmental psychology has stressed that there are at least two types of environments: the ecological environment and the psychological environment (Canter, 1991; Wallenius, 1999). In this thesis, the ecological environment is defined as the architectural space. This space is separate from the psychological environment. The psychological environment involves the individual's psychological system and, in the context of this thesis, consists of the ageing person's experience of health issues, personal well-being, and quality of life in which the staff of the residential home is involved by helping the ageing person to realize existential goals. Given these circumstances, this thesis assumes that the desirable person-environment fit can be measured by the subjective appraisal of the architectural space that the aging person experiences (Stokols, 1979). This measurement can also be understood as the perceived supportiveness of the architectural space in connection with the ageing person's existential goals (Wallenius, 1999).

Wayfinding—This is used to describe how the design of the architectural space including artefacts, signage, and other spatial media provides clues as tools to find one's way in this particular space. This way of thinking is inspired by findings in environmental psychology on human interaction with built space (Arthur & Passini, 2002). In the exteriority as well as in the interiority, the individual interpretive process of understanding the inner architectural space in terms of pleasant places to explore is active. Using sixty informants, the American urban planner Kevin Lynch explored three American cities, Boston, Jersey City and Los Angeles, by studying their "quality (…) of evoking a strong image of identity and structure in any given observer" (Lynch, 1960, p. 9). Lynch concluded that the urban landscapes could be transcribed into two-dimensional mental maps that described the city's character, its imageability (Ibid., p. 9). In this study, it is assumed that the Lynchean pentad of district-edge-landmark-node-path that is used to define the perceived imageability of the cityscape (Lynch, 1960), has an equivalent for the inner space, the capacity of supplying codes for wayfinding.

Welfare regime—the use in this study of some defined types of welfare regimes is not an expression of the author's political inclination. By considering that "...the circumstance that short term policies, reforms, and decision-making take place within frameworks of historical institutionalization that differ qualitatively between countries" (Esping-Andersen, 1990, p. 80), ideological-historical paradigms can be analyzed in terms of the type of welfare regimes they represent: namely their "institutional arrangements, rules and understanding that guide and shape concurrent social policy decisions, expenditure developments, problem definitions" (Esping-Andersen, 1990, p. 80). The key item involved in the definition of these welfare regimes, is the term de-commodification. It refers to services that aim to reduce the citizen's reliance on the market economy for individual well-being (pensions, sick leave, un-employment and social work) (Esping-Andersen, 1990).

The naming of these regimes belongs to the Danish sociology professor Gösta Esping-Andersen, and in Western society, three types of welfare regimes can be identified (Esping-Andersen, 1990, pp. 26-33; Fenger, 2007, p. 6):

a conservative-corporatist regime;

a liberalistic regime;

and a social-democratic regime.

In this thesis, these terms are used in a chronological perspective that might call for some words of precaution: the terms are defined in a contemporaneous situation in different countries. Furthermore, in the historic context, the naming of the regimes acquires a political connotation that is not intentional in this thesis. In the historic context, the three welfare regimes define the dominant political force at the moment, but since politics is associated with compromises in order to reform a society, this thesis presumes that other political forces have been deeply involved in the political reform work of each regime. These reforms have been pursued in a welfare state orientation that implies the protection and promotion of economic and social well-being for the citizens. The welfare state is based on the principles of equality of opportunity, equitable distribution of wealth, and public responsibility for those unable to avail themselves of the minimal provisions for a good life (Encyclopaedia_Britannica, 2011).

Summary

This chapter detailed the point of departure for the research project and the approach that has been applied in this study. This is a research project in architecture that focuses on the appropriate architecture of the residential care home in which several persons with age-related problems live. At this residential care home, they receive care and caring that is proportional to their individual needs, and supplied by care staff employed by the municipal eldercare activity or a private entrepreneur active in this field. The research has applied a phenomenological approach in order to understand the complex interaction between architectural space and older persons whose behaviour and pattern of movements and sojourns is affected by a cognitive or functional disorder.

Beside this approach for understanding the interaction, the research project has a design-theoretical approach that states that architectural design can be seen as a result of a design process in which the architect conceives a spatial solution to a series of textual documentation and verbal descriptions of an activity that will take place in this particular space. The chapter has briefly introduced the seven research papers, and supplied an overview of key concepts that will be used in the following text.

Introduction
An Overview of Ageing and Space

This chapter will present human ageing in a contemporaneous and retrospective perspective. The first subsection details the current phenomenon of the ageing society and its implications for the future. We are about to enter the ageing society with an increasingly larger proportion of older people among the population. The traditional illustration of a population's composition of age groups as a population pyramid with a broad base and a tapering end is about to change into an onion like shape. This is also-called a constrictive or stationary pyramid that indicates a silvering population with high life expectancy but with low fertility and mortality. The second subsection supplies a retrospective view on the architectural preparation for a society's ageing process. By use of consecutive social legislations, a typology of spatial prototypes is possible to trace from the year 1571 until today that implies the architects' involvement in the preparation for the ageing society.

Global Ageing and Future Society

Due to modern medico-social development, the ageing of the population ageing is an ongoing phenomenon in both developed and developing countries (Batljan, 2007, p. 15). The proportion of people aged 65 years and older is increasing worldwide by 10 million per year (Batljan, 2007, p. 15). At the same time, the fertility rate is decreasing (European_Commission, 2008, pp. 29-31). The traditional pyramid-like shape of the population structure, with a broad base consisting of young people, has been turned upside down. Other structures with a bulging middle exist. The common denominator is that at the top of each population pyramid resides the large generation of people born after the Second World War. The ageing population challenges the contemporary societal organization in terms of the provision of long-term care and services (LTCaS) intended for this group of senior citizens. Experts in geriatrics and gerontology dispute whether the expected life span will continue to expand as a result of the welfare society, or if there is a certain point in life when an accumulated panorama of age-related disorders will impose upon the older person an acute need for care and caring (Batljan, 2007; Lagergren, 2005a, 2005b).

Presently, there exist three different theories regarding the expected life span in relation to the presence of age-related health issues and subsequent mortality (Batljan, 2007). The first theory implies the existence of an inherent biological factor that pre-

destines the life span of an individual and the personal profile of diagnoses (Batljan, 2007; Fries, 2005). At an advanced age, 80 years and older, this accumulation of health issues causes an increased risk of mortality. This is the theory of compressed morbidity. The direct opposite way of thinking states that due to medical interventions in the course of people's lives a larger proportion of people survive to an advanced age. This is the theory of an expansion of morbidity (Batljan, 2007). Thirdly, there is a theory on the postponement of severe morbidity (Batljan, 2007; Manton, 1982). According to this hypothesis, the time spent with severe morbidity remains approximately the same although the life expectancy increases. New life styles and improved medical treatments counteract progressing long-term conditions. The postponement of the period in life with frailties and disabilities concentrates death to a more advanced age.

The Geography of Ageing

The phenomenon of an ageing population is also noticeable throughout the European Union with its 27 member states. During the forthcoming fifty year period, the group of people aged 65 years and above is expected to increase from 85 million in 2008 to 151 million in 2060 (an increase with 77 per cent) (European_Commission, 2008, p. 42). If one were to only focus on this proportion then the ranking order of the large countries that have historically dominated European politics—France, Germany, Spain and the United Kingdom—would be rearranged. In an ageing Europe, Germany and Italy have taken hold of the top position with a proportion of older people reaching 20 per cent. Greece is in second place (19 per cent), and Sweden in third place (18 per cent) ((European_Commission, 2008, p 46))[11].

The age group 80 years and above, in particular, is forecasted to be tripled by 2060 (European_Commission, 2008, p 42), Parallel to this increase, the number of people forming the working-age population will decrease. Today, the ratio between this age group and people above 65 years is four persons active in working life per one older person (the dependency ratio). In 2060, it is projected that this ratio will be two to one (Ibid, p. 46).

Ageing in Sweden

The geographical focus for this study is on Sweden, and by December the 31st, 2010, the Swedish population was 9.4 million people (SSW, 2010). During the 20th century, advances in the Swedish welfare state, an improved primary health care service and medico-technical developments have allowed for a prolongation of the life span with 25 years (Grimby & Grimby, 2001; NBSW, 2004). Two categories of older people are discernable, either married couples or single older persons and who live in ordinary housing or single frail older persons who live in residential care homes. The former group is the larger, while the latter is approximately 5 per cent. Today, the average life expectancy for males is 78.4 years, and 82.2 years for women (Batljan, 2007, p 29). The group of people aged 65 years and older reaches the total number of 1.7 million people, of which 251 217 persons are aged between 85 and 111 years (SSW, 2010); see table 1.

Table 1. Presentation of the geography of ageing in Sweden in 2010.

Item	Total number	%	Age group 65-84 years	%	Age group 85-111 years	%
Older population, T	1,737,246	18.5	1,486,029	85.5	251,217	14.5
OP with home care service, T	210,966	12.1	*162,444*	*77.0*	*48,522*	*23.0*
Home care service, M	178,315	84.5	*137,303*	*84.5*	*41,012*	*84.5*
Home care service, P	32,651	15.5	*25,141*	*15.5*	*7,510*	*15.5*
OP in need of short term care, T	8,117	0,5				
Short term care, M, R	7,177	88.4				
Short term care, P	940	11.6				
OP in need of residential care home, T	93,908	5.4	*78,943*	*84.0*	*15,037*	*16.0*
Residential care home, M	76,519	81.4	*64,276*	*81.4*	*12,243*	*81.4*
Residential care home, P	17,461	18.6	*14,667*	*18.6*	*2,794*	*18.6*

Notes.
Persons: OP=older persons; T=total number of older persons.
Provider of eldercare: M=eldercare provided by the municipality; P=eldercare provided by a private entrepreneur; R=eldercare provided by regional actor (county).
Estimates: Numbers in italics are estimates based on the proportional relationship between the age groups in 2007, source: (NBSW, 2008a).

Sources: (NBSW, 2011b; SSW, 2010).

The majority of the senior citizens will experience good health and a secure financial situation (Batljan & Lagergren, 2004; SALAR, 2009). They tend to move to a small extent (Abramsson & Niedomysl, 2008). They will continue to live in a flat or a house that was acquired during working life and that has been adjusted to personal needs.

Independent Ageing with Home Care Services

The older people's habitat creates an emotional bond with the surrounding environment (Hurtig et al., 1981; Malmberg & Henning, 2002; Rowles, 1993). This type of a maintained living within the ordinary stock of housing represents a case of ageing in place (Rowles, 1993). Some seniors begin to develop a need for assistance due to debuting frailties. This need is mainly met within the family or by relatives who contribute with an informal eldercare. After an individual assessment at the local administration for social welfare (ASW), a minor group of these seniors, approximately 12 per cent, have

qualified for regular home care services; see Table 1. Although this type of eldercare is a form of caring, a large proportion includes medical health care services (Batljan, 2007, p. 23).

The proportion between the informal care of older persons and the eldercare provided by the municipality or a private entrepreneur commissioned by the municipality is difficult to discern. Based on research in social work, the informal care would account for approximately two thirds times of older people's total need for assistance (household work, home care service, health care, and other types of assistance and support) if they were to maintain the accustomed activities in daily life (ADL) (Jegermalm, 2005; G. Sundström & Johansson, 2004; Szebehely, 2000). Besides the regular form of home care services, there is also a type of short-term care that older people may require. This need may arise after medical surgery and the subsequent convalescence period, at the terminal stage of a long-term condition (LTC) or as a temporary stay for an older an older person in order to relieve family caregivers (Kylberg & Lidell, 2002). Approximately 0.5 per cent of the age group 65 years and older are in need for this opportunity.

Dependent Ageing in Residential Care Homes

Although the welfare state has allowed for a steady improvement in the general health of the population, this positive trend in Swedish ageing was broken by the end of the 20th century (Thorslund, Lennartsson, Parker, & Lundberg, 2004). As the three theories on life expectancy indicate, the process of ageing implies a greater risk of acquiring an age-related problem. As a consequence, there is a higher prevalence of morbidity among people aged 80 years and above. The previously high quality of life for Swedish ageing people in the 20th century was compromised during the 1990s, when a new trend of significantly worsening health was identified among very old Swedish citizens (Parker, Ahacic, & Thorslund, 2005; Thorslund et al., 2004). In order to provide for this group of older people, the local authorities provide supply sheltered housing in the form of residential care home facilities. Since women live the longest, the majority of the residents in these homes are female. This applies also to the staff members who are mostly women (Szebehely, 1995). On average, the time a frail older person lives in such an accommodation is approximately less than two years (NBHW, 2001).

As in the case of home care services, a flat in such a type of housing is offered to the older person after an assessment of personal needs at the local ASW. In 2010, 93,908 persons (5 per cent) lived in a residential care home; see Table 1. The deterioration of older people's health has affected not only the characteristics of the older elderly (who are now more likely to live in special accommodation for older frail people), but has also expanded the work of care staff from mainly assistance with activities of daily living, (i.e. ADL due to various functional disorders) to the provision of medical treatment in the modern homelike environment of the residential care homes (Szebehely, 2000). The most optimistic demographic projections performed in Sweden predict a 25 per cent increase in the need for long-term care and special accommodations for the older elderly (Parker & Thorslund, 2007).

A flat in a residential care home is usually comprised of a single room with an adjacent individual hallway with a bathroom (NBSW, 2008a). It is a compacted flat.[12.]Yet, the number of available flats in this type of housing has drastically dropped with 21 per cent during the first decade of the new millennium (NBHW, 2007; NBSW, 2011b). The main reason for this change is that local authorities have assessed living in a residential care homes as a heavy financial burden (NBHBP & NBWH, 2004). Instead, a general policy of a prolonged stay within the ordinary stock of housing has been implemented with extended home care services (NBHBP & NBWH, 2004). As a consequence, a dementia diagnosis has become the principal criteria in the municipal assessment process to allocate a flat to an older person in a residential care home (NBSW, 2005).

Preparations for the Future Ageing Society

In 1992, the responsibility for eldercare and appropriate housing was transferred to the local level of civil administration, the municipalities. What was envisioned was an individualized eldercare that was closely in tune with the older person's personal spectrum of needs (Hedin, 1991; Henriksen, 2003a). This national reform[13] had been prepared during the 1980s when the research on the relationship between ageing and dementia was still in its initial stage. The general view was that the ageing process induced functional frailties. This vision did not prove to be correct, and during the 1990s Swedish ageing changed appearances from various functional disorders into complex multi-diagnoses and an increased proportion of dementia among older people (Thorslund et al., 2004). There is an attempt to rethink the existing residential care homes, but it touches more upon ethical and moral aspects of caring and nursing for this group of dependent persons than on spatial requirements for their continued independent living despite cognitive and functional frailties (CDEC, 2008). In 2010, the NBHW introduced a set of new guidelines for the care and caring oriented towards older people suffering from dementia (NBSW, 2010). With reference to the architectural space, the board recommends small-scaled and homelike housing adjusted to individual needs of the residents and with possibilities to spend time outdoors.

If the flat is to be used by one person, subsidies are correlated with 35 square meters relative to the size of the flat, and 15 square meters per flat to be used for a communal space for a group of residents. Thus a maximum of 50 square meters.

If the flat is to be used by two persons, subsidies are correlated with 50 square meters relative to the size of the flat, and 20 square meters per flat to be used for a communal space for a group of residents. Thus a maximum of 70 square meters.

Figure 1. Regulations concerning grants for the construction of new residential care homes (NBHBP, 2011).[14]

Since 2006, state grants have been allocated to the construction of new residential care homes (NBHBP, 2011). An American research study on the relation between state grants and the design of nursing homes suggests that the former have a conservative effect on the opportunities to rethink existing spatial prototypes (Schwarz, 1997). There are reasons to believe that these grants have this effect due to the introduction spatial requirements relating to the proportion between the individual flat and the communally shared space, see Figure 1. In 2011, other state grants were also allocated to organize architecture competitions in order to renew space for older people with or without frailties (MHSA, 2010).[15] Currently, means have been allocated to organize four municipal architecture competitions by the Swedish Institute of Assistive Technology, SIAT (SIAT, 2011). The preparation for the future ageing society does also include various types of new information technology specially designed for older people's need (SIAT, 2010). This may refer to assistive equipments or fixed installations in the architectural space, the smart home concept (Sandström & Keijer, 2007).

In 2011, the public discussion about appropriate architecture for frail older people is divided. Two groups are possible to discern in this ongoing discussion about housing for the older population. The larger and most influential group, consisting of real estate developers and housing companies, focuses on the type of housing that would attract the majority of senior citizens who are still in good health and who are actively participating in everyday life. The credo of this group is the *expansion of the safe-haven residences* for those who are aged 65 years and above. The idea of residential care home is viewed as being an obsolete type of housing for the older generation. Ageing is seen as an individual process that can be influenced by the individual through his or her personal choice of habits, nutrition, and exercise along with society's financial, physical and social planning. This is congruent with the WHO's vision of ageing, the concept of active ageing (WHO, 2002).

A Typology of Space for Ageing

Until the beginning of the 20th century, buildings involved in the ancient poor relief system remained more or less intact (Åman, 1976).[16] This system dated back to the end of the 16th century, and was an adjustment of the previous medieval system established by the Catholic Church during the 14th century. At the core of this structure, resided the idea that care and caring of frail people was a charitable act that could purge a whole range of committed personal sins and pettiness. Several foundations, guilds and other organizations participated in this benevolent work (Dahlbäck, 1987). Private donations added further means to this activity.

In the medieval towns, special large-scaled institutions were built to house people with poor income, the so-called Domus sancti Spiritus.[17] In order to tackle contagious diseases, and in particular leprosy, special charitable institutions were erected outside the towns, the hospitale leprosorum (Dahlbäck, 1987; Persson, 1973). At the countryside, the peasantry paid a tithe to the parish of which a ninth of the accumulated sum was attributed to the operation of an alms house[18] (Aldén, 1918). This house also supplied some support to people in despair (E.-F. Lindberg, 1956).[19] Some monastic orders were also involved in the medieval healthcare and poor relief aid.

Chronology	Civil administration			Private
	National level	Regional level	Municipal level	Ordinary housing
1570 to 1863 Prior to the administrative division into municipalities and counties	Hospital		Alms house Sick house (1571) Poor house (1642),	Outbuilding[20] Charitable institutions (17th century)
1863 to 1917		Hospital	Sick house, Poor house, Large-scaled paupers' asylum (1869) Small-scaled paupers' asylum (1907) Old people's home(1910)	Charitable institutions Outbuilding, Pauvres honteux[21] (1863) Old people's home (1896), Owner-occupied house (1904)
1918 to 1955		Hospital, Nursing home (1929)	Old people's home[22] New old people's homes (1947)	Outbuilding, Gentry's home, Pensioners' home(1939) Retirement home
1956 to 1982		Hospital, Geriatric wards (1956) Nursing home, Convalescent home	New Old people's home Group home	Outbuilding, Pauvres honteux, Pensioners' home, hotel, flat Block of service flats, housing with service
1983 till today		Hospital Geriatric wards	Residential care home Group Home Accommodation with caring and care	Gentry's home, Senior co-housing Safe-haven-residence

Figure 2. A typology of space for ageing and social work that has been traced for the period of 1570 until today that has been created by sorting spatial prototypes according to level of civil administration or in a category that contains buildings used within normal residential housing. The terms are approximate translations of the Swedish terminology.[23] The significant feature of the facilities managed by the civil administration is that the social work is defined by the current social legislation. The private form of eldercare refers to aid provided by spouses, family members or other relatives, or special arrangement between the older person and the manager of the residential facility.

When the architectural prototypes are brought together for this period and for the subsequent five centuries a spatial typology emerges that describe space intended for social use. The various buildings constitute architectural prototypes that can be analyzed further by considering their use and architectural design (Lavin, 1992). This typology can be further refined by distributing the prototypes along the lines of Swedish civil administration and the private market; see Figure 2.

Architecture and Socio-Politics

In the clash between the emerging absolute powers of the Swedish royalty, the Catholic Church gradually lost ground during the 16th century. In 1527, the church's ability to control its real estate was severely circumscribed, and the process of dismantling the medieval welfare system had begun.[24] The parish system and the catholic administrational system were retained by the new reformed Swedish Protestant Church that was closely allied with the royalty. During the 1540s, the Catholic Church was incapacitated, although the formal breach with papist Rome had not occurred. Charitable foundations, guilds and monastic orders that had been established during the five previous centuries were gradually abolished.[25] Combined with bad harvests, the opposition between the royal power and the Church caused a national situation that became acute with famished people and social instability. During the 1540s, measures were taken to ensure the continued existence of the former monasteries and regain control of the social situation (Tillhagen, 1966).

These attempts were not sufficient since the financial means to support these institutions disappeared with the abolishment of the charitable organization (Rosenius-Högman, 1953). In 1571, the new liturgy of the reformed church enlarged the responsibility of rural parishes and towns to supply *sick houses* for four to six persons (Aldén, 1918). These facilities would accommodate children, frail adults and older people, and they were dependent on the aid and charity supplied by the members of the parish (Lindstedt, 1915). Still, the liturgy confirmed the role of the former monasteries as the fundament for the new national health and poor relief aid (Unger, 1996), since these facilities were transferred to a secular administration and incorporated with the stock of former charitable institutions. These were all renamed *hospitals.* They would accommodate a clientele that consisted of wounded soldiers or persons who suffered from diseases or medical conditions but with the distinction that these persons must have means to pay their stay. This matter was to be regulated prior to admission between the state and the parish to which these persons belonged.

A Two-Dimensional Model for Societal Care

Societal order and the fulfillment of the individual's duties have been priorities in all societies. The new church father Martin Luther suggested that "work was the best way of worshiping Good" (Unger, 1996, p. 22). The destitution of this order constituted a threat to the ruling powers. When it came to societal assistance, the general view was that there existed two types of poverty, one that was generally acknowledged as "worthy" and one that was perceived as "unworthy and self-inflicted (Sjögren, 1997; Unger, 1996). The former type included children and frail older people, while the latter was used in relation to an adult person who, in general opinion, was considered to show re-

luctance towards earning his or her living (Sjögren, 1997; Unger, 1996). These cultural and social beliefs would influence the conception of Swedish poor relief aid until modern time (Förhammar, 2000).

Measures to restrict poverty and loitering in society were continuously contemplated by the royalty. In the beginning of the 17th century, the Lion of the North, the Swedish king Gustavus Adolphus and founder of the Swedish empire envisioned a total demolition of the parish houses and the sick houses, since he believed that their mere existence aggravated social instability.[26] Instead, a reduced number of the hospitals were to accommodate the growing number of people in need for social assistance.

The peasantry failed to see the logic in tearing down good buildings that recently had been erected according to the new liturgy, and the clergy argued against the reform (Unger, 1996). Due to bad harvests and wartime, the royal decree of 1624 created a stalemate that made begging and loitering an even more alarming problem by 1635 (Unger, 1996). In 1642 a new act was introduced to solve the aggravating situation.[27] The new act forbade any able person to beg, but if forced to do so, he or she was only allowed to perform this in the home parish (E.-F. Lindberg, 1956).

Several Swedish historians claim that this act should be considered an important milestone in the evolution of Swedish social legislation and the resultant modern twofold welfare model that offers the person in need for social assistance either temporary medical care or individually adjusted social care (Unger, 1996, pp. 89-93). Besides the already existing parish houses and the sick houses, a third type of built space was imposed on the parishes, *the poor house*. The act stated that the residents in the poor houses should be provisioned for by the parishes (Ibid). Furthermore, the parishes in both town and country had to pay a fee to the hospitals for any admission of poor or sick people subject to poor relief aid. In 1734, even the building code include these demands (Åman, 1976).

A Solid Act for Poor Relief Aid in use for 205 years

Over the centuries, several attempts were made to reform the act of 1642, but it would remain intact until 1847 (Lindstedt, 1915). Although mainly focusing on circumscribing begging and loitering, the ecclesiastical law of 1686 enlarged the demand for poor houses. Other royal decrees from 1698, 1788 and 1811 enforced the parishes to provide for the poor people by charity or subsidies (Lindstedt, 1915). Parallel to these institutions, the charity work of the burgers in the towns created *charitable institutions* for older people and their relatives who had been members of the armed forces, a professional fraternity or who had been employed by noble or royal households. Older members of the aristocracy and the royalty were taken care of at the family estate.

Inspired by the British the survey of prisons that was undertaken by the philosopher John Howard,[28] a similar study of buildings for health care and correctional purposes was undertaken in Sweden by the end of the 18th century. This mainly initiated a reform of correctional buildings, prisons and work institutions. By 1841, the benefit of the confinement of the delinquent to isolation in a single cell unit was acknowledged (Oscar_I, 1840; Åman, 1976). The prisons became complete and austere institutions that exer-

cised a supreme power over the delinquent's conduct, moral and aptitude to work (Foucault, 1975). The prisons internalised the previously public execution of punishment, and aimed at reforming the delinquent's mind (Foucault, 1975).

In 1829 a national survey was undertaken to prepare for a reform of the then one hundred and eighty-seven year old act, and it was concluded that only half of the 2.792 Swedish parishes had accomplished the obligation of supplying a separate building to be used as *a sick house* or *a poor house* (Skoglund, 1992). Instead, these demands were fulfilled by a separate room in the regular parish house that was used for meetings. In 1829, there were some 67,000 paupers (2.1 per cent of the total population), mainly in the agrarian lower classes, and housed in buildings of power quality (Skoglund, 1992). Some 1.396 buildings were mapped outside the Swedish capital Stockholm (Åman, 1976). The reform work of the obsolete Swedish act for poor relief was begun in the 1830. The new act was introduced in 1847 with the intent to harmonize the administration of the local organization of poor relief.[29] Each parish or group of parishes should establish a local poor relief commission[30] in charge of the local poor relief aid.

In 1863, when the local self-government was introduced, this charge was transferred from the individual parish to a group of parishes that formed a municipality. The poor relief act of 1847 was reformed twice during the 19th century. In 1853, some leverage for the persons receiving poor relief aid was introduced that allowed the beneficiary to question the poor relief in order to make it more individualized. The second reform in 1871 revoked this possibility and delimited poor relief aid to the bare necessities of life (Aldén, 1918). In 1863, the concept of *gentry's home*s or *pauvres honteux* began to develop, a type of boarding house where the resident had an individual room that was furnished with personal belongings. This type of housing was supported by royal charity foundations or private donations, and the residents originated from the wealthy upper classes.

New Continental Ideas for Social Purposes

In 1868, a publication introduced the concept of the *pauper's asylums* in Sweden, with drawings added in an appendix (Börresen, 1868; Åman, 1976). The exemplary model for this book was found in Denmark, and it involved a large-scaled institution to which the beneficiaries of poor relief—adults, children and older people—were admitted. In exchange for farm work or handicraft, they received the poor relief as a monthly wage. A year later, an old farm in southern Sweden was converted into the first Swedish paupers' asylum (Åman, 1976).[31] In 1884, an inventory of recently built pauper's asylums was published (Åman, 1976). Also, this time with an appendix that included drawings. By the end of the 19th century, there were some 285 paupers' asylums with 16.000 persons admitted. These were dispersed in the south-eastern and north-eastern part of Sweden with a large proportion of workers (Åman, 1976). This form of poor relief aid would expand until 1910, mainly in the larger municipalities and towns.

The large-scaled paupers' asylums made poor relief aid profitable for the municipality, since the beneficiary of this aid was bound to the premises. The local poor relief commission acquired the same rights in relation to this person as the patron vis-à-vis his

employees in the agrarian society. Furthermore, the domiciliary principle regulated this person's movement, since poor relief aid was provided only within the home municipality and travels outside this area necessitated a passport. However, the liberal and social-democratic members of the fin-de-siècle society viewed the poor relief system with large-scaled paupers' asylums as inhumane (Pauli, 1906). The buildings created a deplorable institutional feeling—"the long, and endless corridors, bare space and floors without carpets and walls without any decoration but a chart with rules of conduct"— that was considered as particularly bad for children and frail older people (Hirsch, 1916).[32] Charity organizations and charitable foundations began lobby work in order to improved buildings in use for poor relief aid.

Reform Work for Improved Living Conditions

The four initial decades of the 20th century proved to be formative for the emergence of the forth-coming welfare state. The Swedish parliament passed several liberal reforms that targeted the significant issues that had become apparent in the early industrialized society: legislation concerning the work environment and working conditions, social insurances, social work and improved housing in general. Appropriate housing was considered to be a question for private entrepreneurs, and the municipal involvement in this field was limited to purely emergency actions. However, in 1904, state loans were introduced that allowed workers to build a home for their family on a piece of land large enough to allow for domestic production of necessities. The subsidies had the character of a supplementary assistance to the individual effort, and the state contributions had to be repaid with a low interest rate (Edling, 1996). These loans aimed to increase the national production of agricultural products and stop the migration from the countryside towards the larger towns. The measures were also means to counteract the massive emigration wave to the USA that occurred towards by the end of the 19th century (Edling, 1996).

Several interest associations of interest were founded by the end of the 19th century: charitable foundations with a special focus group (children, older people, poor relief, temperance care, young unmarried mothers) and federations of trade unions. In 1896, a charitable foundation in Gothenburg tried to renew the vocabulary that was used to designate the buildings and also especially the view on the frail older people. The term *old people's home* was coined and the residents were to be referred to as beneficiaries instead of inmates (Paulsson, 2001). The particular question of appropriate poor relief aid became a burning issue, and discussions in this field were especially lively since the matter touched on both general concerns of an improved national health status as well as religious guidance and moral. In 1907, the Swedish Association of Poor Relief Aid (SAPRA) was founded. [33] The members represented both individual members and associations of interest (charitable foundations, municipal poor relief commissions). The eighth item on the founding agenda was the organization of an architecture competition in order to promote new thinking concerning spatial prototypes for poor relief aid. In opposition to the existing large-scaled asylums, the invitation published in daily newspapers called for new ideas regarding *small-scaled paupers' asylum.*
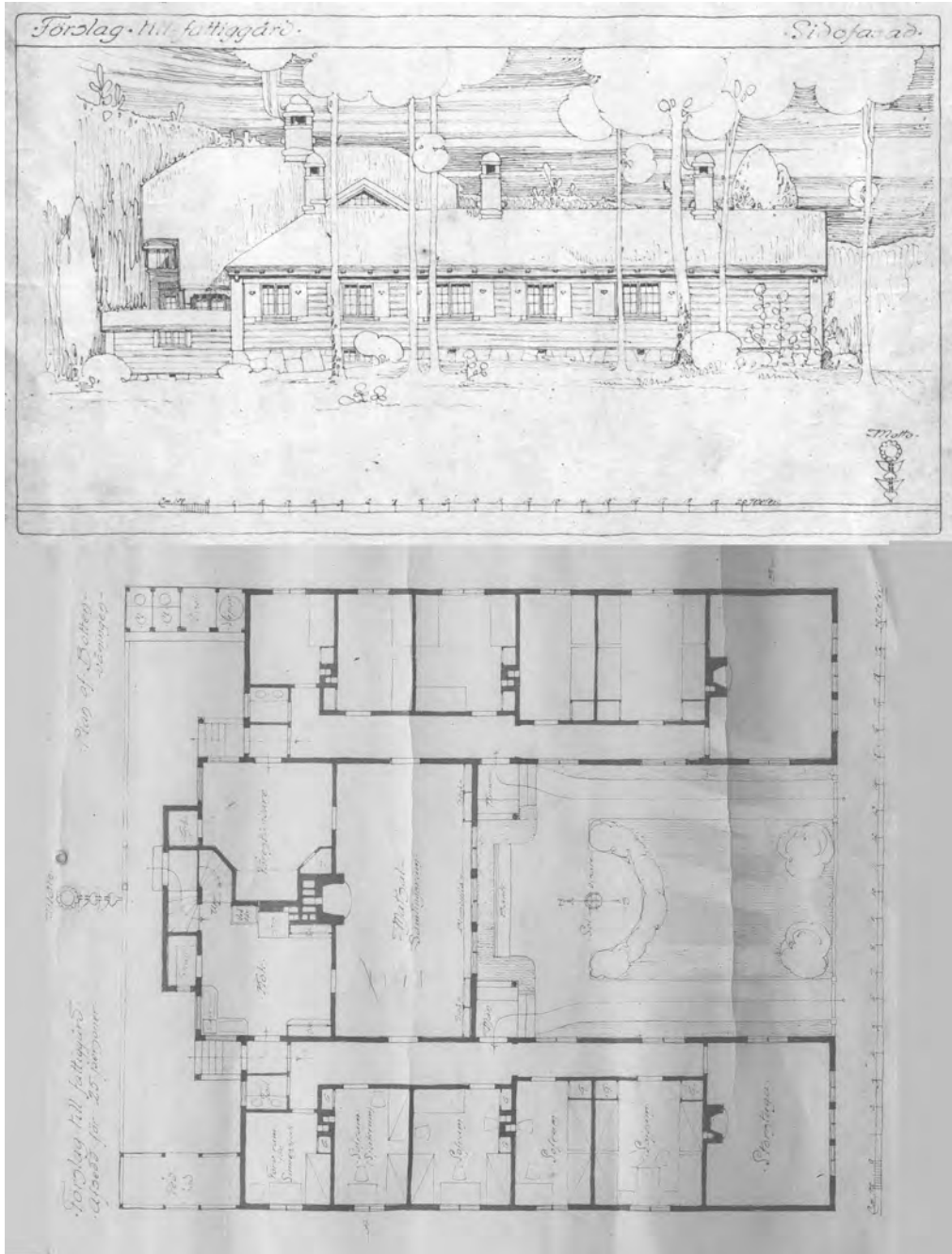
Drawing 1. The side façade of a small-scaled paupers' asylum together with the floor plan. This entry received second prize, and was designed by the Swedish architect Jacob J Gate.[34] (Source National Archives and the regional state archives of Sweden, Stockholm).

Photograph 1. The courtyard at the old people's home in Djursholm that was built in 1909. It was designed by the author of the competition entry, Jacob J Gate, and entirely according to the competition entry (Photograph by author).[37]

Photograph 2. The exterior of the old people's home in Kyrkhult that was built in 1910. The floor plan is identical to the competition entry, but the facades are designed by a local architect. The pergola in front of the main building is not original. It was constructed in the beginning of the first decade of the new millennium (Photograph by author).[37]

New Poor Relief Act and Prototypes for Ageing

The SAPRA intentionally used the architecture competition as a socio-political instrument in order to develop new prototypes of built space for poor relief aid. In the architecture competition of 1907, no first prize was issued, but the SAPRA used the second and third prizes along with a purchased entry to promote small-scaled paupers' asylums for 25 residents with exterior homelike architectural features. Interiorly, the large dormitories were replaced with rooms for from one to four persons; see Drawing 1 and Photographs 1 and 2. In 1910, the association changed the name of these small-scaled asylums into old people's homes, and added an architect's bureau to its advisory activities.[35] Furthermore, the association published a journal that contained reports from various visits to exemplary buildings in Sweden or in other parts of Europe, France, Germany, Hungary and the United Kingdom.

Parallel to the spatial upgrade, the association lobbied for a new poor relief act that would replace the existing one from 1847. This quest was realized in 1918 when the new poor relief act was passed. The SAPRA architectural prototypes were imposed on the municipalities. In addition, some influential members, including the association's architect and chairman, formed the National Bureau for the Inspection of Poor Relief Aid (NBIPR)[36] in control of a national upgrade of architecture used for poor relief that was to be realized in 1929. For this purpose, the architecture for old people's homes that the association had developed since 1910 was converted into national models and guidelines for this development.

By 1933, 483 new old people's homes had been erected, mainly in the rural municipalities that had the oldest building stock, and 897 refurbishments of existing facilities had been undertaken (Göransson & Sundbärg, 1933). Parallel to the municipal in-vestment in new buildings for social work, findings within medicine that had been made after the turn of the century led to the development of new hospital buildings. In 1927, as a supplement to convalescence after medical surgery, state subsidies were allocated to the construction of *nursing homes* (Berge, 2007).

During the 1930s the motives for national control over architecture for specific activities that was stipulated by the new poor relief act was questioned by the body of professional architecture. An article in the national architecture magazine[37] investigated the matter, and concluded that this segment of the architecture commissions was controlled by three architects who were associated with the national bureau. Furthermore, public opinion perceived the old people's homes as being inhumane and cold institutions. Proletarian authors depicted the harsh conditions for the working classes in general, and for their situation in the context of poor relief aid in particular. In addition, the political discussion had shifted from a liberal dominance, and from the mid-1920s onwards the social-democratic movement was broadly acknowledged.

Old People's Homes Used as Multi-Purpose Spaces

In 1938 a parliamentary commission, the Social Allowance Committee (SAC) was formed to prepare for a reform of the poor relief aid.[38] The committee began with sta-tistically mapping the area of municipal and regional activities within this field. It

concluded that the clientele in the municipal old people's home was highly heteroclite: Contrary to the ambition of the poor act of 1918 that envisioned three types of new buildings for children, adults or older people, a large number of municipalities had defined an unforeseen multipurpose use of the building type. This use combined all three types into the one facility of the old people's home. There was a financial gain for the individual municipality, since this type of building was allocated state grants, while the others were not (Berge, 2007). Due to the generally poor standard in residential housing at the time, some municipalities had begun to supply small flats for older people without frailties but with a low income.[39] In 1939, the parliament passed an act on the allocation of state grants to the construction of other buildings of this type, termed as *pensioner's homes* (1938_års_pensionärssakkunniga, 1938; Brodin, 2005), thus promoting an upgrade of housing for older people with few frailties within the private housing market. Similar to the case of the old people's home, exemplary architecture was developed for this type of housing that started to spread over the country after the Second World War.

The war postponed the SAC committee work, but the committee used the time to penetrate the problem of poor relief to older people extensively. The SAC aimed for the exclusion of the old people's home from the poor relief act and the inclusion under the local authorities' general responsibilities for their citizens (Brodin, 2005). The introduction of the old-age pension in 1946 changed the character of poor relief aid, since even older people with a very low income were allocated means that allowed them to pay for eldercare services. In 1947, the committee report introduced the idea of the so-called *new old people's home*. Similar to the *gentry's homes* of the private housing market, the residents should be allowed to bring their own furniture, and the homes should have a character of a boarding house. Still, the emphasis was on what the committee termed "normal ageing" that encompassed mainly functional disorders of any kind (Socialvårdskommittén, 1946).

The committee envisioned that older persons who experienced what then could be defined as an "abnormal ageing" with cognitive problems and a strong dependency on the staff should be placed in separate institutions at the hospitals (Ibid).

Out of Tune with the Public Opinion

The committee's idea of the new status of the old people's home was not meet with acclamation, neither by the civil administration nor by the public opinion. The report was subjected to a thorough consultation process in which the advice of two wartime committees on public buildings attained a renewed attention since they contradicted the fundamental idea of the SAC. As it seems, the Royal Board of Social Welfare (RBSW)[40] had a different opinion about the legal status and the future avenues of the old people's home, since the RBSW suggested the organization of a national architecture competition that focused on the architectural space of these new old people's homes. In 1948, the parliament passed the act that separated the old people's homes from the poor act, and it allocated means to the architecture competition that was to be headed by the RBSW.

Drawing 2. One of the rewarded entries in the 1948 architecture competition, 80 residents, where the architectural design includes a spatial adjustment to the future user. Entry called "East-West" by architect Å. Lindquist. (National Archives and the regional state archives of Sweden).
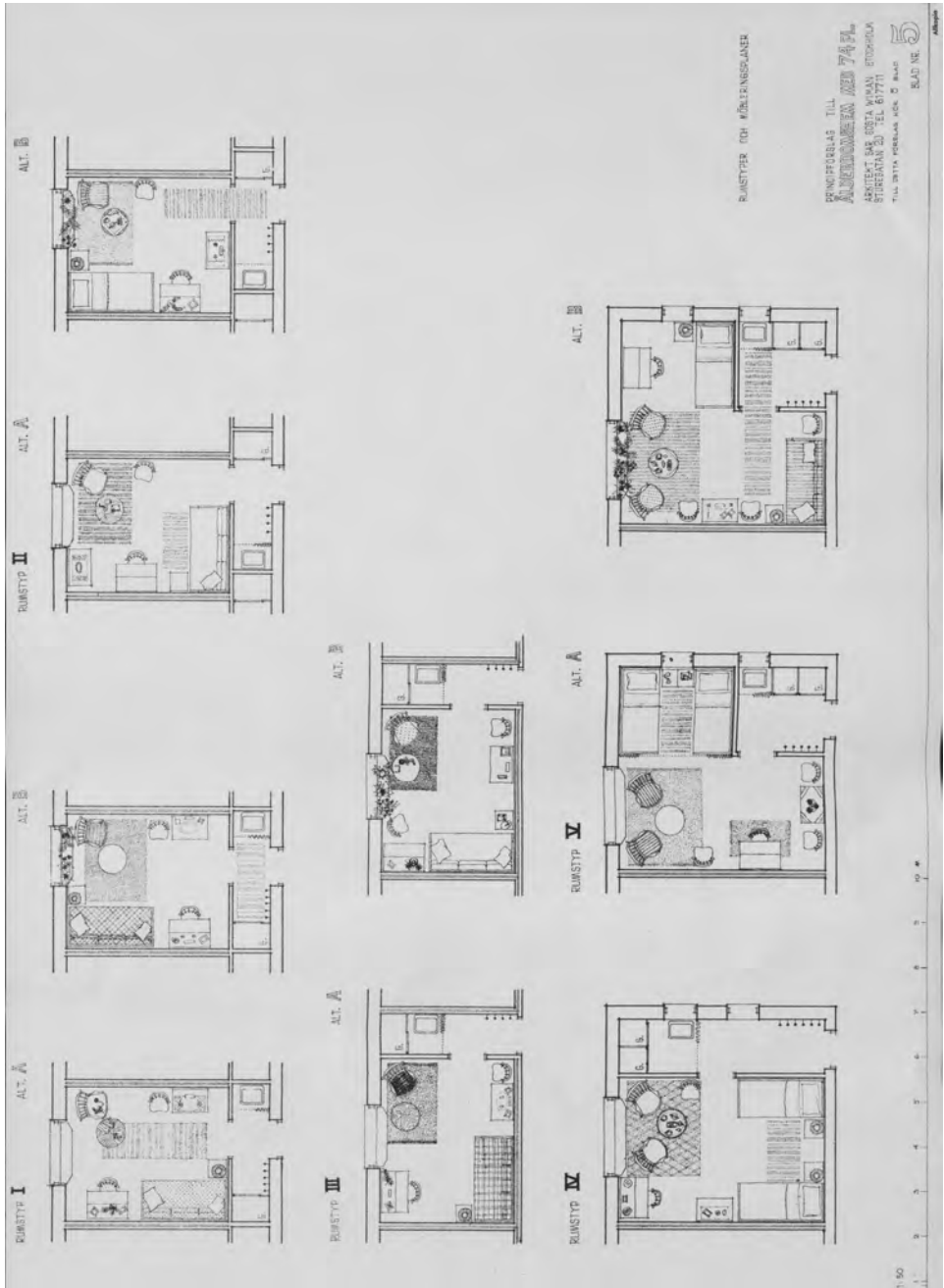
Drawing 3. Another of the rewarded entries in the 1948 architecture competition, 74 residents where the architectural design includes a spatial adjustment to the future user Entry called "Yard by Yard" by architects G Wiman, L Larsson, H Speek, and J Wetterlund. (National Archives and the regional state archives of Sweden).

The RBSW announced an open ideas competition on the matter the same year. The statute of the competition was consistent with the competition rules that the Swedish Association of Architects (SAA) had adopted in 1936, but several of the jury members had a bias from their participation in the wartime committees. The public opinion still viewed the old people's home negatively and favoured the pensioners' homes. This type of housing allowed for continued independence. The Swedish Pensioners' Association (SPA)[41] opposed the idea of the new old people's home, and the organization started a fierce campaign against this type of housing as the ideal form of housing for frail older people.

The subsequent events surrounding the architecture competition made it clear that the idea of a new old people's home represented the experts' view on how to conceive space and prepare social work for frail older people. This view deviated from what the public wanted. Still, the conflict between the two groups initiated a development of architecture for frail older people in a more user-friendly direction. The guidelines for the new old people's homes were moderated towards a more individualized orientation. The new old people's homes acquired a certain resemblance with the existing gentry's homes for the upper classes (Paulsson, 2001).

New Orientations for Space and Social Care

The twelve rewarded entries from the 1948 architecture competition were collected in a publication from the RBSW (RBSW, 1950), and became exemplary models of architecture for frail older people; see Drawings 2 and 3. The national supervision of old people's homes continued along the requirements presented in the competition brief. In addition, the models were used in the municipalities' long-term financial planning with the aim of finding the optimal size of building and the ultimate number of staffing. Although the RBSW had prioritized a homelike and small-scaled design of old people's home since the 1907 competition, the architectural design of the new old people's home tended to become larger and accommodate a higher number of residents from 1950 and onwards. It was the small old people's homes with the recommended 20 beds that disappeared.

A new social act was introduced in 1956 that sustained the reorientation of municipal social work to include home care services while maintaining the principle of old people's home for those older persons who, due to mainly functional frailties, were no longer able to lead an independent life. Older persons who suffered from long-term conditions (LTC) were referred to the geriatric wards at the large hospitals or at convalescent and nursing homes that started to develop. By 1970, the old people's homes had on average 49 beds, and it was the large homes that increased (Åman, 1976).

In contrast to the restrained possibility of rethinking the old people's home and the entrapment in obsolete wartime restrictions for public building, housing for older people within the municipal and private housing sector experienced a period of innovation during the 1950s and 1960s. Several new types of housing for older people were introduced. Besides modern flats with kitchen and bathroom, this housing offered communal services like libraries, restaurants, sports centres, and health and beauty care, of which

the resident disposed according to personal liking and need. This housing was called *a block of service flats, pensioners' hotel, pensioners' flat, or housing with services* (Paulsson, 2001; Åman, 1976).

The flats were spatially adjusted to functional disorders and home care services were supplied by the municipal eldercare. In 1959, state grants were introduced that allowed for the individual adjustment of the habitat to a personal panorama of functional impairments, and since 1966 the Swedish building code included a special paragraph that dealt with spatial adjustment to functional disabilities (Bexelius et al., 1970; NBHBP, 2000; Paulsson, 2008). During the 1960s, continuous reform work on existing social legislation concerning the care of and assistance to disabled children, drug and alcohol abuser, and eldercare took place, and social care was oriented in an inclusive and understanding direction. The idea of equal opportunities had gained cause and entered as an item on the political agenda. People with cognitive or functional impairments were no longer to be locked away in institutions, and housing adjusted to their needs was built in residential areas.

Housing for People with Long-term Conditions

The idea of housing with services challenged the motives for building other old people's homes. In the beginning of the 1970s, statistics showed that these homes were of poor standard with little space for personal adjustments (Lidmar, 1980, 1981; Åman, 1976). Still, the most important realization for the public was that older people with long-term conditions (LTC) and admitted to geriatric wards at the regional hospitals would spend the remainder of their lives there. This created a moral dilemma that would influence the political debate of the 1970s and 1980s. It also coincided with the prognostics for the planning of medical care and the expansion of nursing homes. In 1979, the national Institute for the Planning and Rationalisation of Health and Social Welfare Services in Sweden, SPRI[42] organized an open ideas architecture competition; see Drawing 4.

The focus was on the innovative architectural design of nursing homes that would annex the large hospitals or would be integrated in residential areas. The issue at stake was to create appropriate housing space for those who due to their medical diagnosis were in need for daily caring and medical support, but also required an environment that would supply the existential stimuli. The nursing homes were envisioned to be a universal solution for humanizing the specialized medical environment of the geriatric wards at the hospitals, but they were also suggested as an alternative that would break the stalemate in the spatial development of old people's homes. In reality, both types of housing for frail people met their end in the beginning of the 1980s. Housing with services fitted both the public and the municipalities the best, and this avenue was chosen. In 1982, the national supervision of space for frail older people ended, and with it the old people's home met its end. The new type of architecture for dependent seniors was oriented in a direction that encompassed both the architectural gains of the nursing homes and building complexes for service flats.
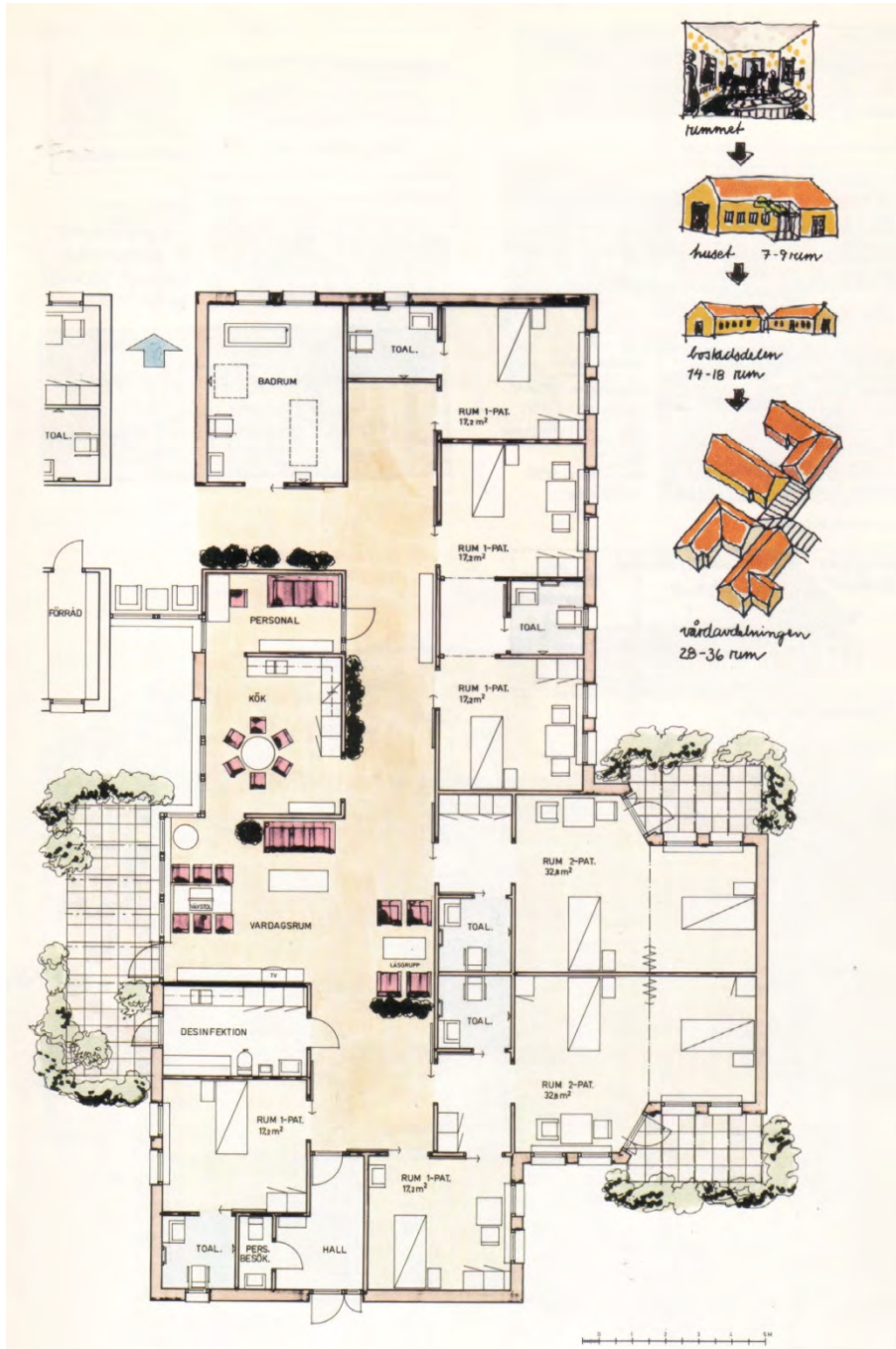
Drawing 4. One of the rewarded entries in the 1979 architecture competition, entry "Grandma' house" designed by the architect's firm FFNS Arkitekter AB, Helsingborg and Gothenburg, that focused on the design of nursing homes. Source: (SPRI, 1980).
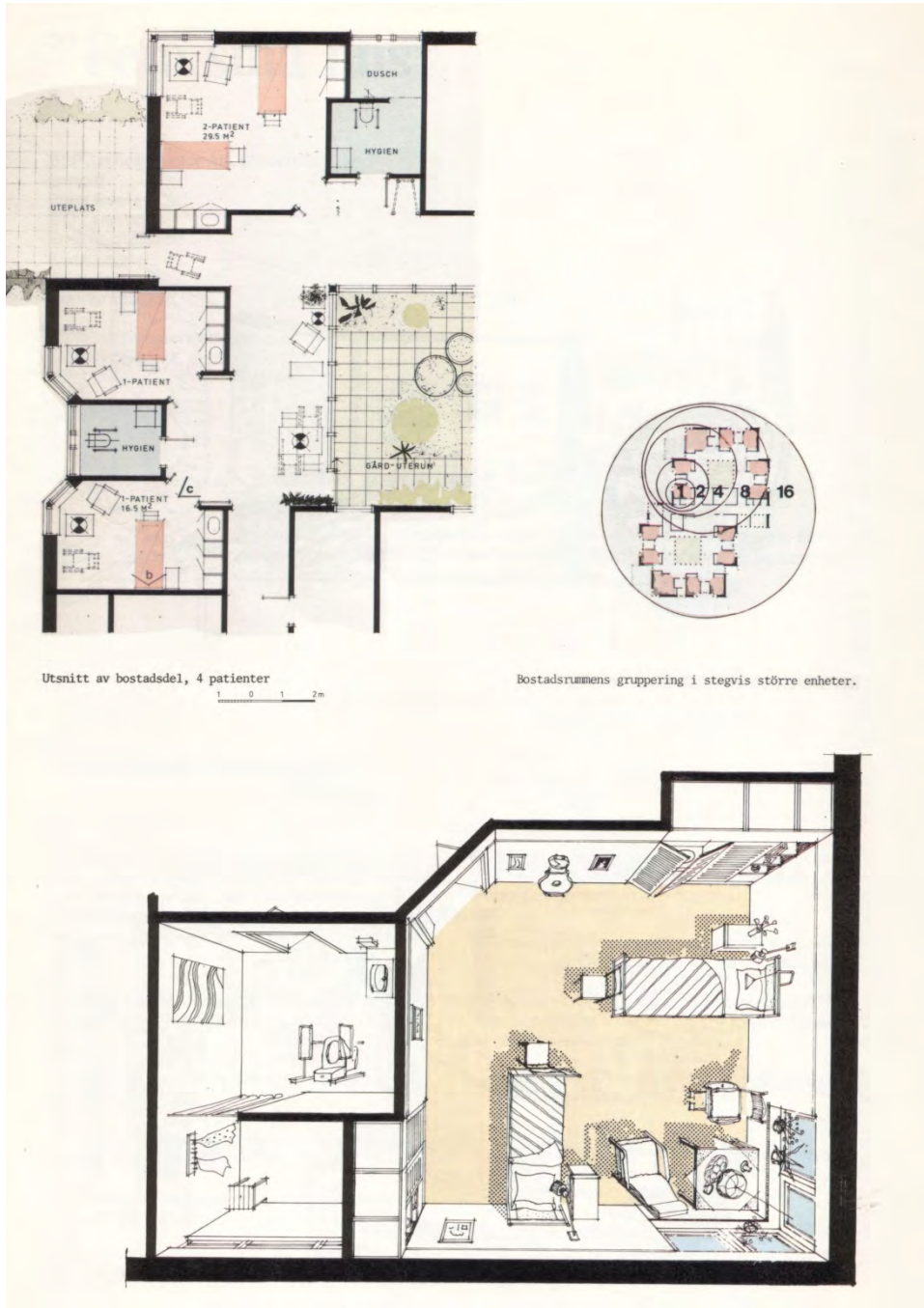
Drawing 5. One of the rewarded entries in the 1979 architecture competition, entry "Five Little Houses" designed by the architect's firm BLP Arkitekter AB, Stockholm, that focused on the design of nursing homes. Source: (SPRI, 1980).

Inclusive Social Service Act and the ÄDEL-reformen

In 1982 a new social act was passed by the Swedish parliament. The previous separate legislations concerning child welfare, eldercare, social assistance, and temperance care was revoked and instead these issues were gathered under the ceiling of a single social services act. This new act defined a human and inclusive attitude to people with cognitive or functional impairments that should permeate the services that municipalities supplied. This act is still in vigour. During the 1980s the health trend suggested that the life span expectancy would expand even further, and it was mainly functional impairments that were envisioned. Smaller groups of people with cognitive disorders or complex diagnoses were to be accommodated in a new type of space, called the *group homes*. This type of housing was inspired by Danish and French initiatives to accommodate this group of people (Dehan, 1997; Melin Emilsson, 1998; Vang, Gripenlöf, & Husberg, 1984).[43] This space supposed a group of six to ten persons in individual flats with one to two rooms assembled around a communally shared space for kitchen, dining and socializing. During the 1980s, the senior co-housing began to develop within the ordinary stock of housing, inspired by Danish examples (Paulsson, 2003).

At the end of the 1980s, yet another reform was prepared for municipal eldercare and appropriate housing for frail older people. In 1992, the ÄDEL-reformen[44] was introduced. It regulated the responsibility of providing appropriate housing for older persons, primary health care services and medical expertise between the municipal and the regional level of civil administration. The division was clear-cut and left the regional level with sophisticated medical care while the municipal level took charge of appropriate housing and a primary health care for older people (Hedin, 1991; Henriksen, 2003a). In addition, this reform produced a change in real estate management between the two civil administrations.

The existing stock of nursing homes, convalescent homes and other forms of housing for older people within the regional administration that had been developed during the 19th century were transferred to the municipal level of civil administration. The concentration of various types of residential buildings to the municipal real estate management meant that the 1990s was characterized by a significant number of refurbishments and the construction of new facilities. A new type of architecture for ageing with frailties emerged, *the residential care homes*. The ÄDEL-reformen stated that a flat in such housing for dependant and frail older people should comply with the spatial requirements of a flat in the ordinary stock of housing. The ambition was to avoid a continuation of long-term stay within a hospital-like environment (Akner, 2004). Still, a part of the surface for kitchen, dining and socializing was allowed to constitute a communally shared space.

The Architects' Involvement in the Architectural Typology

The architectural dimension of space for societal assistance of any sort was activated when the two interests of an architectural grandeur, on the one hand, and the promotion of national health care and poor relief, on the other hand, converged.[45] However,

Drawing 6. The main facade of the large-scaled paupers' asylum situated in the municipality of Skön in northern Sweden. This paupers' asylum in Renaissance style was the winning entry of an open architecture competition in 1890. Drawing by the Swedish architect Emil Befwe (1860-1939), (Source: Arkitekturmuséet, Stockholm). [46]

the architects' participation in the development of architecture for older people was scarce until the mid 19th century. As a consequence of the democratization process of the pre-industrial society during the 19th century, the architects' clientele shifted from being predominantly comprised of clients in the aristocracy or the royalty to include commissioners from the bourgeoisie. This also meant that the architecture profession began a professionalization process that resulted in the creation of national associations for architects. By the end of the century, professional rules of conduct were formulated and competition rules for architecture competitions were defined (Waern, 1996). At least four architecture competitions[47] that dealt with appropriate housing for people with either a low income or who received public subsidies were organized during the 19th century. The first one of 1864 concerned an institution for poor relief aid in Malmoe that involved both housing and work institutions for poor people regardless of age (Waern, 1996). In 1886, the second competition was arranged in Helsingborg with the same purpose, but the competition did not supply an appropriate solution (Waern, 1996).

The competition report suggests an influence from the development of hospital buildings and medical care. Since bacteriology and virology were still unknown, but developing in parallel track, bad air was seen as the major cause of the spread of diseases.[48] The idea of a necessary cube of fresh air per person gained ground, promoted by Florence Nightingale's advice for caring and nursing (Nightingale, 1859). The architecture competition of 1890 is of particular interest for the development of space used within public poor relief aid.
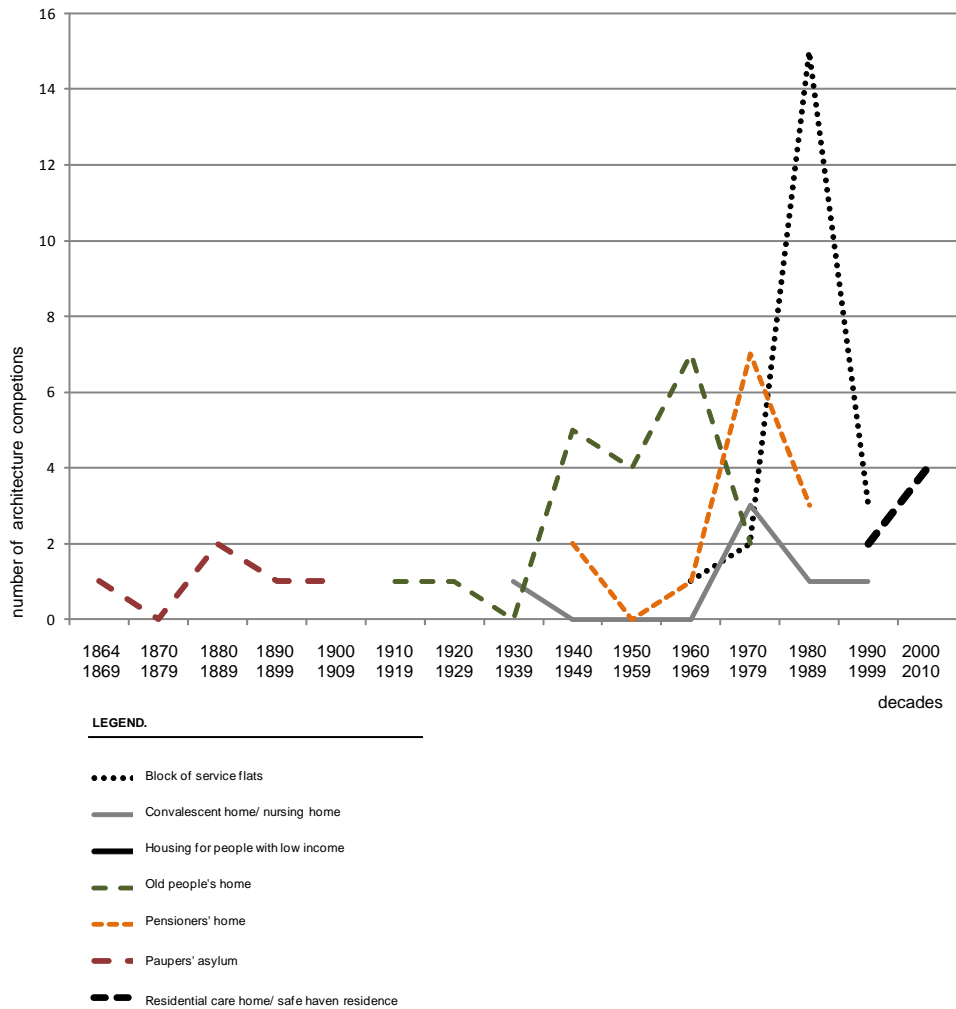
Figure 3. An overview of the architecture competitions that have occurred during the period of 1864 to 2010, crosschecked with spatial prototype (block of service flats, convalescent home, housing for people with a low income, nursing home, old people's home, paupers' asylum, pensioners' home, residential care, safe-haven residence) Sources: (J. E. Andersson, 2008; K. Sundström, 1985; Waern, 1996).

The preserved winning entry displays a monumental building in Renaissance style in a forestry location in northern Sweden; see Drawing 6. It is said that this particular competition brief is the oldest example of a competition document (Åman, 1976). It detailed the spatial requirements of a large-scale paupers' asylum.[49] This spatial definition

of necessary space suggests the presence of an evolution of spatial prototypes of appropriate architecture for various groups of people in need for public assistance. This is further substantiated by an inventory of architecture competitions with a focus on a particular type of space for frail older people during the period of 1864 to 2010. Based on the name of the building tasks, the following graph can be traced over some of the prototypes that were in use during this period; see Figure 3. The inventory supplies an approximate date of birth and of death of each prototype. The assumption of this thesis is that these various examples of architectural space can be correlated with the socio-political discussion at the time.

Residence-like architecture and older user

There are reasons to believe that the buildings in use for societal care before 1850 were adaptations of existing residential architecture (Gromark, 1987; Åman, 1976). Still, developments in architecture during the 19th century introduced the concept of private space (Gromark, 1987; Rice, 2009). It was the upper classes that cherished the idea of a place for a contemplative retreat that was later transferred to the lower classes. On the other hand, the building types defined for poor relief aid after 1850 displayed a need for spatial requirements due to their size and specific purpose. Yet, the spatial vision behind this type of architecture was the reflection of a paternalistic spirit that aimed for social stability and to promote public health and morale (Gromark, 1987).

The typology of space for ageing, see Figure 2, suggests a clear delineation in the civil administrational apparatus between space intended for health care and the space that housed people who due to age, poor health or low income had to impose on society.[50] Furthermore, a similar borderline is traceable between housing within the ordinary stock of dwellings, and the space for people in need for societal support, as state grants since 1904 have promoted the idea of better housing as part of the construction of the welfare society (Edling, 1996). This demarcation line towards space for societal purposes is notable, and this could be explained by the attitude towards poor relief aid. The spatial development in this type of architecture was commenced upon when the social legislation was reformed in a humane and inclusive manner by the mid-20th century.
Another noteworthy detail in this typology of space for societal use is that the user groups involved in space for health care and housing at the private market were visible and important actors in society. A detail that becomes apparent in this typology is that space intended for societal use has always been subject to comprehensive planning and it has been closely intertwined with a specific vision of society. The royal administration of the 17th century viewed dependency and frailty as a negative outcome of the continued use of the former catholic institutions, while the space promoted by the SAPRA, the small-scaled paupers' asylum and its subsequent derivative the old people's home, were key institutions in a liberal vision of society.

  Hence, a particularity of appropriate architecture for frail older people is the omittance of the actual user group apart from the staff when these facilities were planned. The criteria of homelikeness constituted the ambition to create a humanly built environment. The necessary spatial requirement was equal to the one of a bed. This fact is

demonstrated in the second prize-winning entry of the architecture competition of 1907; see Drawing 1. In two of the entries in the architecture competition of 1948, attempts were made to envision the future user; see Drawing 2 and 3. This type of architecture was more about controlling people for the common good. This type of architecture attained a level of correctional purpose, although the users had not committed any criminal act.

Summary

This chapter has presented the phenomenon of global ageing. The first section described in details the ageing society and the implications for the future. However, the geography of ageing is centred to the western countries, and Sweden serves as poignant example with a large proportion of older people among its population. The Swedish preparations to meet the older people's needs of care and caring, healthcare and nursing were then described. The chapter continued to discuss the spatial outcome of the Swedish society's preparations for an ageing society. By use of the social legislation, it was concluded that this societal discussion results in architectural prototypes that are intended to solve this need.

Such prototypes are connected with a latent hope of universal solutions to the problem of appropriate architecture for the ageing generation, with or without cognitive or functional disabilities. The chapter has also aimed for a presentation of the different denominations that emerge when the matter of appropriate architecture for frail older people is investigated. For the public and for people involved in civil administration, these denominations might just be various definitions for the same purpose, but for architects this terminology is a collection of architectural prototypes with individual spatial requirements. The omission of the user is a particularity that continues to permeate the ongoing discussion about appropriate architecture for frail older people. For instance, the DEL emphasized the need for further research on living conditions in residential care homes (DEL, 2008). During the process of creating architecture, members of eldercare administrations and of the staff involved in eldercare act as representatives for the frail older people in the programme planning discussions with the architects. In the absence of knowledge of the older persons who will use the building, visions and assumptions become vital parameters in the creation of architecture for dependent seniors (J. E. Andersson, 2005b).

Put in the historical and social legislative context, this thesis states that architecture for frail older people emphasizes architectural features that are active on a comprehensive level of built space. The building in terms of its efficiency, performance, and work environment is looked upon, while the interactions between the older person and the architectural space are left aside. On the other hand, new types of housing for older people with few frailties focus on emotional values. These values add an extra existential dimension to architecture; location, spatial configuration, and user-friendliness. It is this duality in architecture for the ageing society that motivates this thesis on space for frail older people with a 24-hour need for care and caring.

Theory
Architecture and Ageing in a
Trans-Disciplinary Research Field

The previous chapters have introduced the research project and supplied a condensed picture of the ageing society that is gradually developing. Moreover, a historical overview demonstrated some architectural prototypes that can be considered to be constituents of a typology of space for the frail ageing. The architectural prototypes used to house frail older people are anchored in the spatiality that residential architecture defines. Following the line of reasoning that has been chiselled out so far, it is not the ageing process itself that acts as the propulsive force in the extension of the typology of architectural space for ageing. Rather, it is the foreseeable prognostics of increased and tangible frailties that follow with higher age that motivate society's search for innovative architecture for the ageing society (Akner, 2004).

These circumstances suggest that the matter of appropriate architecture for frail older people is situated in the intersection between practice and theory. This creates a trans-disciplinary research field that involves architecture, the characteristics of the human ageing process and the societal responsibility of assisting people who, due to frailties, are in need for publically organized eldercare. The ageing process and its impact on the built environment and social services generate a discussion as to which orientation of future eldercare is to be chosen. The final direction is defined through the political debate, and will subsequently be expressed as socio-political goals for the welfare society. This chapter aims at bridging the gap between the three dimensions that are active in the concept of appropriate architecture for frail older people—architecture, the ageing process and eldercare. This bridge constitutes a road in a land of diversified fields of research.

This road creates a theoretical framework that has served as a fundament for this research project. In the course of the project, six neighbouring fields of research have been identified as active in the intersection zone that constitutes the land of appropriate architecture for frail older people. Although similarities exist, this thesis has come to the conclusion that each field contains a borderline area that creates both a demarcation and embarkation zone towards another field of research. Therefore, this study claims that the accurate description of the heteroclite land of appropriate architecture for the frail ageing must be considered as a trans-disciplinary field of research. In the following discussion, the trans-disciplinary character will be elaborated.

Architecture, Space and Place

Of central importance in architectural thinking is the duality between place and space. In its most primitive form, place is an immaterial site that materializes in the imagination of a single human being or a group of users. A part of this space is attributed with a particular characteristic, and a place emerges. This effect is the outcome of an individually perceived relationship between the built environment, greenery, nature or topography. The environmental factors interact with previously acquired spatial experiences and emotional experiences. Thereupon, an image of a specific place emerges in the mind of the visitor to this particular space. The Roman notion of a "sense of place," the genius loci, is connected to this reasoning about place and space (Norberg-Schulz, 1980).

Originally, the genius loci suggested a place that was guarded by deceased family members, but it mutated into the existence of a multitude of other sacred places that could be found within space.[51] The spirit of genius loci is connected with a specific atmosphere that can be recognized by the human being who can position him- or herself in different relations to this particular place and a feeling of being inside it, close to it or far from it can be apprehended (Norberg-Schulz, 1994). Architecture, its detailing together with nature and topography constitutes a setting that may induces this sensation of genius loci (Norberg-Schulz, 1980, 1994).

The individual notion of place is constituted by dispersed pieces of architecture or raw natural landscapes, which leads to a continuous place-making process with a reappearing sensation of genius loci. The number of individual places with this spatial capacity is created through the rhythms of being (Lefebvre, 1992). This approach expands the definition of place making it more comprehensive than merely an idea that the humanized and built space per se constitutes a place (Tuan, 1977). The ultimate aim of the place-making process is to integrate the perceived genius loci found at a certain space into the becoming of a special place with deep emotional and existential connotations for the individual appropriator (Canter, 1991; Sime, 1986).

The human interaction with space can be seen as an appropriative process that aims at turning a particular place to personal needs (Lefebvre, 1985). Architecture and the built environment are subjected to the human appropriating process of space. Interactions with the built environment or the raw natural space precondition architecture and the architectural detailing, since the architectural realization is the result of established culture and traditions that the inhabitants of a particular geographical context have established. Architectural archetypes emerge that are active in the global conception of space and spatial features of this space. These archetypes become carriers of an emotional capital (Thiis-Evensen, 1982).

The Exterior and Interior Architectural Space

Architectural space has an exteriority and interiority. The exterior side of architecture has a tectonic appearance that implies that it is visibly dividable into building parts and structural elements (Cornell, 1996). The interior architectural space has a stereotomic character, which is a spatiality that is construed by the architectonic shell and the space that is contained inside it (Cornell, 1996). The stereotomic space is intangible but per-
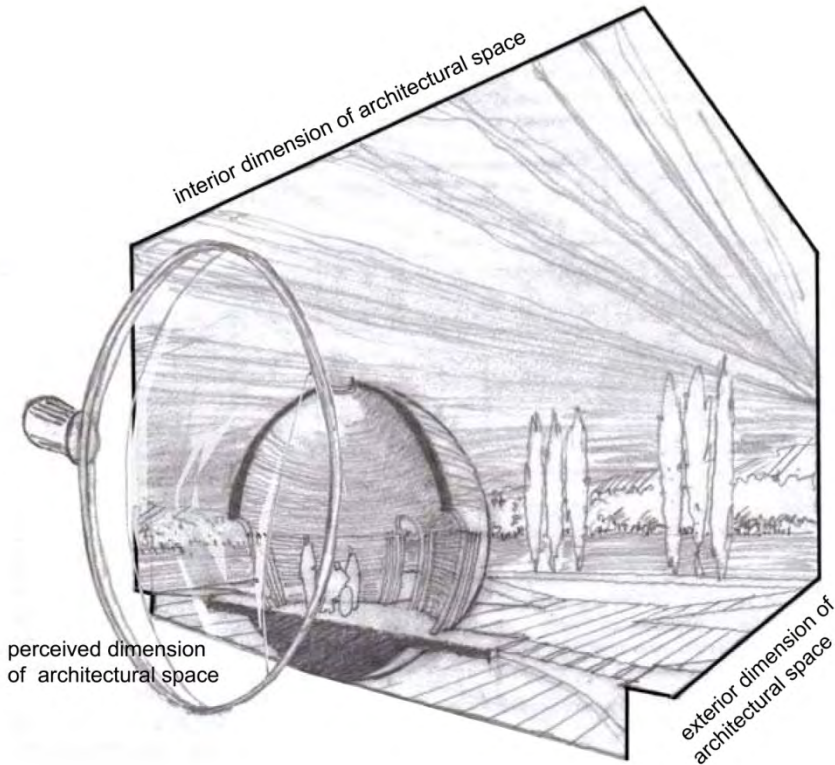
Figure 4. The three types of architectural space—the interior space, the exterior space and the perceived space—that are activated in the human interactions with the built environment Source (J. E. Andersson, 2005b).[52]

ceivable, whereas the techtonic character is both tangible and perceivable. Architecture is often comprised of an interplay between these opposite spatial effects. The appropriation process of space is active both inside the architectural space and between the individual pieces of architecture. Still, architecture is never purely artistic, nor purely practical (Cornell, 1997). As such it can achieve a position of being an icon building, a piece of art with sublime qualities, or a low-key built space that serves as a functional and neutral backdrop to everyday life and social participation.

No matter what is the artefactual status, architecture acts mainly through the human faculty of being able to see and the perceptions that this vision creates in each individual. Other human senses supply additional information that orients the perception in a positive or negative direction. However, the visible architectural space contains an invisible architecture that is activated by the individual's previous emotional experience of spatiality from child to adult (Werne, 1987).[53]

The Perceived Architectural Space

The human understanding of the exterior and interior architectural space creates a third type of space, the perceived space (Merleau-Ponty, 1945); see Figure 4. This space is characterized by the possibility of transcending from the interior architectural space to the exterior one and back again. Transspatiality is the emblematic feature of existence: "(...) the plurality of events that transspatiality generates (...) space and time (...) is the essence of existence" (Barbaras, 2000, p. 58).[54] The exterior, inner and perceived dimensions of architecture converge into the creation of a milieu that is the resultant outcome for human interactions with the built space. The experience of the three architectural spaces is perceived as a state of mind that is linked with a bodily sensation (Wöllflin, 1886). The human perception of this milieu may affect everyday living since the ambiance of this milieu induces moods of like or dislike by the individual (Merleau-Ponty, 1945).

This perceived space describes the most intimate interaction between the human being and architecture since this implies an interpretative mental process that is performed individually by each person who enters a particular architectural space. In the creation of architecture, architects *charge* their architectural design by adding an artistic touch to the architectural design. This can be done by use of stylistic archetypes that project an emotional value that that is discernable for the person who is in the process of appropriating a certain space. The architects have to rely on their artistic and professional skills to make an accurate interpretation of the "sense of place" that belongs to the building site or that will be affirmed or renewed by the architectural design. This approach can be a mimetic design that copies known architectural features like the Swedish timbered two-storey house painted in red with corners in white, or an architecturally independent idea that challenges established notions that are connected with the architectural prototypes (Thiis-Evensen, 1982).

The Perceived Space and the Lived Space

At best, the appropriative process and place-making process is undertaken under auspicious conditions that imply a positive acceptance by the group of users or the single user of architectural space even if it is of poor quality. The new piece of perceived space is assembled in a cognitive and emotional mental process, and added to the existing ones that the user stores in his or her subconscious archives of individual spatial experiences (Bachelard, 1957; Pallasmaa, 2001). The perceived space becomes an integrated part of the lived space that is the mental image of various spatial experiences that the individual appropriator has accumulated (Merleau-Ponty, 1945; Pallasmaa, 2001). The search to construct a protective shell around the habitat turns architecture into an existential space that reflects various types of human interactions with buildings, nature and topography (Norberg-Schulz, 1971).

In this context, the notion of home and the belonging to a certain type of environment appears as the most poignant examples. Home is equal to the habitat, an environment that is created to become an individual refuge adjusted to personal needs or to the wellbeing of a family (Östberg, 1906). This notion of home is also one of the key concepts in this study. It is a perceptual interpretation of architecture that is made by the

Illustration 1. A place is created within the interior architectural space by means of the interaction between the penetrating daylight, the furniture arrange-ment and the colour of the individual artefacts. Aquarelle by author. Source (J. E. Andersson, 2005b).

individual user, and that imbues the perceived space with a sense of being at home. Home is related to something stable in time, an accumulation of "at this moment" that provides meaning to the existential matter of being (Merleau-Ponty, 1945). The home-likeness has surfaced as a key concept in various discourses that deal with societal services and support oriented towards older people (Bergh, 1996).

The Sense of Home in Architectural Space

It is a continuous situation of being in the present that takes place at home since the residents' patterns of use coloured by emotions attributes the home with its own temporality that develops parallel to nature's time of day and night (Power, 2009). This study assumes that the private dwelling constitutes a continuum conditioned by the individual's pace and way of living. In contrast to this chronologically free time zone, there is the temporariness. This refers to small bites of time-limited periods that exist parallel to the continuum in the home. By their presence, they emphasize the importance of the habits and usages that have been established in the home. Sojourns at a hotel, in a hospital or at a residential care home are examples of temporary stays that suppose a new appropriative process with the ultimate aim of developing a homelike feeling in the new setting.

To adjust to a new situation, the human being searches a balance in the new setting by strengthening details in the new environment in order to integrate the new spatial experience within the existing set of various lived space (Ratiu, 1997; Toyama, 1988). The hotel-like stay suggests a temporary stay under voluntary and comfortable circumstances in a boarding-house, hotel, or an inn. However, other types of voluntary stays with a time-limited aspect also exist, namely the stay at a convalescent or nursing home that follows upon medical surgery or a long-term condition (LTC) in which the family care giver needs some leverage for personal needs and to recuperate. The institutional type of stay may involve an involuntary momentum. The time of the stay varies from short-term to long-term. In this case, the architectural design becomes vital in order to attenuate the enforced measures and infuse a sensation of comfort in order to avoid the creation of an austere and complete institution (Brun_Petersen, 2010; Foucault, 1975).

Homelikeness as a Concept for the Frail Ageing

During the 20th century, socio-political reforms reoriented the type of architecture that is used for residential care homes from an institutional environment into a home-like milieu. Moreover, the residential care homes have shifted from being mainly intended for older people with low a financial income to becoming an integrated civil right of the modern welfare state (Brodin, 2005). This changed ideological-political view on how to accommodate older frail people has called for new architectonic visions. The positive effect of the homelike environment has empowered architectural thinking since 1907. In most cases, these reforms have preceded necessary changes of the care work that is based upon the routines of the hospital environment in the same direction (Selander, 2001). Consequently, this thesis assumes that architecture is a type of social art: It is made for social purposes, and as such it reflects society (Hillier, 1996).

During the 1970s, experience-based findings from a refurbishment of an existing residential care home outside Stockholm showed that older frail people were invigorated in a homelike environment (NBSW, 1983). The ad hoc solution to a pressing matter suddenly proved to have a positive effect even for the older residents. Since then, the NBSW has promoted that the interior setting of communal space for older frail people is imbued with homelikeness in. The homelike aspect encompasses an ethical dimension of the appropriate eldercare that has been included in the Swedish Social Services Act[55] as a means of compelling the Swedish municipalities responsible for the fulfilment of this act to supply *appropriate* housing for the dependent and frail seniors.

Architecture Parlante for the Residential Care Home

The homelike atmosphere and artefacts that strengthen this quality are recurrent items on the political agenda. A flat in a residential care home is the equivalent of a private dwelling (NBSW, 2011a). The general writings of the legal document about the desired homelikeness in housing for frail older people have been transferred into recommendations for the realization of the built environment. Based on these recommendations, a practical manual with advice and design solutions has supplemented the Swedish building legislation in matters that relate to accessibility and usability for people with cognitive or functional impairments (E. Svensson, 1989, 1995, 2001, 2008).

This manual is an outcome of the gradual integration in the Swedish building code of necessary adjustments of the built environment to a cognitively or functionally weak person that has taken place from the mid 1960s until today (Paulsson, 2008). The guidelines suggest a type of architecture parlante (Blondel, 1771), since it can be said that these guidelines are activated in four architectural dimensions: Firstly, buildings with a volume that is possible to integrate in a residential environment; secondly, an interior spatiality that projects homelikeness; thirdly, an architectural configuration that helps people who are in this space to find their way; and fourthly, the supply within this interior space of a spatial overview of the communally shared space thereby assisting in orientation.

after Cold et al, 1992.
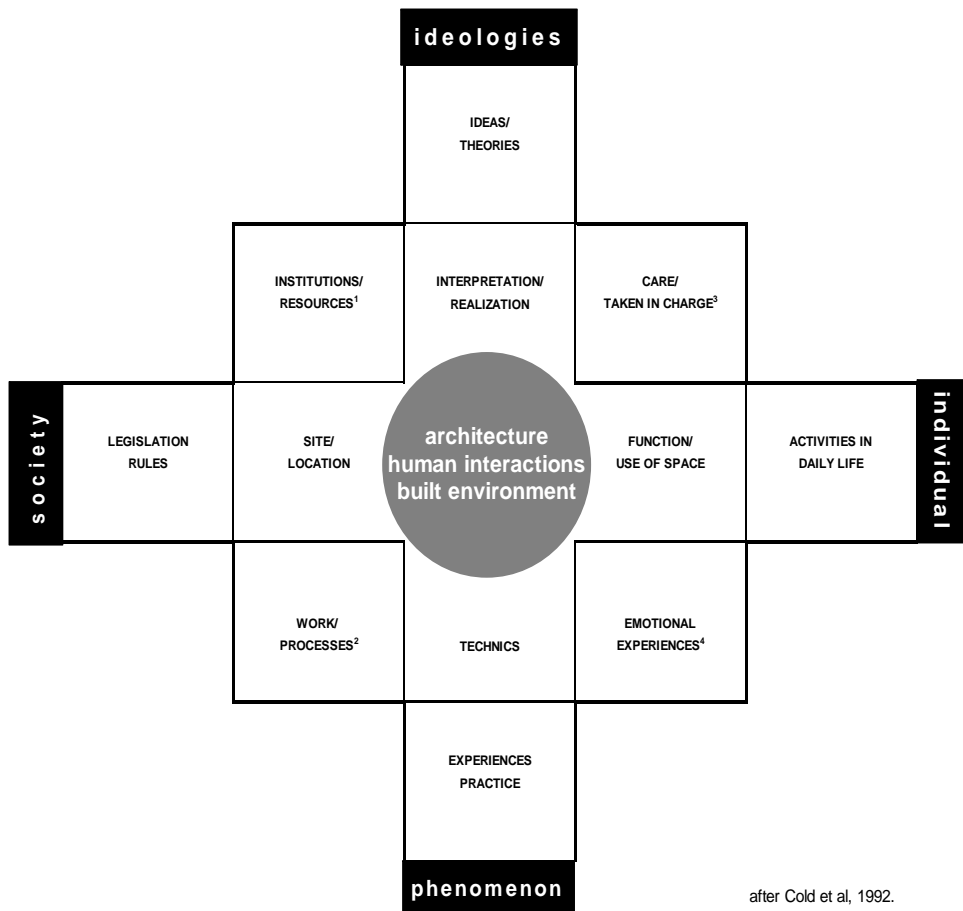
Figure 5. Architecture as a field of practice, located to the intersection of four dimensions, ideologies versus phenomenon, and individual spatial use versus the collective/ societal use (Cold, Dunin-Woyseth, & Sauge, 1992). The model has been adjusted to fit this research project. This adjustment pertains to the location of the aspects of the four dimensions.[56]

Architecture and Practice

Architectural research has tried to explain architecture as a field of practice (Cold et al., 1992). In this model, human interactions with architecture and built environments are situated in the intersection of four spatial dimensions; see Figure 5. The first spatial dimension is space perceived as a phenomenon where expe-rience, practice, and tech-nology influence architectural space. The exterior and interior space that architecture constitutes can be subject to spatial theories that may generate ideologies about space. This is the second spatial dimension with societal implications. These opposite notions of space form two terminal points of a vertical axis. The third spatial dimension is the individual use of architectural space, where the spatiality may be personally adjusted to our activities and needs. Such adjustments create functions in architecture.

In contrast to the individual use, there is a fourth spatial dimension, where collective practice and cultural traditions define the communal use of space. The third and fourth spatial dimensions form two terminal points of a horizontal axis between individual and society. The vertical axis and the horizontal axis can be sub-divided into different as-pects, which affect the further conceptualisation and detailing of architectural space. Four supplementary aspects crystallize in the meeting between the spatial dimensions that involves care, emotional experiences of space, institutions and resources, and work processes. The closer to the centre the aspect is located; the more direct is the influ-ence it has on architectural space. Thereby, architecture becomes a scalable reflection of human existence and its prerequisites. In turn, architecture is influenced by other thinking that is generated in conjunction with the described model of practice. This is an abstract space that is the outcome of human interactions with built environment, nature and topography, and paired with ideological paradigms, societal models and political wel-fare ambitions (Bourdieu, 1972; Lefebvre, 1985).

Phenomenology Coloured Methods for New Spatial Knowledge

The classical way of achieving new spatial knowledge and thinking within the architec-ture profession is the use of exemplary architectural models. The method used within the architecture profession to acquire new knowledge about a new design task posits the architect's personal perspicacity to perceive human interactions with built space as the main source for obtaining new knowledge. Through a presumed self-identificative process with the events taking place, the practicing architect expands a generalist train-ing to include new design knowledge (Schön, 1983). This will later be used in a scenario thinking when designing new architectural space (Schön, 1983).

The fundamental argument for this assumption is based on the belief that "my body is the texture that communicates with all objects, and, concerning the understanding of the surrounding environment, my primary instrument for understanding it" (Merleau-Ponty, 1945, P. 272).[57] This echoes a belief within the architecture profession that archi-tecture is not just a functional spatial configuration but moreover an aesthetical experience that influences the human being to define a way in space, find a place for a sojourn and evaluate the space in terms of likes and dislikes (Seamon, 1982; Werne, 1987).

Yet, this methodology has an inherent limitation: The individual architect can only relate to the matter of appropriate architecture for persons with cognitive or functional disabilities to the extent that he or she emphasizes with the particular situation of having a long-term condition. Since the matter acts on a personal level, the professional bias of the architect might lead him/ her to focus on details of importance for the architectural practice, but of little relevance for the frail person.

Architecture in a Design-Theoretical Perspective

By applying design theory to the creation of architecture, the multi-professional exchange of various knowledge and individual notions about the appropriate space for ageing can be explored, since this influence the architect's work and the architectural design the fall out. When treated as a design object, the process of creating architecture is structured into three distinctive phases. The initial phase is the definition of the product to be, its appearance and the inherent requirements. The initial phase is also termed the design process, in which the architecture profession has an important role (Lundequist, 1995). Then follows the realization of the product, and finally the continuous use of the product (Lundequist, 1995; March, 1984).

This view on architecture puts the so-called design process in the focus of interest for this thesis on architecture for frail older people. The design process has three pronounced objectives: firstly, to conceive a new artefact for various usages, secondly, to predict the appropriate qualities of this artefact in its future multipurpose uses, and, thirdly, to accumulate knowledge about existing cultural notions and values that influence the shape of the artefact and its future usability (March, 1984, p. 269). [58] The exterior architectural space contains information about human interactions with the built environment, nature and topography, while the interior space reflects the way of life that is led by a group of people collectively or independently. The interface between the spatialities supplies further information of relevance for architecture practice.

The empirical findings form an indirect knowledge about ongoing spatial phenomena that can be affirmed or reinforced in opposite directions by the architectural design Brought together; studies of the exterior and interior space generate an input in the creative process of conceiving innovative architecture. Theoretical knowledge achieved through the training to become an architect or other professional involved in the design process is put into practice by thinking in terms of scenarios (Schön, 1983). This process is triggered by mental fragments of various human interactions with architecture but also by other fields of research that act as germane primary generators in the design process (Darke, 1984). This means that these mental fragments promote both thinking about architectural space in general and about the design task in particular.

The Design Process and Design Criteria

The design process involves a multi-professional group of experts: engineers, building companies, real estate managers, union representatives, managerial professionals, and care professionals such as nurses, and nursing assistants. This thesis asserts that architecture is the outcome of a design process in which bundles of knowledge are activated (Dobloug, 2006). The stakeholders involved in the realization of a building project ex-

change views on various design solutions that the architects invent, and finalize the requirements in construction briefs (Ryd, 2003).

It is said that this exchange can be understood as *logical reasoning*[59] about the design task that activates several mental processes that involves parallel cognitive processes that are both artistic, spatial, as well as communicational in terms of processing verbal information from discussions and negotiations (Lundequist, 1995). The propulsive force in design thinking is found in the preparatory sketches and drawings that the architects deliver to the meetings with the commissioner and other actors involved in the project (Dobloug, 2006; Lundequist, 1995). In the realization process, the second phase that follows upon the design process, the achieved architectural design is transferred to drawings and elevations that allow for the realization of the building.

During the design process, the architect assumes the responsibility of combining imperative environmental demands and spatial requirements with a comprehensive spatial idea that gradually acquires an architectonic gestalt. These parameters act as design criteria that condition the architectural design. In addition, the other actors who are active in the design process, the building experts and the representatives of the commissioner, influence this architectonic vision. In the case of a new residential care facility, the representatives of the commissioners are members of the administration of the eldercare activity or of the staff at another care home. The creation of architecture is subject to cultural and social beliefs (Bourdieu, 1972; Lefebvre, 1985; Lundequist, 1995). It becomes a collective endeavour and is part of a democratic decision-making process that is an integral part of modern society (Bloxham_Zettersten, 2000; Dunin-Woyseth, 2001).

Architecture Competitions as Social Visions

Architecture competitions have proven to provide a fruitful entry for the study of the dynamics between architectonic visions, ideo-historical paradigms and primary generators (Katsakou, 2011; Rustad, 2009; Tostrup, 1999). The architecture competition is a European phenomenon, mainly active in Central Europe (Biau, Degy, & Rodrigues, 1998; Rönn, Kazemian, & Andersson, 2010).[60] The competition brief reflects the organizer's intentions that are to be realized as an architectural gestalt. Architecture competitions generate documents reflecting both the organizer's considerations and the participant's attempt to conceptualize the design task with respect to its restrictions and other parameters such as the building legislation.

The brief presents an experience-based knowledge of certain activities translated into spatial requirements, while the jury report based on these assumptions supplies a combined an aesthetical and rational argumentative assessment of the architects' design solutions in the competition. The jury report supplies the assessment of the submitted entries (C. Svensson, 2008). Both documents are written sources. There are two organizational forms of architecture competitions, open ideas competitions or two step competitions (SAA, 2008).The submitted entries in the competition are the architects' artistic contemplation of the design task presented as drawings, illustrations or textual explanation of the design.

The architecture competition illuminates the complex exchange between the vision and the reality by which all built environment is conditioned; the resulting negotiation process to which architecture is constantly subjected (Bloxham_Zettersten, 2007; Dunin-Woyseth, 2001; Hagelqvist, 2010). This means that parameters other than strictly spatial ones, even political matters, determine the final realization of the built space (Bloxham_Zettersten, 2007). The architecture competition is the first step towards a subsequent realization of built space that will undergo an individual design process with multiple decisions that will both prepare for and be determined of the resulting tendering documents (Ryd, 2003).

Other types of documentation also reveal the interplay between architectonic visions, ideo-historical paradigms and primary generators. This documentation may be found in an advisory architectural programme that contains guidelines for the new architecture and built environment that will be realized (Tornberg, 2008).[61] This type of documentation is applicable to detailed physical planning, but also in the context of a single building project. In the context of architecture for residential care homes, the national welfare goals included in the social service act have been translated into spatial requirements in order to fulfil the societal ambition of an accessible and usable environment (SFS2001:453, 1982; E. Svensson, 2008).

From Architecture to Other Fields of Research

One priority in the creation of architecture is to spatially emphasize the particular choreography that the built space will induce people to perform (Bergström, 1996; Lefebvre, 1985). The built environment is dominantly designed to meet the needs of an adult person of an undefined age with a total control over her/ his cognitive and functional capacities. In architecture, the bi-millennial triad of firmitas (firmness), utilitas (commodity), venustas (delight) still encapsulates the ultimate aim of any architectural realization (Vitruvius, 1999). Firmness refers to the constructional element of architecture that is intended to provide a sustainable protective shell against climate, while commodity deals with the fit between a single end-user or a group of users and the architectural design. The users create functional requirements that have to be met.

Delight refers to the longstanding belief within the architecture profession that well executed architecture generates an emotionally positive response by the user of the space (Wöllflin, 1886). The execution lies in the architectural gestalt; in the choice of material and colours. The main task in the creation of architecture is to design an architectural space that will be perceived as appropriate for a multitude of spatial usages.

In this thesis, the four categories of architectural design—interior decorating, landscape architecture, physical planning, and urban planning—are united under the ceiling of an all-inclusive definition of the word architecture: Architecture encompasses any type of built environments for human usage. With this expansive definition of the word, architecture achieves a zooming capacity that stretches from the comprehensive spatial use, over collective patterns of spatial use to the detailed and individual spatial usages.

The Macro, Meso and Micro Level of Architecture

The zooming capacity of architecture describes levels of spatial realizations that progress from a comprehensive understanding to a more detailed and individually adjusted architectural space or vice versa. The inclusive definition of architecture that this thesis promotes can be detailed by use of the triad macro, meso and micro. On the macro level, architecture becomes involved in the planning of the natural and physical setting. This implies an organization of space for various usages like agriculture versus built environments, arable land versus industrial plants, natural resources versus exploitation, infrastructure and other spatial adjustments for the modern welfare society.

On this level, space is comprehensively structured into a panorama of specific functions that are juxtaposed with a list of priorities in order to create a balanced and sustainable environment. This list describes requirements that have been defined in the public political discussion about which societal model to realize. The next level of space, the meso level, suggests a more refined level of architecture, in which urban planning and the human interactions with space become visible. Collective usages of space are possible to register at this level (Lefebvre, 1985). The human appropriation process becomes evident on this level, and involves a group of users or a single user.

On the next level of space, the micro level, architecture presents a group of buildings or solitary objects. Similar to the meso level, human interactions with this level of space concern the collective use as well as the individual user. The appropriation process of this level of space is active both inside the architectural space and between the pieces of architecture. In line with other researchers, this thesis maintains that mental maps can be used on the meso and micro level of architectural in order to describe the human appropriation process of these types of space (Lynch, 1960; Marling, 2003). The architectural space can be sorted in five categories of spatial clues: districts, edges, landmarks, paths and nodes (Lynch, 1960).

Districts describe zones with similar use as well as industrial land or residential areas, while edges define boundaries between the perceived districts. Landmarks are works of architecture that have attained a specific characteristic attributing an individual piece of architecture or a global district with such a spatial quality. Paths and nodes refer to the visible traces of human usages of the built environment: It can be a matter of streets, trails or junctions between these lines of transportation through the built environment (Lynch, 1960).

Architecture and the Ageing Process

It could be argued that architecture supplies the best evidence that ageing is an integral part of living (Messy, 1992). In a some architectural commissions, age is an issue: Age is a parameter in the case of architecture intended for children or young adults; namely educational environments such as kindergartens, primary schools and high schools for the first group of users, and colleges, student hostels or universities for the second group. It is also an issue when the architectural design is intended to create space for older people, although it is arguable whether it is age per se or the possible frailties related to the ageing process that are in focus for the design In architecture practice, the

knowledge about age, space and spatial behaviours becomes tacit knowledge and part of "the reflection in action" procedure that characterizes professions in which theoretically acquired knowledge is put to use in solving problems of a practical nature (Schön, 1983).

This is an extra-human approach towards human interactions with space and the ageing process. The approach implies a search for information that can be transferred into computable facts and requirements applicable to space for ageing. The extra-human approach generates qualitative findings on space for the frail ageing, and is based on recognizable spatial patterns of collective human usages. It can be questioned to what degree the findings can predict human interactions with the built environments, when these are conditioned by an individual ageing process. During the design process, the architectural design undergoes a process of reasoning about the appropriateness of the achieved findings about space for older people's needs, which means a condensation of adjustments for cognitive and functional impairments.

Fields of research	MACRO level of accessibility and usability	MESO level of accessibility and usability	MICRO level of accessibility and usability	NANO level of accessibility and usability
Architecture	●	●	●	○
Healthcare science	○	○	●	●
Human geography	●	●	●	○
Medicine	○	○	●	●
Occupational science	○	○	●	●
Social science	○	●	●	●

Notes: ● = this refers to a strong participation; ○ = this refers to a medium participation; ○ = this refers to a small participation.

Figure 6. The four levels of implication of the keywords accessibility and usability in the built environment.

Accessibility and Usability

The necessary adjustment of architectural space to cognitive or functional disabilities is captured by the keywords accessibility and usability. They contain a level of flexibility; in particular the word accessibility. It has gained a increasing relevance for the congruence between frail older people and the access to societal information, services and built environment (Kahana, 1987). Still, the building code uses the keywords in a tandem func-

tion, and the exact definition of the words is somewhat dim in the legal text (SFS1987:10). Usability acts as a complement to accessibility. Besides the legal documents, the practical implications of the keywords for the architects' work are presented in detailed manuals and standards (Neufert, 1980; E. Svensson, 2008).

This material supplies advice on how spatial adjustments made to meet the demands of disabled people can be created in architecture in general (ordinary housing, public buildings and work environments) or in buildings designed for a particular use (residential care homes, sheltered housing, and other special types of buildings). The approach is general and applicable to a group of people. The individual panorama of cognitive and functional disabilities is not present. A definition of the tandem items has been detailed within research in occupational therapy and infra-structural planning. This definition suggests that accessibility and usability are active on a macro, meso and micro level of society's responsibility to integrate people with cognitive or functional disabilities in social life and everyday activities (Iwarsson & Ståhl, 2003). The macro level pertains to the national level of societal planning in terms of building, housing, infra-structure and physical planning. The meso level deals with the same parameters as on the macro level, but is integrated in a local or regional context, an undefined public space. The micro level refers to the space of the individual habitat, the private space.

Moreover, this research suggests a definition in which accessibility becomes a function of a personal component and of an environmental one, whereas usability is a function of the personality, the environment and the individual activity of this person (Iwarsson & Ståhl, 2003). This clarification is of relevance for architecture, since it highlights the personal interaction with built space. The personal component that is active in the tandem works against the architectural aim of creating generalizable and sustainable solutions for a group of people. Based on this detailed definition of the keywords, there is reason to believe that the macro, meso and micro levels are to be seen in a collective perspective. Subsequently, the built environment will promote a general realization of accessibility and usability that could be detailed further according to the personal panorama of cognitive and functional disorders.

Therefore, a fourth level of use of the tandem items can be introduced in order to visualize the direct and individualized aspect of accessibility and usability for persons with cognitive or functional disabilities: This would be the nano level that refers to the personalized interaction between the individual and his or her closest space, the habitat, the collective and public space, and the societal space. The nano level of accessibility and usability could be seen as a moveable aspect that cuts through the macro, meso and micro level depending on the space with which the person is interacting. With this reasoning a fourfold matrix can be traced that clarifies the role of architecture in the spatial adjustment process towards cognitive and functional disabilities, and its relation to neighbouring fields of research; see Figure 6.

Architecture and Neighbouring Fields of Research

During the realization of this study, five fields of research have been identified as contributors to the expansion of architectural knowledge about appropriate architecture

for frail older people: healthcare science (care sciences, nursing science, physio-therapy); human geography (cultural/ gerontological/ health geography), medicine (anat-omy, geriatrics, neuro-science), occupational science (occupational therapy, physio-therapy), and social science (psychology, sociology, social work). It is assumed that there is a difference between persons with an aesthetical training such as architects and persons with other types of professional education. The former tend to emphasize the perceptive aspect whereas the latter relate the architectural experience to its associa-tive power of evoking references to an already familiar type of built space (Fawcett, Ellingham, & Platt, 2008; Rapoport, 1982).

By introducing the human ageing process as a design criterion in the creation of archi-tecture, it becomes evident that architectural space has different meanings within the different fields of research. The place attachment to a certain space makes older people hesitant to move and they prefer to remain in a special area of built environ-ment(Abramsson & Niedomysl, 2008). This is explored in human geography. The older
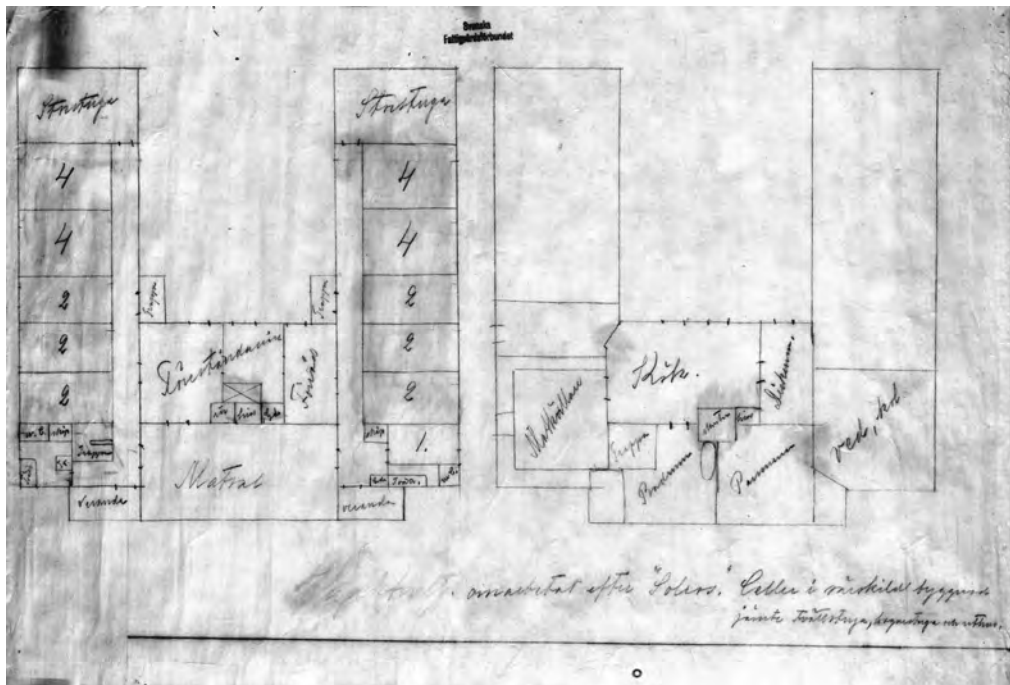
Drawing 7. An ex ante evaluation of a competition entry: This was the revision of the second prize winning entry in the 1907 architecture competition. The notes highlight general re-quirements by naming main functions and stating a figure in each individual space. This number indicates the number of beds it is possible to install in the space by placing them along the walls. The bed is the only computable fact and the only tangible information pro-vided about the future user. (Source National Archives and the regional state archives of Sweden).[62]

person's panorama of medical conditions differs from younger people (Akner, 2004). Cardio-vascular conditions may cause dizziness and balance problems that pose demands on architecture in order to be perceived as supportive for the ageing person (Rahm_Hallberg & Hellström, 2001). Still, as an effect of the ageing process, not primarily depending on age-related problems but rather on the individual older person's increased load of professional commitments and personal obligations, the physical access to these places becomes restrained. To compensate for this loss, the imagination assumes an important role of reliving past places and earlier selves (A. E. Smith, 2009, p184).[63] This is a prerequisite for a comfortable ageing in place, to grow old in a familiar environment and a built space appropriated many years previously (Hurtig et al., 1981; Malmberg & Henning, 2002).

This is explored in healthcare science. Brain degenerative diseases due to the human ageing process may induce visuo-spatial problems that trouble the individual experience of this architectural space (Ingvar, 2001; Kolb & Whishaw, 2002). This is explored in medicine. The person-environment fit in terms of accessibility and usability is explored in occupational therapy (Haak, 2006; K. Johansson, 2008). The milieu that emerges from the interaction between older people and their disabilities, members of staff that provide care and caring to these persons, and the architecture that acts as a physical framework is explored in the social sciences (Falk, Wijk, & Persson, 2008; Melin Emilsson, 1998; Nord, 2010). In order to become a design criterion and a valid parameter or architectural planning, the age factor requires the visualization of patterns of possible human spatial behaviour.

The Ageing Person's Location in Levels of Accessibility and Usability

This study argues that architecture is mainly active on three levels of the possible use of the keywords accessibility and usability: At the macro level, architecture can be understood as comprehensive physical planning on an international, national and regional level; a built environment seen from a bird's eye. The meso level suggests detailed physical planning that pertains to the regional and local realization of architecture and landscape architecture. On this level, the implication of the tandem pertains to the interaction between various built environments that can be identified.

Finally, the micro level suggests architecture, interior decorating and landscape architecture on a local and individual level regarding the use of space. On this level, the human interactions with the built environment are visible. A fundamental difference emerges from the above illustration of the four levels where accessibility and usability are active; see Table 6: The fields of research that include healthcare science, medicine, and occupational science are located mainly on the micro and nano levels of accessibility and usability, while social science includes the micro, meso and macro levels. This suggests a research interest that is centred on the older person and his or her competences that are conditioned by the ageing process. It expands from the individual level to the collective one.

Legend:
1. entrance hall
2. delivery
3a. garbage room
3b. equipments
4. elevator
5. lounge
6. kitchen
7. dining space
8. therapy space
9. oriel space
10. glazed corridor end
11. laundry room
12. storage room
13. cleaning utensils
14. WC
15. terrace

Single apartments (double scale)

SCU-1

SCU-2

Ground floor

Legend:
1. entrance hall
2. nurse office
3a. manager office
3b. clerk office
3c. occupational therapist office
4. elevator
5. lounge
6. kitchen
7. dining space
8. therapy space
9. oriel space
10. glazed corridor end
11. laundry room
12. storage room
13. cleaning utensils
14. WC
15. balcony

Connected apartments for pair (double space)

SCU-1

NSCU-2

First floor

Ros-Andersgården Care Home

Original drawing © Anova Arkitekter AB, Stockholm

Drawing 8. Ex post evaluation of the residential care home Ros-Anders, Tungelsta, Sweden. This home is presented as an exemplary model of residential care home architecture (Regnier, 2002). The particular features that are part of this exemplary quality are the central location of the kitchen, the meandering corridor and the number of places available in the floor plan intended to promote movements and sojourns (Ibid.). The individual flats are carefully designed although they represent a design that has become conventional in this type of housing, approximately 30 square-meters and intended for a single user. The possibility for a couple to reside there must be considered inadequate since the only real possibility would entail opening up the wall between two flats.[64]

On the other hand, architecture and human geography are mainly active on the micro, meso and macro levels. These fields encompass the older person's individual spatial use as well as a group of older people on a macro and a meso level. The behaviors of these older persons, in terms of movements and sojourns, form collective and private spatialities. This suggests that the research interest necessitates a degree of generalization. It is oriented towards the imprint on space that the older dependent person as an individual or a group creates, and on the architectural design for creating this protective spatiality with its necessary technical components.

The fundamental difference between the different fields of research lies in the approach towards the older person, and in the chronological stance in relation to the built environment. Architecture and human geography assume an ex ante and an ex post position in relation to the built environment, whereas healthcare science, medicine, and occupational science reside in the ex ante position that allows for establishing facts on what is discernable; see Drawing 7 and 8. Social science seems to assume both situa-

tions given its flexible stance from macro to nano level. The different position of the older person vis-à-vis the built environment creates a platform that may link architecture with human geography and social science as well as healthcare science, medicine and occupational science.

Architecture and the Ageing Process

One way of visualizing age in architecture, is to contemplate the ecological model of ageing that has been formulated in environmental psychology (M. P. Lawton & Nahemow, 1973). This theory supplies a line of thinking when it comes to understanding the supportiveness of an envisioned architecture for older frail people (Wallenius, 1999). The theory suggests that human behaviour can be seen as a variable of environmental pressure and personal competences (M. P. Lawton & Nahemow, 1973). According to the theory's inherent principle of docility—the greater the personal competence, in terms of cognitive and functional competence, the lesser the influence of environmental pressure, and, in consistency with this, the lesser the personal competence, due to cognitive and functional disabilities, the greater the impact of environmental pressure—the human adjustment process is affected by the surrounding environment (T. Svensson, 1996). This might lead to maladaptive behaviours that result in negative stress for the individual; see Figure 7. Thus, the theory suggests that architects should conceive space in harmony with its users' competences; create architecture as a space that includes everyone regardless of age or frailty.

Given the range of possible human interactions, the theory highlights the dilemma in architecture, the need for generalizable facts that are applicable to a large number of people. In architecture, the built environments are an ecological milieu that is designed to meet generally established requirements in terms of welfare goals. This definition applies to human geography and social sciences too, but for the remaining three fields of research architecture can also be understood as the ecological and psychological milieu that is active on an individualized level. In this context, the understanding of the perceived supportiveness of the built space is subject to a personal appropriation process conditioned by the personal panorama of cognitive or functional disabilities (Canter, 1991; Wallenius, 1999).

The Intra-Human Approach to Built Environments

The identified approaches towards the older person and the built environment constitute a fundamental difference between the six identified fields of research. From the intra-human perspective, the older person constitutes a subject that allows for measuring and monitoring, a quantifiable object. On the nano level, the individual panorama of cognitive or functional disabilities originates from one or several medical diagnoses. When the modern medicine started to evolve during the 19th century, the clinical observations of patients with a specific medical condition were first noted, and, in some cases the patients' subsequent movements and spatial patterns that appeared as a consequence such as Parkinson's disease (Kolb & Whishaw, 2002, p. 156).[65] However, the ancient miasmatic theory, the belief that bad air was the reason for the spread of conta-
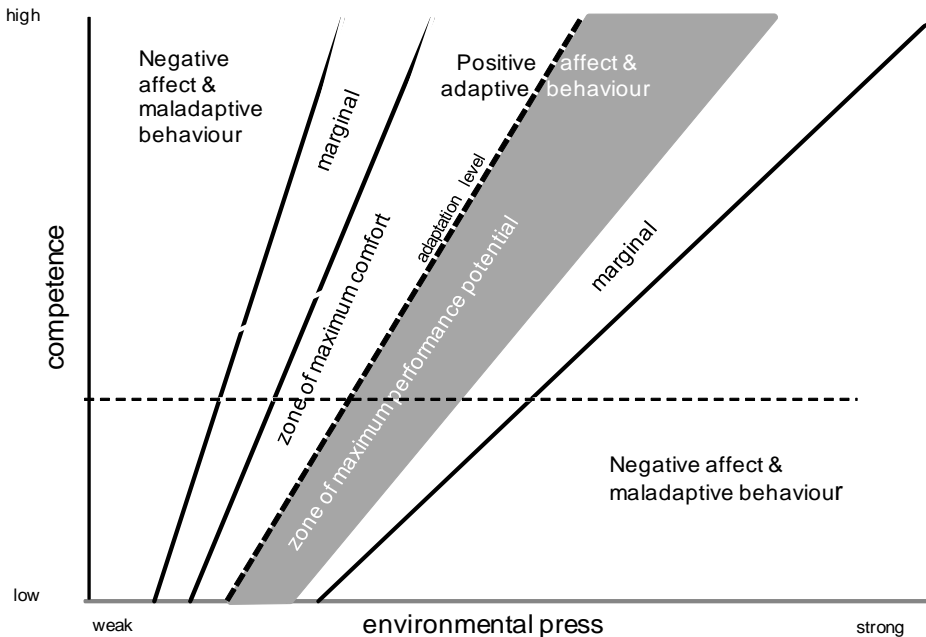
Figure 7. The ecological model of ageing suggests the possible difficulties that might appear in architectural space due to its spatial configuration and design (Illustration by author after original (M. P. Lawton & Nahemow, 1973).[66]

gious diseases like cholera, dominated medical thinking, and the opposing idea of a spread by touch, that is bacteriology and virology, was still in their initial stage (Åman, 1976).

  Florence Nightingale's revolutionary theories regarding good care and nursing con-verged with the medical paradigm in the sense that both virulently were opposed the germ theory. This lead to the belief of the existence of sick buildings: and there existed a general fear of being treated for an illness or undergo surgery at a hospital (Adams, 1996). In collaboration with architects and engineers, the medical profession advocated sanitary improvements, while Nightingale put forward good hygiene and nutrition (Ad-ams, 1996; Nightingale, 1859). They both agreed upon the necessity of good air and ventilation. Specific types of hospital buildings started to evolve in Central Europe like the pavilion hospital with large and spacious wards with plenty of air and ventilation (Birch-Lindgren, 1934). However, in Sweden this principle was never realized rigidly due to financial reasons and to the fact that Swedish hospitals built prior to the 20th century was of a small size (Bedoire, 1974). In the beginning of the 20th century, the occupa-tional and physical therapy professions[67] started developing with the aim of improving living conditions for the group of people with various functional disabilities who were

gathered under the collective term of the then used term invalids. Equipments and tools were designed and developed for this group, and the assistive technology emerged. After the First World War, the professions were established in helping the multitude of young men who suffered from severe war wounds or traumas.

In 2001, the totality of the one hundred and ninety-one member states in the World Health Organization (WHO) endorsed a new international instrument for describing and measuring health and disability at both individual and population levels, the International Classification of Functioning, Disability and Health (ICF) (WHO, 2001b). The ICF instrument is based on a combined medico-social model of health that promotes a view that the degree of perceived disability is an outcome of health conditions (disease, disorder and injury) and contextual factors (environmental and personal factors) (WHO, 2001b). According to this model, appropriate architectural space is one of the environmental factors; see Figure 8. By use of the ICF instrument and other similar classification systems on human cognitive and functional capacities[68], various scales and instruments for measuring accessibility, usability and life conditions have been developed independently or jointly by researcher in medicine, nursing science, and occupational therapy. Closely affiliated with natural science, these fields of research use predominantly quantitative research methods with control groups and statistical processing of research data. Qualitative research data are used to substantiate these findings.
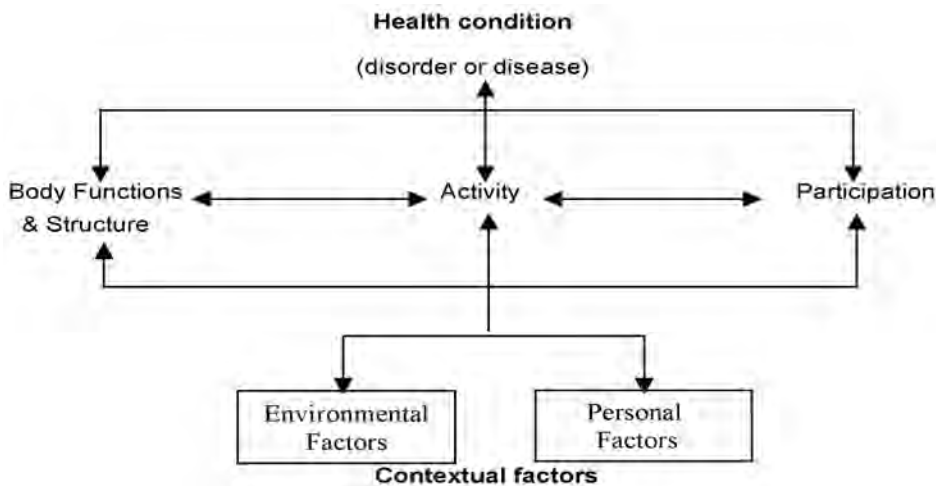
Figure 8. The ICF bio psychosocial model that was ratified by all member states of the WHO. This model supplies an overview of the perceived relationship between human interactions, built environments, medical conditions and participation in everyday living. (Source (WHO, 2001b).

Architecture and Environmental Psychology

In human geography and social science the built environment becomes a source of knowledge about the use of spatiality by various social groups (Lefebvre, 1985). It is the individual emotional response to a certain environmental stimuli that comes of interest. It is a question of the psychological effect on the human being made by the architectural space that constitutes a place-identity process and a socialization of the self (Bachelard, 1957; Buttimer, 1980; Proshansky, Fabian, & Kaminoff, 1983; Proshansky, Ittelsson, & Rivlin, 1970). It is a case of place psychology, here termed architectural psychology[69] that describes the human response, conditioned by individual resources, social climate, occupational or recreational activities, to the physical environment.

This response may result in a mental state of arousal or fatigue (Janssens & Laike, 2006). The two subsystems of the autonomic nervous system (ANS) are involved in this response, the parasympathetic nervous system promotes "a rest and digest" condition, whereas the sympathetic nervous system activates "a fight or flight" response" (Ingvar, 2001; Kolb & Whishaw, 2002). According to environmental psychology, there are continuous variations in the environmental pressures on human being. The individual process aims at establishing a balance in this variation (Janssens & Laike, 2006; Küller, 1991; Ratiu, 1997; Toyama, 1988); see Figure 9.

During the 1970s, substantial research was undertaken in architecture among older people who experienced good health and remained in the ordinary stock of housing or in housing with home care services and other services. It was concluded that the relationship between older people and the accustomed habitat was an important factor for successful ageing in place (Hurtig et al., 1981), a conclusion that research in human geography (Rowles, 1993, 2000), and occupational therapy have corroborated (Haak, Dahlin-Ivanoff, Fänge, Sixsmith, & Iwarsson, 2007; Malmberg & Henning, 2002)

Extra-Human versus Intra-Human Environmental Assessments

The fields of research with an intra-human approach to the question of appropriate architecture for older people have also developed protocols for evaluating the ordinary stock of housing and the environment that is found in residential care homes. This is the case of the Housing Enabler instrument (Iwarsson & Slaug, 2001) that identifies accessibility and usability issues and correlates these with the most frequent panoramas of cognitive and functional disorders. The particular built environment that the residential care home and similar buildings constitute can be evaluated by other environmental instruments, like the TESS-NH instrument (Sloane et al., 2002).

This instrument focuses on the provision of four items: safety, security and health; orientation and cueing; privacy control versus autonomy, and a global assessment of the social milieu that the residential care home creates. In the Nordic context, an early version of the TESS-NH instrument has been tested with an inconsistent result: The initial version proved to be a blunt instrument: although it could be easily used by various experts, the downside was that the instrument promoted a spatial solution with a central corridor surrounded by flats (J. E. Andersson, 2005b; Åhnlund & Ohara, 1997).
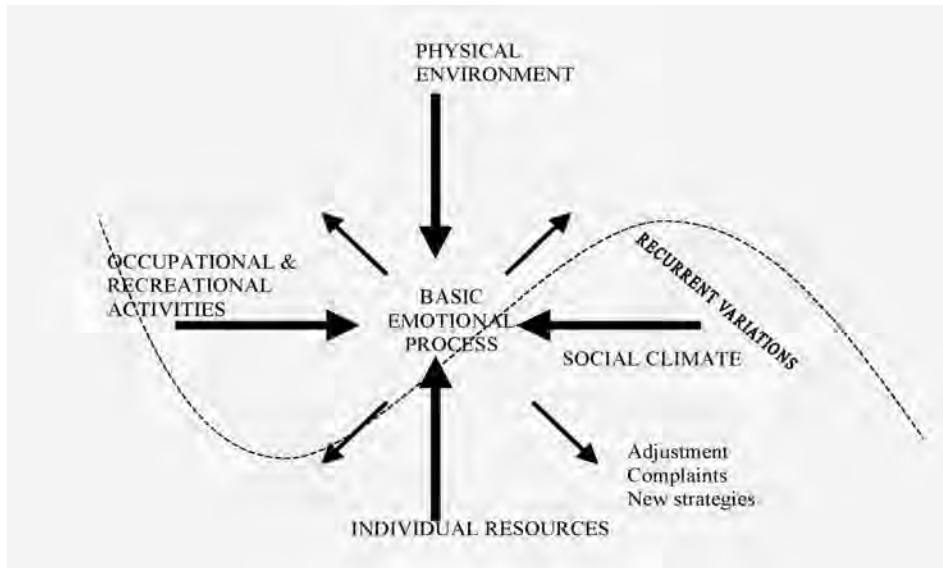
Figure 9. The environmental psychological model of human interactions with built environment (Küller, 1991). There is continuous fluctuation in the environmental pressure on the human being. The individual process aims at establishing a balance in this variation.

Other instruments measures living conditions, like the life quality instrument WHO-QoL that evaluates older people's sensations of wellbeing and health in general (Murphy, Herman, Hawthorne, Pinzone, & Evert, 2000), whereas quality of life for residents with long-term medical conditions , and for those who live in care home facilities can be assessed by instruments like QUALID (Falk, 2010; Weiner et al., 2000). It can be said that the common denominator of these evaluations is the aim of supplying an answer to the question: What does the architecture look like, how can it be measured and compared in order to improve the built space for older people?

However, in the context of the architecture, this question has to be reformulated into a design issue: What does residential care home architecture look like, what are the spatial requirements and what can be learnt from existing environments in order to conceive appropriate architecture for frail older people? The most illustrative exponents of this attempt to answer the design issue of improving built environment for frail older people are the architecture monographs. These monographs use exemplary models of architecture in order to enlighten a particular design issue. The model cases, drawings and photographs accompanied by an explicative text highlight issues vital for the design process of new architecture for frail older people. In the context of housing for frail older people, several monographs exist that supply guidance for the conception of a new appropriate architecture (Dehan, 1997, 2007; Huber, 2008; Regnier, 2002; Utton, 2006).

This guidance can be transcribed into pieces of advice, or guidelines, of varying numbers and approaches: either with a focus on the relationship between the human being and space (Regnier, 2002), or with a focus on the interest in the available spatial prototypes (Dehan, 2007). This question is the propulsive force of architecture magazines that dedicate special editions to the matter of appropriate housing for frail older people (Arkitektur_DK, 1999), and the reason why architectural research using multiple research methods defines the constituents of this type of special housing (K. Möller & Knudstrup, 2008a, 2008b).

Intermediary Forms of Environmental Assessment Protocol

The TESS-NH instrument is the most used instrument in the USA (Norris-Baker, Weisman, Lawton, Sloane, & Kaup, 1999), but other instruments such as the following exist: Multiphasic Environmental Assessment Procedure (MEAP); Satisfaction Assessment Questionnaire for Assisted Living Residents (SAQ); Elderly Resident Housing Assessment Programme (ERHAP); LivAbility). Some instruments such as the Professional Environmental Assessment Protocol (PEAP); Nursing Unit Rating Scale (NURS) and The Environment-Behavior Model (E-B Model) (Cutler, 2000), focus entirely on environments for older people with dementia.

These protocols are examples of post-occupancy evaluations that evaluate environmental features in the architectural space as well as the perceived level of privacy, control and opportunities for social contact. When doing these evaluations, the evaluator positions him-/ herself in the situation of being an older resident with frailties. In the architecture profession, post-occupancy evaluations (POE) are performed in order to evaluate the built environment's performative capacities[70] delimited to the given design task (Preiser, 1988).

The main object for these evaluations is residential architecture that in a systematic and rigorous manner is evaluated after completion (Preiser, 1988). It is an ex post situation where the virtual user of the environment is not present other than in the form of characteristics that belong to a certain target group of residents envisioned for the architecture, or in the form of a medical diagnosis. In the POE evaluations, the building experts, namely the architects, building contractors, commissioners, constructional engineers, and property developers convene. It is a qualitative assessment based on the comparison between spatial requirements defined in the early design process and personal notes taken by the building experts during a walk-through evaluation.

In some cases, the user groups have also been included in these evaluations (de Laval, 1997). In the Nordic countries, adaptations of the POE method have been further developed so as to include the residents, and have been used in various residential environments (Ambrose, 1990; de Laval, 1997; Hurtig et al., 1981). In the Nordic adaptation, the walk-through evaluation is included in an eight-step preparation process that stretches from the organization, over the collection of data and into the finalization of a report. The walk-through evaluation is used both in the evaluation of environments that are part of the ordinary stock of housing and in residential care facilities.

The POE method has also been developed into a special protocol for the assessment of care environments for older people, the Evaluation of Older People's Living Environments (EVOLVE) instrument (Lewis et al., 2010). This instrument can be used by both building experts and other specialists within the fields of medicine, nursing science and occupational therapy. It applies a holistic view to the physical environment in a residential care home. However, it has to be emphasized that the continuous evaluation of realized built environment in terms of 'why' is a traditional and vital element of the training to become an architect. This assessment process of appropriate and inappropriate architecture is an integral part of the profession, and constitutes a form of architecture criticism that can be used at any stage of the design process (Rönn, 2003, 2007; Rönn et al., 2010). This is an ex ante position of the evaluation of built environments; see Drawing 7. Moreover, attempts have been made to integrate the ICF instrument with guidelines for with guidelines for the built environment by using a model for integrated building design. However, this harmonization work has not yet provided an overview (Hoof, Kort, Duijnstee, Rutten, & Hensen, 2010).[71]

Architecture, Accessibility and Usability on the Nano Level

In this context, the nano level refers to the most direct level of accessibility and usability that is part of a person's sensory interaction with the architectural space, and in the case of severe cognitive or functional disabilities, also an emotional interaction with a caregiver or an assistant nurse or other medical professional. At this level, the needs of the tandem items are tangible, since an appropriative and adjustive process is continuously going on with the aim of turning the architectural space into a personal place, a home with deep emotional connections (Lefebvre, 1985; Milligan, 2009; Rowles, 1993). The users initiates an appropriative process that is similar to that of the architecture experts—house designers, interior designers, landscape architects and physical planner—and that may lead to interior changes in the spatial layout, and subsequent interior decorating inside the architectural space of the habitat. This process may also involve the immediate exterior architectural space performed as landscaping and gardening.

A subconscious impact from photographs of exterior or interior architectural spaces found in design magazines or television may influence this individualized adjustment. In the case of an application of state grants for further home adjustment due to disabilities, architects are not primarily involved. Cognitive and functional disabilities activate a dimension in architecture that adheres to a situation when the built environment has become fully appropriated by the users (Lefebvre, 1985). The nano level is the essence of the private space. Following table 6, this spatiality belongs entirely to care and the caring professions; assistant nurses, doctors, nurses, occupational therapists and physiotherapists are the experts on this level of appropriate space for ageing.

This thesis suggests that this nano level of the implication of accessibility and usability refers to an individualization of space that is beyond the scope of architects' professional work. The nano level is present in the architects' handmade illustrations and sketches from the space that is about to be realized. Still, this level pertains to an appropriation process that can be described as an animation of space. In the animation process the architects, i.e. house, interior and landscape architects, have left space, but

left a framework that will be a backdrop to the continued everyday life. In the environmental psychological approach, there exists a notion of the private sphere versus collec-collective or public space. On the nano level, the care professionals become the experts on the relationship between human and architectural space, since this interaction is conditioned by long-term medical conditions (LTC). In a design process of a new residential care home, they often assume the role of representative of the older persons.

Views on Architectural Space among Planners and Users

Studies have shown that residents prioritize space for privacy, while both care representatives and architects focus on communal space for social interaction (Duffy, Baily, Beck, & Barker, 1986). Therefore, the residential care home architecture needs to be designed with aspects of private and public space in order to animate the interior space (Barnes & et_al., 2002; K. Möller & Knudstrup, 2008a). This circumstance does not imply that this level can be omitted by the architecture profession, but rather that this level of human interaction with the built space has to be further elaborated in the technical documentation that precedes the realization of appropriate architecture from the frail older people.

This can be done by integrating findings from the healthcare science, medicine and occupational science. Nursing research into colour discrimination and preferences among older people with dementia has shown that colours can be used in the interior setting in order to strength orientation and way-finding in the communally shared space (D. Smith, 2008; Wijk, 2001). A survey of buildings built after the reform in 1992 and to be used as housing for older frail people, or group living for adults with various cognitive and physical disorders concludes that the feedback from the actual users of the built environment is of importance for fostering the potential of future architecture with the same intent to evolve in a more performative and user-friendly direction (Almberg, 1997). Such a feedback necessitates the involvement of the residents, their individual panoramas of cognitive and functional deficiencies as well as members of staff in a dialogue with the original conceivers of the realized architectural design, the architects and care professionals at an administration level in order to improve future designs of similar types (Almberg, 1997).

These findings suggest that the individual experience of the interior setting for a communally shared space may influence personal well-being, and have a therapeutic effect (Day, Carreon, & Stump, 20(Day et al., 2000; Rioux, 2003). Interviews with older persons who have primarily somatic problems, and who live in accommodations for the frail elderly, indicate that this category of residents will tend to compare the interior setting in communally shared space with earlier experiences of their home environments (J. E. Andersson, 2005b). On the other hand, older people with dementia will tend to perceive the interior setting as part of a work environment, reminding them of workplaces of their past (J. E. Andersson, 2005b).

The Humonculus as an Architectural Concept

The human body has been used as a structural element in architecture in order to enhance the spatial experience of height or weight.[72] In Western art, ageing is expressed

by over-exaggerating the visible and negative results of ageing, bulging veins and heavy wrinkles, and by positioning the older person in an isolated situation, either to express destitution or the august position of wisdom (Bloch, 2008). In the architectural ambition of conceiving architecture that will be perceived as appropriate for residential care home, the instrumentalism of the complex human inter-action with the architectural space can be done by using a neuro-scientific image, the homunculus thesis (HT) (Ingvar, 2001; Kolb & Whishaw, 2002; Tibbetts, 1995). [73]

  Although the homunculus is not a particular representation of age, it is the neurological representation of how a large proportion of the cortex in the human brain is involved in the control of muscular and sensory organs. It is not the eight-head high human body of ancient Greece or Rome, it is a body with an oversized head, a very large mouth and tongue, big eyes, ears and nose, not to mention the even larger hands, and the body that is supported by small weak feet; see Figure 10. This disproportion-ateness makes visible the complexity of the human body and its intrinsic relation to the surrounding environment, raw nature or humanly adjusted built space. The homunculus graphically suggests the role of the human brain in this intrinsic interaction between the human body and the environment (Kolb & Whishaw, 2002).
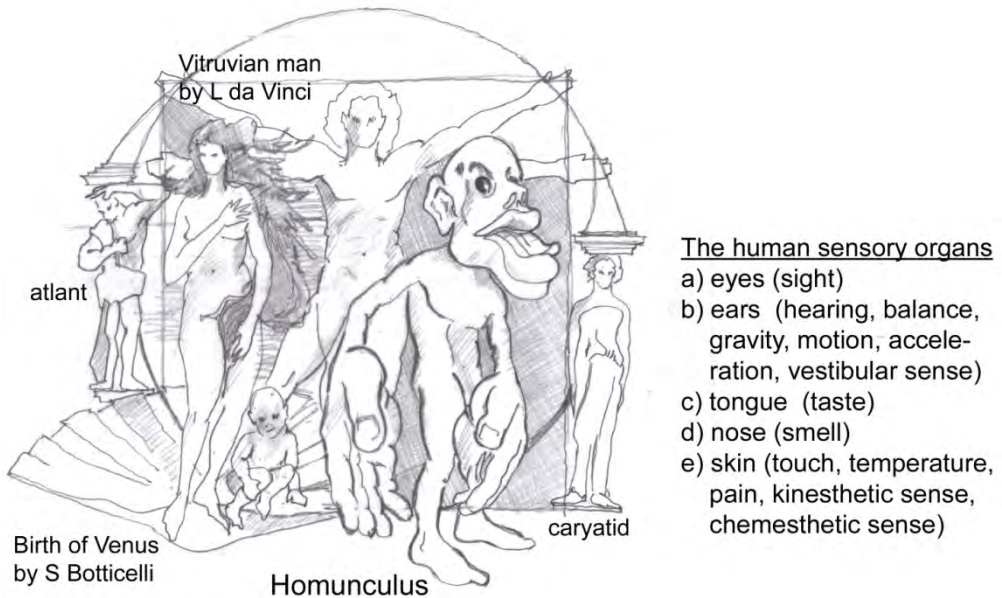
Figure 10. The human body has been used as a structural element in architecture in order to emphasize height—a woman figure, a caryatid, as a pillar to a horizontal beam—or weight, a male figure, an atlant, that supports a heavy load like Atlas carrying the sky on his shoulders. The focus has been on the perfect female or male body, like Venus or the Vitruvian man.

However, the thesis only focuses on computable and logical aspects in the construction of the human body; the intellectual one is left a side. Therefore, in the following reasoning the homunculus thesis is used to demonstrate the ageing process of the human sensory organs, and to suggest the subsequent consequences on the cognitive and intellectual capacity of the ageing person. In comparison with the smaller feet for balance and position, the size of the hands suggests the importance of the hands as instrumental tools for accomplishing various tasks, and not least for bringing nourishment to the mouth. The oversized tongue physically displays the sensory organ of taste that is important for separating fresh from tainted food. The gustatory sense is a chemical sense that is able to perceive a range of basic tastes: sweetness, bitterness, sourness, saltiness, and umami. The other chemical sense is the olfactory sense, or the sense of smell, that is located to the nose. The ability to smell triggers the appetite and detects noxious odours. The sense of smell and taste are connected with the chemesthetic sense that causes nausea and pungent sensations in the body as a reflex to remove the cause of this sensation.

The mouth ends in the throat that distributes the food to the stomach for further processing. The ear also has a connection to the throat by the Eustachian tube that regulates air pressure in this sensory organ. The outer ear picks up noises and sounds and transfers them via a canal to the middle ear that converts the air-induced mechanical movement to neurological signals in the inner ear. Besides hearing, the inner ear is implicated in the detection of the body position, acceleration, balance, gravity and motion (the vestibular sense) (Berthoz, 1997). The skin is the largest human organ that by two primary layers provides an insulating barrier against heat, water and microorganisms that might infect the body. Through the skin, sensations of touch, temperature, and pain are transmitted to the brain by nerve impulses. The kinaesthetic sense is implicated in the detection of the relative positions of body members.

Finally, there is sight that is the most important sense for experiencing architecture. Incoming light in the eye activates receptors in the retina at the back of the eye bulb. These photoreceptors are of three types, the rods are sensitive to brightness but not colours while the cones distinguish colours. The third type of photoreceptors is much less abundant and is involved in the detection of bright daylight and the body's preparation for the diurnal cycle (Hoof et al., 2010; Kolb & Whishaw, 2002; Torrington & Tregenza, 2007). What is not visible in the illustration of the homunculus is the central role of the brain in processing the received information from the sensory organs. The sensory organs communicate with the brain via electrical impulses. The nucleus of the nerve cell picks up information in the sensory organ by a network of dendrites. From the nucleus, this information is transferred by fine cable-like axons to the spinal cord. The spinal cord extends to the centrally located parts of the brain.

By now, the information from the sensory organs has become part of an activation of the central nervous system. The spinal cord enters the brain through the brain stem. Information regarding movements and motion are processed in the cerebellum, whereas the central fundaments of the cerebral hemispheres (hypothalamus, thalamus, bridge, midbrain and the lower brainstem) regulate vital body functions through chemical substances, hormones, released as a response to the neurological information by the

endocrine system. The human brain has a comparatively large hemisphere that allows for complex information processes. This reaction is transferred back to the sensory organs and other organs in the body by the peripheral nervous system. This system contains two subsystems of which one is controlled by will and the other one by the autonomic nervous system (ANS) that promotes a rest and digest condition (parasympathetic nervous system) or a fight or flight response (sympathetic nervous system) (Kolb & Whishaw, 2002).

Table 2. The panorama of age-related deficiencies that might appear due to the ageing process as reported by 448 older persons residing with the ordinary stock of housing. (Illustration by author after original (Rahm_Hallberg, 2008; Rahm_Hallberg & Hellström, 2001).
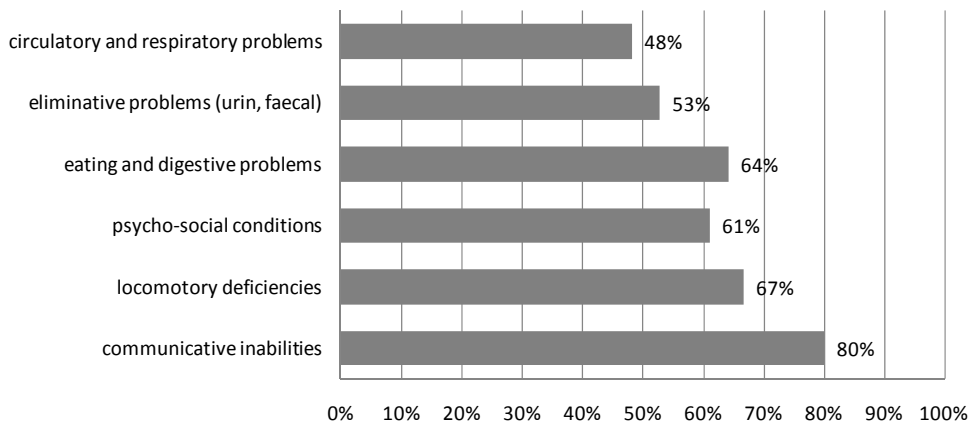
The Ageing of Human Sense

During life, these sensory organs become less performative which leads to deficiencies that can be corrected by assistive technology or by surgical operations. Already by the age of forty, the lens in the eye yellows that causes a decreased transmittance of light (Kolb & Whishaw, 2002; Torrington & Tregenza, 2007). Brighter light, possibly combined with glasses, is needed in order to be able to perform tasks similar to those one could perform at younger age without this assistance. In severe cases, the diurnal cycle is affected that induces a misbalance in the endocrine system. This might cause sleep disorders and subsequent health problems. After the age of sixty, the number of gustafactory and olfactory cells decrease and may induce weaker appetite and a changed nutrional status in the body. Furthermore, the protection against noxious odours and tainted food is also likely to decrease (Hoof et al., 2010).

The daylight and nutritional status make the skin age and become less flexible and smooth. The muscular force decreases and the joints stiffen. The audible range is affected by age as early as by the age of forty to exclude high and low-frequency pitches (Hoof et al., 2010; Kolb & Whishaw, 2002). These age-related changes may appear as a

single phenomenon or as a cluster of age-related problems, a case of comorbidity (Fratiglioni et al., 2010). Based on a sample of 448 older persons living in the ordinary stock of housing, such a panorama of age-related changes consist of six main deficiencies: communicative inabilities, locomotory deficiencies, psycho-social conditions, eating disorders, digestive and eliminative problems, and respiratory and circulatory disorders; see Table 2 (Akner, 2004; Rahm_Hallberg, 2008; Rahm_Hallberg & Hellström, 2001).

The Ageing Brain

Also, the human brain ages, although the performative capacity does not seem to diminish, only that the ageing brain requires more time to compute a cognitive process (Skolimowska, Wesierska, Lewandowska, Szymaszek, & Szelag, 2011). Still, if the brain is affected by disease or deterioration dementia occurs. The prevalence rate of dementia among older people aged 65 years and above is similar in Europe (6 %) and the USA (7 %). Approximately 50 percent of these cases relate to Alzheimer's disease that is a degenerative disease that affects the nerves' dendritiform network in the brain tissue. Vascular problems are another brain degenerative form with the same implication. The loss of dendrites makes the sufferer gradually lose cognitive functions that makes the direct response towards a sensory stimulation more acute.

Primal reactions of the central parts of the brain can no longer be moderated by cognition (Kolb & Whishaw, 2002). Dementia leads to visuo-spatial problems that involve sensitivity towards glare and reflections. The discrimination of colours, depth and surfaces becomes blurred (Falk et al., 2008; Wijk, 2001). The angle of the daylight and the interior colouring interact and may result in disagreeable nuances, especially a yellow space in a northern localisation such as the Scandinavian countries (Hårleman, 2007). The person who suffers from dementia becomes easily agitated and, combined with the ageing eye and a retinal deterioration, the diurnal rhythm is out of tune; anguish and worries may appear by the end of the day, the sundowners' syndrome (Hoof et al., 2010; Regnier, 2002; Torrington & Tregenza, 2007). The progression of brain degenerative disease makes the older person gradually lose all sensory abilities, in a characteristical four stage process, and increasing dependence to personal assistance by a caregiver or care staff. Studies on older people's patterns of movements and sojourns confirms this dependency (Nord, 2010).

Theories on Ageing

The evolution of the welfare society has resulted in a prolonged life span and the creation of a societal support for frail people that includes care and caring. Since mainly healthy years have been added to the life span, theories on ageing have been formulated. The notion of the third age emerged and special universities for the study of this period in life were founded (Laslett, 1989).[74] Modern life was considered to have four stages: the initial one concerned childhood and adolescence with dependence, education and socialization; the second one was adult life with independence, responsibilities and mature life; the third stage in life appeared after retirement age, normally after 65 years, and meant fulfilment of personal dreams and goals; and, finally, the fourth stage in life

around 85 years when a new period of dependency appeared due to age-related frailties (Laslett, 1989).

Ageing is also related to ideas of promoting personal health by appropriate nutrition, outdoor life and social networks (Berléen, 2003; Rydwik, 2007). As such, ageing has become a part of socio-political goals to fulfil in the modern welfare society. In order to include the physical ageing process of the human body and its existential implications, philosophers, psychologists and social scientists have formulated theories that suggest that ageing does not only imply a prolonged life but also another existential dimension. This dimension implies a mental process of maturing into an older person with a broader view on life. Ageing is connected with a higher degree of contemplation and life satisfaction (Tornstam, 2005; Wadensten, 2010). This reasoning is also reflected in the theory on approaches to living and existentially dramatic situations, the salutogenic model of living, in which the sense of coherence would explain the individual fit with environmental pressure (Antonovsky, 1991; Langius & Lind, 1995).

These theories apply to the type of ageing that mainly implies functional disorders. In the context of a brain degenerative disease, the illogical behaviours make the sick person to become associated with the diagnosis.[75] In this case, the Freudian psychoanalytic idea of the mental censor and excitement gives a possible explanation to the illogical behaviours: It should be interpreted as the older person's attempt to release inner worries induced by the disease. The older person is aware of the progressive decomposition of his/ her intellectual ability that in the first stage attacks cognition and in the second turn strikes against perception. In order to uphold his or her personality, the older person needs affirmation from others so as to maintain the constituents of his or her individuality (Herfray, 2009; Le_Gouès, 2006; Melin Emilsson, 1998). The deterioration of the brain tissue makes the matrix of emotions and experiences acquired through life to falter and finally collapse.

Theories on Care, Caring and Nursing

Florence Nightingale did not only create a nursing procedure with the ultimate aim of regaining full health, she also influenced the architectural space that surrounded this work (Nightingale, 1859). With the creation of nursing homes and old people's homes the nursing profession left the boundaries of the medical environment and entered the realm of daily care and caring work of the welfare society. Both geriatrics (1909) and gerontology (1946) were created as disciplines during the 21st century.[76] Spatial changes concerning the eldercare setting have proceeded changes in the execution of the care and caring work (Selander, 2001). Despite this spatial pressure to reform old routines in healthcare organisations, these structures remain largely unchanged which leads to dissimilar understandings of care and caring among older persons, staff and managing administrators. A professional-oriented perspective dominates over a holistic approach to understand the older person's needs of care, caring and social interaction (Henriksen, 2003b). The understanding of eldercare varies among the politicians who supply the financial means to the care activity and the care planners who implement the daily realization of eldercare. As a consequence, overarching goals are lacking and the organization is complex (Henriksen, 2003a). It is generally assumed in the forecasts for

the imminent ageing society that the future generation of older people will be less prone to accept a standardized level of care and caring that society defines than previous generations of older people (Whitaker, 2007).

The general policy in eldercare is to promote and strengthen the older people's rights in the residential care home but the dynamics between the care staff and older persons create a policy-practice gap. In this void, the routines of the care work promotes a trivialization in the understanding of the older people's opinions and wishes that make the care out of tune with the actual implications of what the older person or his or her relatives have expressed (Harnett, 2010). In order to get by this dilemma, the current trend is to instruct the care staff to pay more attention to their use of a respectful manner in their interaction with the frail older residents (CDEC, 2008). In some cases, ethical values for eldercare have been aligned with architectural intentions. In the Swedish context, this has often involved anthroposophical values or a closeness to local culture and traditions (Husberg & Ovesen, 2007; Jeppsson Grassman, 1997). With this approach, architecture emphasizes aesthetical and emotional values in the built environment, by way of an access to sensorial stimulations such as being outdoors or having a massage, or being in hot water.

Summary

This thesis states that architecture is mainly active on a macro, meso and micro level of space. These levels of space find their corresponding homologue in the architectural terms of physical planning, detailed planning and architectural and landscaped design. Still, the common denominator of these varieties in architecture is the absence of a clearly identified user. Instead, it is a collectivity that has been employed with standardized patterns of spatial behaviours and usages. In this context, age and ageing is of little relevance other than in the general division of space intended for children and the one designed to be used by adults. Rather, the ageing process is included in the tandem concept of accessibility and usability. These key words allow for an expansion of architecture into the neighbouring fields of research since the implications then turn from the faceless users and penetrate to the realm of the individual. In this context, ageing and age-related problems are the fundamental parameters for any change in the built environment in order to guarantee an accessible and useable environment for all.

This chapter has supplied a theoretical framework that aimed at linking the field of research that architecture constitutes with neighbouring trans-disciplinary fields of research. These can be found in healthcare science (care sciences, nursing science); human geography (cultural/ gerontogical/ health geography), medicine (anatomy, geriatrics, neuro-science), occupational science (occupational therapy, physio-therapy), and social science (psychology, sociology, social work). During the research project these fields of research have been identified as relevant for architecture, since they generate knowledge that can be integrated in architectural thinking and the practice of architecture. However, this framework can also be described as platform over a fundamental gap that exists between the identified fields of research. This gap is created by the focus on the human being in the interactive process with architecture and built environments. The extra-human approach with a focus on comprehensive solutions faces an intra-human

perspective that uses detailed knowledge about the individual as programming tools to define spatial adjustments.

Although the six fields of research are converging, there is a communal necessity of creating cohesion by formulating a theory about human interactions with the architecture and the built environments. In this context, phenomenology supplies a model for reasoning about space. Space is perceived through the human sensory organs. This creates two types of information about the environment, a perceived space and a lived space. The former is a sensory image while the latter is a cognitive model of space in terms of like and dislike. Adding the ageing process of the human body's sensory organs, this phenomenological approach induces a deepened understanding of how ageing and age-related problems affect the human relationship with architecture.

Research Project
Rationale, Methods, Analysis

The underlying notions about the appropriate space for ageing with frailties constitute a cultural and social capital that influences the realization of architectural space and the resulting built environment. The main aim of this study has been to understand how constituting parts of this general idea of an ideal homelike and residence-like architecture for frail older people have been realized as a built environment. This aim has been employed in a contemporaneous, retrospective and a future-oriented perspective. The purpose has been is to expand knowledge about older people's interactions, conditioned by age-related issues, with the built environment in order to renew architecture for frail older people. This chapter will present the research project and the fundaments for the research undertaken.

Rationale

Architecture is programmed by general welfare goals that are defined on a political level. These are implemented through legislation, and detailed further in interpretative recommendations or guidelines for the built environment. Then, the welfare goals are put into practice by architects and other professions who are active in the programming phase of a new building. The societal aim is that the individual habitat in any shape shall constitute *an appropriate space for living and any activity in everyday life that is associated with it.*[77] In contemporary building legislation, accessibility and usability are key concepts for the design of modern architecture and the adjustment of the existing one to personal panoramas of cognitive or functional disorders.[78]In the case of housing for both frail older people, it is assumed that a proportion of the individual space necessary for cooking, eating and socializing can be transferred to a communal space with the same purposes.[79]

The national guidelines promote the idea of a homelike and residential-like environment as the ideal milieu for frail older people since the beginning of the 20th century (NBSW, 1983, 2011a; E. Svensson, 2008). This environment is recommended to have a spatial layout that facilitates for the older person to find his or her way in this space. The spatial configuration creates a spatiality that supplies an overlook of the communally shared space (E. Svensson, 2008). The guidelines are open for a case-to-case based interpretation and an individual implementation in a new building project. The emphasis on the home as the ideal environment is based on cultural, ethical and political values

that are supported by experience-based and empirical research findings (Bergh, 1996; Day et al., 2000; NBSW, 1983).

In the architectural discussion, ageing is perceived as an integral process of being; it is a prerequisite for living since ageing means a continuous training of skills and the integration of this new knowledge in order to refine personal competences close to perfection (Messy, 1992). Therefore, the phenomenological approach for understanding the empirical findings in the present thesis is paired with a transactional worldview. This view promotes a causal relation between human behaviour, culture, social traditions and architecture, and in consequence there is not fixed relation between a certain environmental input and a special type of human behaviour (Altman & Rogoff, 1987). In analogy with architecture, if any of these parameters varies, then there will be new human interactions with the built environment. However, ageing implies a stronger emotional connection to a building or a place, in some cases they become physical necessities for older people (Rowles, 1993)

This thesis assumes a phenomenological approach towards human interactions with the built environment. When practicing architecture, this leads to a conscientious stance by the individual architect to explain good and poor architectural quality in built environment for various human purposes. This is echoed in the professional code of the architects' associations (SAA, 2000). This constant evaluative process is an ongoing architectural criticism of the appropriateness of an individual design solution with the aim of creating even better architecture (Rönn, 2007). Nonetheless, it is important to emphasize that this phenomenological approach towards the built environment does not contain an inclination for normative architecture. Architecture is an outcome of its constituents, culture, building material, nature and topography (Norberg-Schulz, 1980). When any of these parameters change, the phenomenology of architecture becomes different.

Research Approach

The thesis expands from the assumption that architecture can be seen as the result of a design process. This stance is firmly rooted in design theory (Cross, 1984, 1993, 2011; Lundequist, 1995; Rowe, 1987). In order to pursue this line of thinking, this thesis has made the following assumptions about architecture and the creation of architectural space:

Firstly, architecture shall be understood in its broadest sense that encompasses the architectural design of the building, the interior setting, the landscape-planning of its immediate situation and the comprehensive physical planning that has determined the geographical location. Secondly, that the conception of architecture is the result of a creative process similar to the design of an artefact, a car or any man-made tool for permanent use. The fundamental purpose of any design is to generate a novel idea with a set of performance requirements, and to base this idea on the accumulated knowledge of established notions and values (March, 1984).

Thirdly, the realized architectural space is possible to understand as the result of an exchange of social beliefs, cultural traditions, experience-based findings, as well as cur-

rent trends in architectural and social behaviour (Bourdieu, 1972; Lefebvre, 1985). Moreover, in the case of architecture for the frail ageing, socio-political paradigms interfere with the realization of the architectural space (Esping-Andersen, 1990; Esping-Andersen & Korpi, 1986).

Delimitation

This research project focuses on frail older people's interactions with the type of architecture that the residential care home setting represents. This type of residence includes a 24 hour care and caring at the service of the older residents. This study is delimited to the type of architecture that the residential care home constitutes. This environment is intended to be used by dependent seniors. In this space, general welfare goals that are defined by socio-politics acquire a spatial gestalt. These intentions contain ethical values to be realized by the care and caring that is provided in the building. In addition, they supply spatial requirements that guide the conception of architecture. This type of architecture has many names, but in this context all of the possible denominations are gathered under the ceiling of residential care home.[80]

The underlying notions about the appropriate space for ageing with frailties constitute a cultural and social capital that influences the realization of architectural space and the resulting built environment (Bourdieu, 1972). In the creation of new architecture for the ageing generation, these notions subconsciously influence the repertoire of exemplary models and the choice of referential objects for the building process. The notions become latently active for the architecture profession, since they influence the set of primary generators that are shaped during the initial creative phase in architectural thinking (Darke, 1984).

Methodology

Case study methodology has been used in this research project (R. Johansson, 1997; Stake, 1995; Yin, 2003). Triangulation is central in case study methodology (R. Johansson, 2000; Patton, 2002; Stake, 1995; Yin, 2003). In this study, triangulation has been used both with regard to the number of cases that have been studied within each case study, and with reference to research strategies (Ibid.). A multiple case study design has been implemented. The number of cases has replaced the use of control or comparison groups of the quantitative research tradition (Yin, 1994).

By use of parallel cases, a pattern-matching process was begun (Alexander, Ishikawa, & Silverstein, 1977). In the case studies, mixed research strategies were used in order to address issues of generalizability, objectivity, reliability and validity (Groat & Wang, 2002; Guba & Lincoln, 1989; Maxwell, 1996; Onwuegbuzie & Johnson, 2008; Patton, 2002): There is a general consensus that various research methods add strength to qualitative studies (Creswell, Plano Clark, Gutmann, & Hanson, 2003). The studies began with the formulation of a set of research questions that contained a broad scope towards the phenomenon that was to be studied. The aim was to generate an extensive research material that allowed for a broad knowledge of the field of research as well as an in-depth understanding of the phenomena that were studied.

The chronology of the case studies undertaken during this research project demonstrates that this pursuit has not been linear, rather parallel on an instinctive level (Seamon, 1982; Yin, 2003). The reoccurring patterns that these three case studies purport to constitute the applicability of the conclusions that have been drawn in this study.

Research Objectives and Research Questions

The present study has four research objectives that have been implemented in three separate case studies. The objectives are:

Research objectives 1: To assess contemporary architecture intended for residential care home facilities for frail older people.

Research objective 2: To study the origins of guidelines for the design of Swedish residential care homes.

Research objective 3: To identify notions about the appropriate architectural space for future ageing among people who are not trained in architectural thinking.

Research objective 4: To implement various assessment methods that have been designed in order to evaluate architecture for frail older people.

The four research objectives have been reformulated as a sub-set of seven research questions that have been implemented in individual research papers. Consequently, the following seven research questions have emerged that are presented in the following matrix; see Figure 11. This matrix gives an overview of how the connection between the four research objectives; the research questions and the seven research papers of this study.

Case Studies

During the course of this research project, three case studies with different focuses have been realized; see Figure 12. This is an overview of the case studies realized within this research project and their correlation with research objective, research perspective, research papers and research methods.

The first case study took place in the municipality of Haninge during the period of 2003 to 2005. This study focused on the duality between architecture and planning requirements on the one hand, and user values in terms of a homelike environment and a work environment, on the other hand. This case study resulted in four research papers that were included in a intermediary study on a licentiate level (J. E. Andersson, 2005b).[81] This study was executed in Swedish and two papers have been reworked for this thesis and an international forum. These are research paper I and III.

The second case study focused on a maintenance project realized as a colour-based intervention in the communal setting of two residential care home facilities in the City of Gothenburg. This study was realized during the period of 2006 and 2008 with two environmental assessments undertaken prior to and after the intervention. This study resulted in a research paper on the use of two environmental methods in order to assess the interior re-colouring of communal space while the residents remained in place (research paper IV).

Research objective, RO1	Research paper (RP)
To assess contemporary architecture intended for residential care home facilities for frail older people.	
Research question, RQ 1: The national guidelines aim at the realization of a homelike and residence-like architecture with an interior spatial overview in order to assist the older person's orientation. Given that ambition: *what type of spaces has been promoted in Sweden since 1992?*	RP I
Research question, RQ 2: Frail older people use the communal space in individual manners that create patterns of movements and sojourns in the setting of a group of flats in a residential care *home.* Given this fact: *How can older people's spatial usages be described in an architectural manner?*	RP III

Research objective, RO2	Research paper (RP)
To study the origins of guidelines for the design of Swedish residential care homes.	
Research question, RQ 3: Architecture competitions have been used to improve space for ageing, and they produce competition documents (competition briefs, jury assessment reports and submitted competition entries): *What type of architectural space did architecture competitions promote as the appropriate one for frail older people?*	RP II
Research question, RQ 4: Local authorities are to implement national welfare goals that concern appropriate housing for frail older people. Given this basis: *How does the consultation process between municipal administration function in the case of organizing an architecture competition, and which is the motivating force behind this idea?*	RP V

Research objective, RO3	Research paper (RP)
To identify notions concerning appropriate architecture for future ageing among people who are not trained in architecture	
Research question, RQ 5: Local authorities are to implement national welfare goals that concern appropriate housing for frail older people. Given this basis: *How did the organizers structure an architecture competition about housing for frail older people and senior citizens? And, how are competition briefs perceived by architects and which is there a link between the brief and the jury assessment report?*	RP VI
Research question, RQ 6: Ageing implies different usages of architecture, and can be connected to goals to achieve in life. Given this basis: *What notions exist about the appropriate architecture of the ageing society, ageing in place or residential care home?*	RP VII

Research objective, RO4	Research paper (RP)
To implement various assessment methods in order to evaluate architecture for frail older people.	
Research question, RQ 7: Residential care homes require maintenance on a regular basis: *How can the supportive character of colour-based remodelling actions in the interior setting of the communal spaces in the two Swedish residential homes for older frail people be assessed by use of two qualitative assessment methods?*	RP IV

Figure 11. Overview of the relationship between the research objectives, RO, and their implementation as research questions, RQ, in seven separate research papers, RP.

Research project 4

Location	Research objective (RO)	Chrono-logical per-spective,	Research methods, (RM)	Research papers, (RP)
Case study 1. 2002-2005				
The municipality of *Haninge*	Research Objective 1: To assess contemporary architecture intended for residential care home facilities for frail older people.	C, F, R	APM, CR, I, PO, PH.	RP I RP III
Case study 2. 2006-2008				
The City of *Gothenburg*	Research Objective 4: To implement various assessment methods that have been designed in order to evaluate architecture for frail older people.	C, F	APM, CR, I, T	RP IV
Case study 3. 2007-2010				
The municipality of *Järfälla*	Research Objective 2: To study the origins of guidelines for the design of Swedish residential care homes.	C, F, R	AS, CR, I, PH	RP II, RP V,
The municipalities of *Järfälla, Ljungby* and *Tingsryd*	Research Objective 3: To identify notions concerning the appropriate architectural space for future ageing among people who are not trained in architectural thinking	C, F	CR, I, Q	RP VI, RP VII

Notes:
The following abbreviations are used:
APM = architecture profession methods; AS = Archive search; C = contemporaneous perspective; CR = close reading; F = future-oriented perspective; I = interview; PO = participatory observations; PL = Photolanguage; Q = questionnaire; R = retrospective perspective; RO = research objective.

Figure 12. This overview describes the three case studies that have been realized during this research study. The studies have been paired with information about the number of parallel cases, the main geographical location, the research objective, the chronological perspective, the resulting research paper and the research methods used in the particular case study.

The third and most expansive case study was performed in the municipality of Järfälla between 2007 and 2010. This study focused on a then recently settled architecture competition that focused on innovative habitats for the ageing population who were found in the municipality. This study resulted in four papers. The first paper examined a municipal stake-holder's considerations before opting for an architecture competition (paper V), while the second one presented notions concerning the appropriate architecture for ageing found among a group of representatives from the municipality and from organizations in defence of older people's rights (paper VII).

However, the results of this case study necessitated a comparative analysis with a contemporaneous and retrospective perspective in order to fully understand the empirical findings. This resulted in a comparative study of the preparation and use of competition documentation in three municipal architecture competitions realized during the period 2000 to 2010 (research paper VI). However, the municipality of Järfälla encloses in principle all major changes in the evolution of architecture for frail older people, and this prepared for a sixth, retrospective study on the national use of architecture competitions as a socio-political instrument (research paper II).

Research Strategies

The execution of the case studies has aimed for the accumulation of a diversified research data (R. Johansson, 2000; Seamon, 1982). This point of departure has similarities with the knowledge process of the architecture profession. In this thesis as in the practice of architecture, the approach is holistic and tries to unravel the constituting parts of the phenomenon, in this case the appropriate type of architecture for ageing with frailties. This broad scope generates empirical findings that have allowed for the detection of multiple and parallel sources of evidence in order to sustain valid conclusions (Yin, 2003).

The accumulation of a diversified research material has been achieved by use of a heterogeneous research strategy that has involved archive searches, access to official documents, assessment tools, close reading, interviews, interviewing guides, and participatory observations. This has been realized through the parallel use of several research methods. These have been developed in the initial phase of each case study with the aim of activating, not only multiple sources of evidence, but more importantly, several levels of recollection by the informant or other respondents.

The research material was collected at a particular site, at a defined moment that involved a particular person. This use of multiple and parallel sub-cases has been made along with a heterogeneous research strategy in order to provide valid and generalizable conclusions that are applicable on a general level (Maxwell, 1996; Onwuegbuzie & Johnson, 2008; Yin, 2003). A mixed method approach has been implemented (Creswell, Plano Clark, Gutmann, & Hanson, 2003). This mixed method approach is considered to strengthen the validity of the conclusions that were later drawn in the separate research papers (Maxwell, 1996; Onwuegbuzie & Johnson, 2008; Patton, 2002).

Research method (RM)	Associative recollections *adjusted*	Associative recollections *spontaneous*	Perceived space and human interactions with architecture	correlations, patterns, relationships	Environmental and architectural features
Architecture Profession Method (APM)			●	●	●
Close reading/ document search (CRDS)				●	●
Interviewing guide (IG), Thematic Interviews (TI)	●	●		●	
Participatory observations (PO)			●	●	●
Photo-language Method (PLM)		●	●		
Questionnaires (Q)	●			●	
Therapeutic Environment Screening Survey, (TESS-NH)			●	●	●

Figure 13. Overview over the research methods used in the study and their main area of action.

Research Methods

This study has used seven different research methods in order to accumulate diversified research material that can be further analyzed. During the accumulation of research material, at least two research methods were used in a parallel manner in order to record as fully as possible the events taking place at that particular moment. The heterogeneous research methods have been chosen since it was assumed that these methods would activate different fields of recollection either by the interviewee or the respondent, thus minimizing a possible bias of enlarging or diminishing their individual participation; see Figure 13.

Close Reading and Document Search (CRDS)

This type of research method was used in all of the studies, and pertained to the extensive documentary material (drawings, photographs, manuscripts, and various texts) that had been accumulated. The close reading implied a verification and pattern search involving various empirical findings, but also searches in national archives and libraries (Brummett, 2010; Ingemark_Milos, 2010). In the event that participants were identified and available, these were contacted for further questions in relation to the research question.

In the case, the informants' statements were conflicting other types of knowledge about the matter were searched in official archives and registers. These institutions included municipal, regional and state archives.

Environmental Assessment Instruments

These assessment instruments provided information about the perceived space in a residential care home. Architectural and environmental features were subject to causal reasoning in order to establish reoccurring patterns. The ambiance and human interactions with the architectural space were registered.

Architecture Profession Method (APM)

This was a purpose-built four-step inventory protocol that was designed on the basis of the architecture profession's methods to assess built environments. Theses protocols were created by the author of this thesis alone. The first step involved a semi-structured interview with ten questions. These questions were addressed to a representative of the residential care home, who was contacted prior to the study visit. The questions aimed at attaining general background information about the building. The second step comprised an inventory of existing materials prior to, or after, modernisation.

The third step involved both an interior and exterior photographic documentation of the care home. In the case of a maintenance project, the fourth step identifies the maintenance operations that were envisioned to take place in the building, the extent and the location. Moreover, drawings and documents pertaining to the maintenance process, and key actors in the maintenance process were identified. If possible, the key actors were interviewed with respect to the maintenance process the same day as the study visit. Otherwise, they were interviewed by telephone after having scrutinized the documents. On average, the time estimate for this environmental protocol stretched from one to two hours; see appendix 1:1.

Participatory Observations (PO)

The participatory observations were coordinated with meal hours. The first observations took place between 9.00 and 12.00; the second session was after lunch until 17.30 in the afternoon, and the third session of participatory observations took place between 18.00 and 19.30 in the evening. During the observations, the observer interacted with residents and staff, at which point, the residents and the staff were invited to ask questions about the research project, the observations or other topics. The aim was to

create a relaxed atmosphere and confirm some of the events that had taken place during the observations. These observations were performed by the author of this thesis; see appendix 1:2

Therapeutic Environment Screening Survey for Nursing Home (TESS-NH)

The Therapeutic Environment Screening Survey for Nursing Homes (TESS-NH) is an observational instrument, that gathers systematic data on the built environment in an accommodation for elderly frail people (Sloane et al., 2002). The instrument adopts a holistic approach towards caring for elderly frail people and the designated architecture, by assessing human interactions with the interior setting of the architecture. Through a 32-question inventory protocol the degree of homeliness in the accommodation for elderly frail people is evaluated both in terms of care and spatial characteristics. It uses a summary scale, the SCUEQS, the Special Care Unit Environmental Quality Scale, which is based on eighteen items in the instrument. This provides a validated numeric value for the physical environment (Sloane et al., 2002). The author of this thesis performed the TESS-NH assessments. On average, the time estimate stretched from forty-five minutes to one and a half hour; see Appendix 1:3.[82]

Interviews and questionnaires

The interviews aimed at retaining the informants' adjusted and spontaneous recollections in connection to a previous involvement in an architecture project, a municipal matter or other personal experiences of residential care home architecture (Kvale, 1996; Trost, 1997). During the interview situation and the transcription of the recorded interview a causal reasoning was used in relation to these speech acts in order to establish reoccurring patterns.

Interviewing Guide (IG)

The interviewing guide was organised according to twelve themes each with three to six sub-questions; all-in-all eighty-two questions. The themes had been identified in conjunction with documents pertaining to the event, in this case an architecture competition. Theme I presented the aim of the interview and details of the research process (approved transcripts of the interviews, anonymized informants, and confidentiality). In the second theme, personal questions were asked with the intention of sketching an approximate background of the interviewee. The third and fourth themes dealt with the competition brief. Theme V explored Swedish eldercare and architecture intended for eldercare use.

Theme VI supplied questions to be answered in response to photographs; the section on the Photolanguage method. Themes VII and VIII focused on the jury assessment process. Themes IX to XI discussed the realization process of the winning competition entry. The final theme XII identified other potential informants whom the official documentation had omitted to mention. Theses interviews were mainly performed by the author. In twelve cases, the author was accompanied by the supervisor of this thesis, Mr. Magnus Rönn, associate professor at the Royal Institute of Technology, KTH, Stockholm, since it was deemed that the author had a bias (a previous contacts with the

informant or other involvements).[83] On average, the time estimate stretched from one to two hours; se Appendix 1:4.

Thematic Interviews (TI)

An interview with three sets of thematic questions was used with frail older persons who resided at the Ros-Anders residential care home, with staff members working there and with other persons involved in the design process of the same (architect, municipal representative). The questions concerned a) the interviewee's background; b) views on the architecture of the residence and use of communal space; c) views on the care and caring given, and d) opinions about the physical environment. In the case of interviews with a staff member, additional questions pertaining to the residents were asked. The questions were formulated in a colloquial language slightly adjusted to the interviewee's use of language.

In connection to the question about the built environment, twenty-five photographs were used in order to facilitate the discussion (J. E. Andersson, 2005a, 2005b). All of the interviews were transcribed verbatim. A recording of the interview on a CD-disc was sent to the frail older persons. A transcript of the interview was sent to staff members and other representatives who had been interviewed. The respondent was asked to approve and if necessary correct the transcript. These interviews were performed by the author alone. On average, the time estimate stretched from one to two hours; see Appendix 1:5.

Photolanguage Method (PLM)

This section was inspired by the Photolanguage method (Baptiste et al., 1991).[84] The interviewees were invited to choose three photographs in relation to three questions whereupon they were asked to explain the associations that motivated their choices. The photograph collection consisted of twenty-five photographs that were tested, with the aim of discussing the interior setting of the home, among the older residents, staff and other persons involved in the creation of the Ros-Anders residential care home (J. E. Andersson, 2005a, 2005b). Each photograph had a small white dot with a letter to facilitate identification. This section was included under the assumption that the photographic motifs would arouse memories other than rational ones, and thereby minimise a possible bias.

It was assumed that the informants, rather than adopting a rational assessment, would choose photographs based on their affective responses towards the motif (Joye, 2007; Rodiek & Fried, 2005; Ulrich, 1983). The photographs would act as surrogates for the architectural space for which the informant had a preference (Appleton, 1975; Hull & Stewart, 1992). The individual choice of a photograph was noted in the field notes (a copy of the interviewing guide with all the question themes). Since this method was part of the interview and the interviewing guide, the Photolanguage sessions in the former situation only included the author and the respondents, whereas in the latter case the author and the advisor both participated during the respondents' answering. On average, the time estimate stretched from half an hour to one hour; see Appendix 1:6.

<u>Questionnaires</u>

The interviewing guide with twelve themes with three to six sub-questions and all in all eighty-two questions was converted into a questionnaire. The questionnaires were used as an alternative to the interviewing guide. This use was motivated by geographical distance. However, the number of questions was rationalized, and the respondents were asked to answer thirty-six questions concerning the municipal preparations for organizing an architecture competition.

Theme I presented the aim of the questionnaire and details of the research process. In the second theme, personal questions were asked with the intention of sketching an approximate background of the interviewee. The third and fourth themes dealt with the competition brief. Theme V explored Swedish eldercare and architecture intended for eldercare use. Themes VI and VII focused on the jury assessment process. These questionnaires were sent to key persons involved in the architecture competitions in two Swedish municipalities. Fifteen questionnaires were sent out and eight filled out questionnaires were received; see Appendix 1:7.

Research Material

The research material comprised of interviews (digital recordings and transcripts), environmental assessment instruments (protocols and photographs). No convenience sampling was used, that is neither the informants nor the residential care homes were subjected to any preparatory measures prior to the sampling of the research material. Therefore, the research material can be characterized as raw since it was collected at a particular site, at a defined moment that involved a special person.

The only inclusion criterion has been that the informant, after having accepted to be interviewed as part of the research project, or someone at a particular residential care home has taken the time to supply additional information about the home prior to the inventory phase. In the event that these prerequisites were met, a brief specific information leaflet about the research project was sent out as a confirmation of the date for the interview or the visit. The research material was supplemented by complementary material.

Setting

Swedish municipalities have served as settings for this research project, and have supplied information on the relation between an ageing population and the built environment for frail older people. In all, five municipalities have been used as references for the research project, although the municipalities of Haninge and Järfälla have functioned as the main sources and test beds for the conclusions of this thesis that regards architecture for the frail ageing. However, the common denominator of these municipalities is that they have a large proportion of older people among the population, almost equal to the national average. The characteristics of these municipalities are presented in Table 3.

The municipality of Järfälla can serve as an example of communal preparation for the silver generation, namely the age group of 65 years and older. In December 2008, this group of people represented 15% of the whole population of 64 355 citizens (Järfälla_Kommun, 2009a). Until 2018, an annual 20% growth of these age groups is forecasted (Järfälla_Kommun, 2009b).This is almost identical with the percentage for the full age group of Swedish seniors. The municipality of Järfälla, as also that of Haninge, is situated in the Stockholm city region.

National level	Population		Age group 65 years and older		Ratio in per cent	Number of residential care homes (buildings)	Research paper (RP)
Sweden	T	9,415,570	T	1,737,246	18,5	2644	
	W	4,725,326	W	957,468	20,2		
	M	4,690,244	M	779,778	16,6		
Local level							
The City of Gothenburg	T	513,338	T	76,214	14,8	77	RP IV
	W	258,870	W	43,445	16,8		
	M	254,468	M	32,769	12,9		
The municipality of Haninge	T	76,919	T	10,922	14,2	51	RP I, III
	W	38,325	W	5,828	15,2		
	M	38,594	M	5,094	13,1		
The municipality of Järfälla	T	66,130	T	11,111	16,8	7	RP V, RP VI, RP VII
	W	33,213	W	6,064	15,3		
	M	32,917	M	5,047	18,2		
The municipality of Ljungby	T	27,306	T	5,762	21,1	6	RP VI
	W	13,515	W	3,112	23,0		
	M	13,791	M	2,650	19,2		
The municipality of Tingsryd	T	12,243	T	3,256	26,6	9	RP VI
	W	6,034	W	1,757	29,1		
	M	6,209	M	1,499	24,1		

Notes:
All population figures are based on the population count made in December 2010. The number of residential care homes is based on adjusted statistics from NBWS.
Abbreviations: M= males; T=total population; W = women.

Sources: (NBSW, 2010, 2011c; Statistics_Sweden, 2010)

Table 3. Overview of the full population, the age group 65 years and above correlated with gender in the five municipalities that serve as backdrop to the present study.

Research project 4

Sample of architecture competitions.

Year.	Name of architecture competition	Organizational form	Number of entries	Research paper
1890	Sköns Fattiggård	Open	unknown	RP II
1907-1908	Sv Fattigvårdsförb. idétävl om smärre fattiggårdar (SAPRA's arch. comp.)	Open	11	RP II
1948-1949	Kungl Socialstyrelsens allm. arkitekttävling (RBSW's architecture competition)	Open	55	RP II
1979-1980	SPRI arkitekttävling om lokala sjukhem (SPRI's architecture competition about nursing homes)	Open	66	RP II
2006-2007	Formgivningstävling avseende tillbyggnad av äldreboende samt ombyggnad av vårdcentral mm inom kv Örnen (Architectural competition regarding housing for elderly people at the town block Eagle)	Invited and pre-qualification with 24 applicants, three chosen.	3	RP VI
2006-2007	Flottiljen-Framtidens boende för äldre (Flottiljen–Future-oriented habitats for the elderly)	Open	33	RP V RP VI
2009	Arkitekttävling avseende nybyggnad av äldre- och trygghetsboende inom Kv Bandybanan. (Architectural competition regarding a senior and sheltered housing at the Bandy-Pitch)	Invited and pre-qualification with 60 applicants, five chosen.	5	RP VI

Sample of exemplary models of residential care homes

Municipalities	Residential care homes	Year of construction	Number of residents	Research paper
Gothenburg	Ekparken RCH Solängen RCH	1992; 1992	49; 20	RP IV RP IV
Haninge	Malmgården RCH Ros-Anders RCH	1954/ 2001; 1999;	26 40	RP I RP I, III
Sollefteå	Graningebyn RCH Helgumgården RCH	1989; 1983	14; 12	RP I RP I
Stockholm	Kattrumpstullen RCH	2003	97	RP I
Södertälje	Tallhöjden RCH	1989	57	RP I
Uppsala	Balder RCH Höganäs RCH Myrbergskagården RCH	2000; 2000; 2001	51; 50; 51	RP I RP I RP I
Ystad	Ljuskällan RCH Vigs Ängar RCH	2001; 1995	60; 33	RP I PR I
Vellinge	Postiljen RCH	1995	24	RP I

Figure 14. Overview of the sample in the research project: the seven architecture competitions, the fourteen residential care homes (RCH).

Munici-palities	Municipal administration or Residential care homes	Number of respondents	Number of residents	Research paper
Sample of participants affiliated with a municipal organization or other				
Gothenburg	Administration for social welfare	1	CA,	
	Ekparken RCH	1	CP	RP IV
	Solängen RCH	1	CP	
	Real Estate Company	5	A, E	
Haninge	Administration for social welfare	1	CA,	
	Ros-Anders RCH	3	CA, CP, N,	RP I
	Malmgården RCH	1	CA	RP III
	Ros-Anders RCH	11	OR, A	
Järfälla	Administration for Social Welfare City	21	CA, A, E	RP V
	Planning Office;	2	A, A	RP VI
	Municipal Executive Office,	4	MP, SP	RP VII
	Registrar office.	2	AD	RP VII
	Residential care home	1	CP	
Ljungby	Administration for social welfare	2	CA	RP VI
	Real Estate company,	1	B,	
SAA	Jury representatives	8	A	RP V, VI
	Competition secretary	4	A	RP I, V, VI
	Winning architects	4		RP V, VII
Sollefteå	Graningebyn RCH	1	CA	RP I
	Helgumgården RCH	1	CA	RP I
Stockholm	Kattrumpstullen RCH	1	CA	RP I
Södertälje	Tallhöjden RCH	1	CA	RP I
Tingsryd	Administration for Social Welfare	1	E,	RP VI
	Real Estate company,	2	AD	
	Registrar office	1		
Uppsala	Balder RCH	1	CA	
	Höganäs RCH	1	CA	RP I
	Myrbergskagården RCH	1	N	
Ystad	Administration for social welfare	2	CA,	
	Ljuskällan RCH	1	CA	RP I
	Vigs Ängar RCH	1	A/ CA	RP I
Vellinge	Postiljen RCH	2	CA; CP	RP I

Notes:
Abbreviations: A = architect; AD = administrator; B = building expert; CA = Care Administrator;
CP = care professional; E = engineer; N = nurse; OR = older resident; RCH = residential care
home; SP = Social Planner.

Figure 15. Overview of the eighty-eight persons who were interviewed or answered a questionnaire during the execution of this research project.

During the period of 1950 until today, these municipalities have shifted from a dominantly agrarian economy into a multi-oriented economy with smaller and larger industries and service businesses. It has an ageing population growth that stems from a strong population growth that occurred as a consequence of the regional development of the Stockholm city region in the 1950s, 1960s and the 1970s. In the case of the municipality of Järfälla, the newcomers have mainly Swedish origins. Almost, the same circumstances exist in the municipality of Haninge, the only difference being that the population has a more international background.

Sample

This research project has made use of a varied sample that has consisted of architecture competitions, residential care homes and participants. The sample has supplied a research material that has allowed for establishing both a broad knowledge about Swedish architecture intended for frail older people, and an in-depth knowledge about living conditions in a residential care home and the older persons' interactions with architectural space. The sample has supplied material that has allowed for an analysis of current tendencies in the realization of residential care home architecture as well as the older residents panorama of cognitive and functional deficiencies and their relation to architectural space.

Architecture Competitions

Background information concerning architecture competitions were obtained from various inventories of architecture competitions that had occurred during the period of 1864 to 2010 (K. Sundström, 1985; Tidskriften_Arkitektur, 2010; Waern, 1996). A list of 82 architecture competitions were established (J. E. Andersson, 2008). These were distributed per level of civil administration and seven key architecture competitions during the period of 1864 to 2010 were further explored; see Figure 14. These competitions were used in Research paper II.

Exemplary Models of Residential Care Homes

Study visits to fourteen residential care homes were performed. Twelve of the facilities were included as exemplary models in a separate study on the architectural design of the contemporary residential care home; see Figure 14. This selection encompasses the reform of 1992 with nine to eleven years. Ten of the homes were run by the municipal elder care, and two residences were managed by private care entrepreneurs (residential homes 6 and 12).

This selection of the exemplary models of residential care homes were analyzed in Research paper I. The only inclusion criterion for being part of the sample was that the particular residential home was judged to be an exemplary model, based on an independent assessment made by one of the following actors: a) a jury of an architectural competition; b) a user, namely an older person living in a residential home, or a staff member working in such a facility; c) a Swedish organization in defence of older people's rights, or d) researchers in architecture or nursing.

Two residential care homes were investigated since they were part of an intervention project that was to be realized in the communal space of the respective homes; see Figure 13.´These interventions were assessed in Research paper VI.

Participants in the Studies

All in all, ninety persons affiliated with municipal administrations, residential care homes, national organizations in defence of older people's rights, or architects have participated in this research project, mainly by accepting an interview or in some cases answering a questionnaire; see Figure 15.

Since age, gender and professional background were not an inclusion criterion for the selection of informants, this type of information was only collected if the participant was willing to supply this information. Women dominated the sample of participants, and the average participant was a female respondent with a municipal administration aged between 55 and 64 years.

Participants affiliated with municipal administrations

Thirty-nine participants were affiliated with a municipal administration. The majority of this group of participants were women, about 79 per cent. The men found in this group of participants were either head of the administration or working with a special assignment within the administration. The majority of the participants worked in an Administration for Social Welfare (ASW), 64 per cent, while the rest of the respondents worked at the Municipal Executive Office (MEO), 5 per cent, the City Planning Office (CPO), 10 per cent, or the Administration for Real Estate Matters (AREM), 21 per cent. These respondents are used in Research papers III, IV, V, VI and VII.

Beside the group of participants with a direct link to the municipal organization, this sample included six older persons that represented three national organizations that defend older people's rights. This was the Senior Citizens Council in the municipality of Järfälla. The group consisted of three men and three women, and the average age was around 70 years; see Research paper VII.

Participants with an architectural background

Seventeen persons with an architectural training have been interviewed, twelve men and five women. Of this group, eight persons had participated as jury representatives of the Swedish Association of Architects (SAA), three men and five women (one woman appeared twice since she was jury representative in two competitions). Four men represented three architect's offices that had won first prize in an architecture competition. ´

Four persons had acted as competition secretary in relation to any of the competitions explored within this research project, three men and one woman. One person in this group of participants represented the SAA. Beside these architects with a connection to an architecture competition, two additional members of the architecture practice was interviewed in relation to a residential care home. This group of participants were aged between 40 and 65 years; see Research papers I, II, V, VI, VII

Research project 4

<u>Participants working at residential care homes</u>

Seventeen participants worked at a residential care home, mainly as the head of the home or as care staff members or nurses; see Research papers I, V and VII. They were all women, with an approximate age between 40 and 55 years.

A group of three staff members who worked at the two SCUs found at Ros-Anders residential care home were approached for an interview in relation to the eight residents who lived there and who were included in the study; see Research paper III.

<u>Participants among the residents living at residential care homes</u>

Research undertaken at the Ros-Anders residential care home has in-depth knowledge about living conditions in a residential care home and the older person's interactions with architectural space; see Research paper III. The thirty-nine residents who lived there during the period of 2003 to 2005 as well as the selection of ten staff members who were interviewed were the main sources of knowledge about living conditions for people of an advanced age with both cognitive and functional disorders.[85]

However, the exact age and medical condition of each resident was not established, since it was deemed to be beyond the scope of the study. There were no inclusion criteria other than the residents' and the staff members' willingness to participate. The main focus of the study was older people's spatial interactions with architectural space, and a descriptive analysis of age and medical condition was not relevant. Information on the resident's age, health and medical condition was attained to the extent the resident was willing to provide it.

- A target population of 39 residents who lived in flats distributed in groups of ten in four different wards in the Ros-Anders residential care home. Two wards were Non Special Care Units (NSCU) and two were Special Care Units (SCU).

- A group of 20 residents, 6 men and 14 women, lived on the ground floor, i.e. in the SCUs. The staff reported that they suffered from moderate to severe dementia. The average age of the SCUs was approximately 81 years old. A group of 19 residents, 4 men and 15 women, lived on the first floor, i.e. in the NSUs. They stated that they experienced predominantly age-related functional disorders and other somatic problems. The staff reported that two of the residents, two women, suffered from mild dementia. The average age of the NSCUs was approximately 84 years old. Ten of these residents were approached for an interview about their opinion about the home and living conditions found there.

- A group of 18 residents were followed as to their spatial appropriation of the communal space of an individual ward. At the NSCUs, 10 older persons were observed, while 8 older persons who lived in the SCUs were monitored as to their spatial appropriation.

Complementary Research Material

The present doctoral thesis has been realized in a two-step-process. Therefore, beside the seven research papers of this thesis, two supplementary case studies realized within this research project constitute a fundament for a better understanding of the research material in the present study. One study pertained to an intervention in the interior communal setting of a ward at the Ros-Anders residential care home, and the other study dealt with the design process of three residential care homes (J. E. Andersson, 2005b): The architect and the eldercare planner at the local ASW were interviewed in relation to their recollection of the design process concerning the Vigs Ängar residential care home (two informants); the Johanneslund residential care home (four informants) and the Ros-Anders residential care home (three informants).

The empirical findings were documented extensively by documentation search, drawings and photographs. This was a way of encapsulating the events that had taken place and what had been perceived during the study visits. Thus, a complementary material was assembled that included the photographic documentation that was realized parallel to the study visits to a particular residential care home. It also pertains to documents like drawings, floor plans, or leaflets with which the interviewees supplied the author. In addition, noteworthy details were noted in summary architectural sketches.

Each interview and study visit was annotated with field notes that the author of the present thesis made after the interview or study visit. Furthermore, study visits to residential care homes created occasions for spontaneous meetings with other older residents or staff members, since an introductory motive always was necessary to supply at the beginning of each visit. One has to bear in mind that the study visits are realized within a home environment.

In addition, during the realization of this research project, the topic of architecture for frail older people has been one of the focal points in an academic course for senior students in architecture or practicing architects that has been realized since 2009 at the School of Architecture, KTH. In this case, the course has been realized in a municipal setting, and the full sample of municipal residential care homes has been investigated by the students as a special course assignment. Thus, the residential care homes in the municipalities of Järfälla (spring 2009), Ystad (autumn 2009) and some in the city of Stockholm (autumn 2010) have served as a backdrop and test bed for hypotheses made during the realization of this research project.

Research Data

The analysis of research material aimed at establishing recurrent patterns and phenomena that would form the research data base. Data from the environmental assessment instruments were obtained by computing the data according to methods established in the architecture profession or to manuals that belonged to the instrument (APM, PO, and TESS-NH). Complementary research material that was collected parallel to the interview or the study visit (field notes, photographs, drawings, floor plans, leaflets, other photographs, and sketches). Later they were assembled per object or subject in order to allow for further analysis.

Research method	Interview transcription	Protocol computation	Informants' approval and correction	Documentation verification	Correlations, cases, pattern, relationships
Architecture Profession Method (APM)	●	●	●	●	●
Close reading/ document search (CRDS)			●	●	●
Interviewing guide (I), Thematic Interviews (TI)	●		●	●	●
Participatory observations (PO)		●			●
Photo-language Method (PLM)	●	●	●		●
Question-naires (Q)	●			●	●
Therapeutic Environment Screening Survey, (TESS-NH)		●			●

Figure 16. Overview over analysis methods that were used in relation to the collected research data.

Data analysis

The respondents' discourses[86] on ageing and appropriate architectural space as well as on spatial experiences related to the respondents' personal choice of imagery support were verbatim transcribed. This analysis operated on the assumption that the spoken information could be examined as speech acts active in a global or specific context of ageing (Van Dijk, 1977). By applying cognitive theory to pragmatics, information regarding the appropriate architectural space for the ageing population could be detected (Blum-Kulka, 1997; Van Dijk, 1977).

This approach has similarities to Applied Discourse Analysis (ADA), since it focuses on what is expressed through language (Gunnarsson, 1998). The interviews were sent to the informants for correction and approval. The approved versions were anonymized before they were made part of the research material. The established research data base consisted of qualitative findings that were further processed by use of computation and simple descriptive statistics; see Figure 16.

Procedure

In the following paragraphs, the procedure of analyzing the collected research material is described in relation to the particular type of material.

Close Reading and Document Search (CRDS)

The close reading and document search mapped reoccurring patterns in the material. CRDS was applied to the verbatim transcriptions of the interviews, the environmental assessment instruments as well as additional research material.

Environmental Assessment Instruments (APM, PO, TESS-NH)

Data assembled via the environmental assessment tools, the APM and the TESS-NH protocols, were computed according to the manuals defined for the methods. The APM resulted in a transcription of field notes that described the material used for the floor, the wall and the ceiling. Necessary maintenance actions were noted along with comments on acoustics, air quality, and odours. In the case of the TESS-NH protocol, an extensive use of floor plans, photographs, and other documentation from the residential care home facilities was necessary, since there are discrepancies between American recommendations for nursing homes and the Swedish guidelines for architecture for older frail people. The manual established for the instrument was used to settle this problem (Sloane, Long, & Mitchell, 2005). In this thesis, the full TESS-NH instrument was used to establish a numeric value for a particular ward, as well as a value computed along the SCUEQS scale.

The observations that pertained to frail older people's use of the communal space were transferred to mental maps by use of the pentad of landmark, boundaries, edges, nodes and districts (in the context of the interior space this notion was changed to zones (Bodin Danielsson, 2005)). This was a transfer of concepts that have been established in the urban landscape in three American towns by the American urban planner Kevin Lynch (Lynch, 1960). The grounds for identifying one of these items were based on the accumulated use of, or orientation towards a certain zone. This outcome of the data analysis

presented the older people's movements and sojourns in a spatial and visual way. It became evident that there was a correlation between the state of older people's health and their patterns of movements and sojourns, as well as their dependency on the staff.

Interviews (IG, TI, PLM)

Colloquial language in the interview was adjusted to form correct Swedish grammar. The transcriptions were anonymized. The transcriptions were sent for approval to each respondent who was invited to correct the final version of the text. Two of the sixty-four informants chose to decline this opportunity or made such changes in the text that the final version would be erroneous compared to what had been recorded. With respect to their age, the frail older residents were sent a recording of the interview on a CD-disk, but they were asked at the end of the interview if they preferred a transcription. The older persons unanimously opted for the recording. Later, they or staff members reported that they had listened to it. Even relatives took part of the recording. In some cases, the recording seemed to have functioned as a substitute for a real person present in their flat.

It was noticeable that persons involved in administrational work and not familiar to architecture or research used a formal language that could be directly transcribed into correct Swedish. Architects, older persons or other people who for some reason experienced great comfort in the interview situation used an imprecise language with half sentences or gestures to imply that both the participants of the interview all understood the hinted meaning. The analysing procedure began with verbatim transcriptions of the interviews in Swedish. The logic of the speech acts was structured (Barthes, 1966). The speech acts were then organised into a coherent text with full sentences. If necessary, the text was adjusted according to the author's notes from the interview, or to documentation that had been obtained through searches in official records.

Through the focus on a particular question or a specific theme in the interview, the respondents' answers could be compared to each other and constitute research data for the later research papers. This was a pattern seeking process and reoccurring allegories, expressions or words that the respondents used functioned as means of classifying the types of discourse. The frequency with which the respondents used these words was identified by sorting the information according to the classification codes that had emerged. Later, these codes were used to access textual segments of the interview that were translated into English.

Photographic Material (PLM)

Since the Photolanguage method was part of the interview or the interviewing guide, these sections were transcribed at the same time as the rest of the interview. In the transcription that was sent to the respondents, a page showed an overview of the photograph collection. In the text, the individual choice of a certain photograph was noted with the identification letter. The Photolanguage sections were included in the transcriptions that were sent for approval and correction to the respondents. Thus, the reasoning that arose in conjunction with viewing of the photographs was treated in the same way as the rest of the steps in the interview or the interviewing guide, and processed as described above.

Figure 17. The most preferred motifs in the photograph collection used in this study. The photograph F generated 100 per cent positive connotations, while photograph N 90 per cent. Photograph C of a kitchen also produced strong positive associations, 89 per cent, and photograph E 75 per cent. These four photographs were used to describe qualities of the private dwelling; homelike and residential-like. Photograph E was used as a contrast to the institutional environment, or an institution that was staged as homelike. Photographs U (30 per cent positive connotations) and V (100 per cent negative connotations) were the least appreciated photographs that represented the institutional environment. (Photographs taken by author).

The photograph collection had been tested during the period of 2003 to 2005 among the older residents and staff member who lived and worked at the Ros-Anders residential care home, or among other persons who had been involved in the creation of the building. Then, a pattern of reoccurring photographs appeared. In this case, three photographs reappeared: The informants used the photographs E and C to describe homelikeness. These were taken in real settings, whereas photographs such as photograph O were identified as being staged.

In the next step of the analysis, each photographic motif was correlated with the respondents' statements, and these were sorted according to the negative or positive associations the respondents experienced in relation to the photograph. It was then possible to establish a ranking list of the motifs by the frequency with which a certain photograph was picked by the respondents.

A similar pattern reoccurred when used among the twenty-seven informants in the municipality of Järfälla. Photographs C, E and N were identified as homelike or residential-like. One outdoor motif, photograph F, was identified with the sublime quality in architecture that the respondent envisioned. This was the most used photograph; se Figure 17.

Questionnaires

The received questionnaires were subjected to close reading and mapped reoccurring patterns in the material. Uncertainties were checked by a direct contact with the respondent or secondary sources by telephone. Then, the questionnaires were anonymized.

Ethical Discussion

The residential care home is both a private space and a work environment. Despite this duality, the home is first and foremost a dwelling, and as such it is subject to the same regulations as the ordinary market of dwellings are (SFS1970:994). However, the provision of eldercare is subjected to control by authorities on regional and national level, the NBSW (SFS1980:620, ; SFS1982:763, ; SFS2010:659). Given these circumstances and the fact that the project is about architecture, it has not been deemed necessary to submit the research project to an ethical research board. Therefore, any correlation with descriptive data of age and medical conditions has been left outside this study.

However, this research project takes place in the intersection between the private sphere with its emotional rationale and the professional life with its collective agreements. This necessitates caution, and the ethical principles for research within the humanities and the social sciences formulated by the Swedish Research Council have been applied thoroughly (Swedish_Research_Council, 2002). This means that the respondents with a professional relationship with this study have been informed about the intentions of the project prior to their decision to participate. The information obtained from interviews was transcribed and submitted to the respondents for final corrections

and approval. Thereafter, the research material has been anonymized and thereupon included in the study.

For obvious reasons, another approach was called for when the interviews involved frail older persons or the situation of undertaking participatory observations or study visits. The execution of these situations was always adjusted to the other on-going events in the residential care home. A formal presentation with name and the purpose of the visit was realized that, in most cases, were accompanied with a hand-shake with each person who was present. This information could in most cases serve as an entry for a relaxed conversation with the older person and a member of staff about the architectural space, interior colours and the older person's previous professional activities. It was important that these situations took time and were adjusted to the pace of the older person or the on-going activity in the residential care home.

After that, a study was realized that was ended in the same manner as it began. In the case of an interview with an older person, this encounter was prepared by asking members of the care staff or the nurse at the residential care home, if there were any special concerns that had to be respected. Then, the older person was asked whether he or she was willing to be interviewed. They had the opportunity to contemplate this question for about a week or in some cases longer, but most of them chose to accept it. In some cases, the staff suggested an older person as a way of encouraging them to break a state of isolation.

The realization of the interview was closely attuned with the older person's habits and preferences. There were no time limit other than that the interviewee explicitly told so or the older person displayed signs of being tired. The interviews with the older persons were finalized as a compact disc that could be played in a regular cd player. The cd-box contained information about the interview and the research project. Several of the older persons who were interviewed were amazed of hearing their own voice, and listened to the record many times.

The cd disc was handed over to the informants personally, and in some cases fragments of the conversation was played in the presence of the author of this study. However, most of the older persons chose to listen to the full recording later at their own and in proportions that suited them. The recording was normally between one to two hours, in odd cases even longer. In addition, relatives appreciated the cd disc since the audio recording eternalized their loved ones in a way that a photograph cannot do.

Other photographs inside the communal space or private space of a residential care home have been taken with the permission of the residents and the staff. All photographs have been taken without the use of flash. No person, neither residents or staff members, has been within the photographic frame. In the case that a person unexpectedly has entered the area in focus for a photograph, these photographs have been corrected afterwards by manipulating the image by use of Adobe Photoshop.

Summary

This chapter has in detail presented the research that has been realized within borders of this thesis, its rationale, aims and objectives, and the fundaments for the research project. The approach is anchored in design methodology and coloured by a phenomenological framework for the understanding of the empirical findings. The research project has employed case study methodology with heterogeneous strategies in order to accumulate a research material that gives a board and in-depth knowledge of architecture for frail older people.

Four research objectives have been formulated in a comprehensive approach to understand the special type of architecture that the residential care home constitutes. Three case studies have been realized around these objectives, but the objectives have been further detailed into seven research questions. In all, seven research methods have been user to answer the research questions.

A mixed method design has been implemented. The chapter ended with a description of data analysis procedure of the accumulated research material. The research project has not been reviewed by an ethical board, and therefore ethical considerations that have guided the realization of this thesis were presented.

Summary
Seven Research Papers

The previous chapters constitute a backdrop to which this overview of the individual papers should be read. Under the ceiling of four comprehensive and guiding objectives, this research project has generated seven research papers on various aspects that concern the relation between the frail ageing process and the architectural design of a residential care home. These papers are either based on empirical findings from residential care homes or on research that has used documentary materials, found in the national archives.

The order of the papers is not chronological. Rather, these are arranged in an order that supplies a contemporaneous, a retrospective and a future-oriented perspective to the matter of appropriate architecture for dependent and frail seniors. This rhizomatic order describes the pursuit of the research undertaken. This overview begins with a research paper that investigates the contemporaneous phenomenon of architecture for dependent and frail seniors. This is Research paper I. From here, the narrative thread takes a leap some hundred years back in time in order to unravel the roots of some of the spatial requirements that are active in the creation of contemporary architectural design for frail older people. This is Research paper II.

With a kick turn, the thread jumps back to the present by investigating the spatial appropriation of communal space among frail older people living in four different wards in a residential care home. This is Research paper III. Then, the focus is set in the direction of environmental changes undertaken as maintenance operations in the communal space of two residential care homes while the homes were still in use and the residents remained in the building. This is Research paper IV. Hereupon, the narrative thread goes back and forth between the present and the future, since the fifth paper explores socio-political ambitions for the architectural space at a new site, situated at a former airbase outside Stockholm. This is Research paper V.

The narration continues with Research paper VI that retains the future-oriented perspective. It focuses on the programming documents of three contemporaneous architecture competitions, realized during the period 2006 to 2010. The narration comes to an end with Research paper VII. Here, a future-oriented perspective appears in which notions concerning the appropriate architectural space for the ageing society are formulated by various groups of stakeholders.

Research Paper I

Habitat Privé, Hôtel ou Hôpital ? L'Architecture Relative à l'Hébergement de Personnes Âgées et Dépendantes, (EHPAD) en Suède[87]

Home, hotel or hospital? On Swedish architecture used in twelve residential care homes for frail older people between 1983 and 2003.

This paper focuses on the outcome of national guidelines for the architecture of residential care home environments. These guidelines promote an architecture that encompasses the two dimensions of a homelike and residential-like architectural space exteriorly and interiorly. In addition, they emphasize a spatial configuration that supplies a spatial lookout of the communal space in order to facilitate wayfinding. The study used a sample of twelve available residential care homes that had all acquired a status of being an exemplary model. The residential care homes were realized during the period of 1983 to 2003. Each residential care home constituted a separate case study, and a heterogeneous research strategy that involved architecture assessment methods and interviews was used. The facilities were analyzed by using a spatial theory that suggests that the indoor space of architecture can be defined in terms of its spatial shape, namely a cell, a corridor, a niche or a multipurpose space. In addition, the location and the architectural design of the entrance and the facade were analyzed. Moreover, qualitative data were attributed a numeric value in order to supply a quantitative measure.

Based on the empirical findings, the study suggests that the national guidelines result in three design scenarios that architects tend to use when they conceive of space for older frail people: At best, the guidelines fulfil their intention and generate a homelike milieu where the architectural space is integrated closely in the daily eldercare activity. The second outcome suggests an environment where the architectural space is of high quality with a hotel-like ambiance. This space is not an optimal one for the eldercare performed at the home. Still, the staff members are willing to accept these spatial flaws since the residents experience well-being and contentment with the milieu. Thirdly, the guidelines result in a hospital-like environment where hygienic and medical aspects involved in the eldercare activity have been promoted at the expense of the architectural design. The environment displays a high degree of functionality important for the creation of an appropriate work environment, but unsupportive for the creation of a homelike feeling in the communal space for the resident.

The majority of the residential homes in the sample fell into the third category, the hospital-like environment. Four residential care homes represent a hotel-like environment, while three homes display such qualities that they realize a homelike and residential-like milieu. The key factor involved in the experience of the residential care home as a homelike, hotel-like or hospital-like environment is the accessibility to the outside space from the inside space. The phenomenological term of transspatiality is used to describe this relationship. Furthermore, residential care homes tend to be located close to or integrated in existing built environment with a residential-like facade. However, the indoor architectural space represents a hospital-like environment. The residential care homes built during the 20th century in particular fall into this category.

KEY WORDS: Architecture, residential home, homelike space, hotel-like space, and hospital-like space.

Research Paper II

Appropriate Architecture for Ageing, on the Use of Architecture Competitions as a Social-political Instrument to Improve Space for Dependent Seniors in the 20th Century Sweden.

This research unravels the origins of the national guidelines for the design of architecture for older frail people. Based on an inventory of architecture competitions realized during the period of 1864 to 2010, it is possible to distribute these according to their relation to the levels of national civil administration (municipal, regional and national). The lion's share of these competitions, sixty-eight competitions, has been arranged by municipal commissioners as projects intended for realization. Only one competition can be related to the regional level of civil administration, while three architecture competitions held in 1907, 1948 and 1979 have been arranged on a national level. These organizers were organizations in defence of people who due to age, medical conditions or other reasons were in need for societal support.

These three national competitions preceded a reform of the ruling social act. They were organized as open ideas competitions with the expressed intent of exploring the spatial implications of changes in the socio-political context by reforms of legislation concerning social work. The competition was part of an aim to improve built environment for societal use and to lobby for a reform of the social act. The 1948 competition was organized by the Royal Board of Social Welfare (RBSW) and aimed at the innovation of architectural space for frail older people as a result of a legal exclusion of the old people's home from the poor relief act and a new status as ordinary housing for older persons. The third national competition occurred in 1979 when the spatial evolution of the old people's home had reached a point of stale-mate, and its raison d'être was in question. The main focus was the nursing home, but it was paralleled to the design of the old people's home in the competition brief. Even this competition preceded a social reform of the social act that was later accepted by the parliament in 1982.

The competition of 1907 coined the term small-scaled paupers' asylums that some years later were changed into old people's homes. This competition promoted the key concepts of homelikeness and small-scaledness as important parameters for architecture intended for frail older people. These notions were further detailed into spatial requirements for the interior environment of the new old people's home by the architecture competition in 1948. In this competition, the definition of negative institutional features that were to be avoided in order to create a homelike interior environment was drawn up. It also updated the localisation of the building from that of a peripheral location to that of an integrated part of the existing built environment with a maintained small-scaledness. However, the public reaction towards the new status of the old people's home questioned this type of building as the optimal housing for frail older people. Social work was reoriented in a more individualized way. The 1979 architecture

competition emphasized the existential aspects of living with long-term conditions and its spatial implications. The competition promoted homelikeness albeit in a continued hospital-like environment.

This paper concludes that these three national competitions have been decisive for the definition of the present guidelines for architecture for frail older people. The research has mainly been done on the basis of a documentary survey of literature and entries in the national and regional archives pertaining to the organizing body involved in the competition. Besides the focus on the spatial gains of the three competitions, the paper adds new information to the Swedish architects' involvement in this special field of architecture. Moreover, it details the ongoing friction between the small-scaled homelike environment and the large institutions. The recurrent use of the architecture competition demonstrates the quest for a universal prototype for architecture for frail older people. Architecture is used as a planning tool in socio-politics.

KEY WORDS: architectural competitions, architectural space for ageing, eldercare, and residential care facilities.

Research Paper III

Appropriating Space in an Assisted Living Residence. On Architecture and Older Frail People's Spatial use[88]

This research returns to contemporariness. The communal space of a residential care home is used to explore frail older people's spatial appropriation of this communally shared space in a ward with ten flats. The residential care home selected for this case study was one of the twelve exemplary models in the first research paper. In this particular case this care home has acquired its status of exemplarity through an assessment made by a researcher in architecture and gerontology.[89] The residential care home has four identical wards although two are the reversed copies of the other ones. Two of the wards, here termed Non Special Care Units (NSCU) were intended for residents with primarily somatic problems due to ageing, while the two others accommodated frail older people with mild or severe dementia, here termed Special Care Units (SCU). Despite an interior harmonious architectural space, the wards displayed four individual interior settings with a varying degree of perceived homelikeness.

The objective of this paper was to explore the reasons for this noticeable difference between the wards. This was made with a post-occupancy evaluative approach that included the use of interviews with the residents and staff members, participatory observations and an assessment instrument. Out of a target population of thirty-nine residents a sample of eighteen residents who were willing to participate in the study remained. Ten residents were interviewed as to their spatial usages of the communal space. Three staff members were interviewed in relation to eight residents with mild or severe dementia, and their use of the communal space. Their habits of movements and sojourns were noted during the observations. The milieu was evaluated with the validated environmental protocol for nursing homes, the Therapeutic Environment

Screening Survey of Nursing Homes (TESS-NH) (Sloane et al., 2002). In this study the full TESS instrument was used as a summary scale that included the majority of the thirty-two items to catalogue but also the eighteen items that within the protocol constitutes a validated scale, the Special Care Unit Environmental Quality Scale (SCU-EQS).

Neither of the scales supplied by the TESS instrument supplied any conclusive explanation why one ward was perceived as nicer than another. Rather, they suggested that one of the NSCUs and one of the SCUs supplied a more homelike environment than the others. The frail older residents' spatial usages were mapped by transferring the pentad of edge-landmark-node-path-district (Lynch, 1960) that has been defined in the urban landscape to the interior space of four wards at this particular residential care home. Combining this quantitative assessment with the qualitative data acquired through interviews and observations of movements and sojourns, an environmental reasoning emerged. The NSCUs displayed a symbiotic relation in which the ward with the nicer appearance constituted a homelike environment that attracted the interest of the residents who lived at the other adjacent ward. The attractive NSCU staged an interior setting with furniture, textiles, and other artefacts that provided places at which one could spend time. These places made use of the architectural design in order to create a place for reading and looking out the window, or a social space for two people having a cup of coffee together and discussing the view or any other matter of interest.

On the other hand, the two SCUs described two opposite mental maps independent of each other: At one of the SCUs, the interior setting was conditioned by one resident's picking and wandering behaviour. This behaviour created invisible boundaries that the other residents and staff members needed to respect. As a consequence few places for communal use appeared in this ward. At the other SCU, the residents' acute dementia diagnoses made them dependent on the staff. In their turn, the staff staged different places in concordance with the architectural space in order to counteract the residents' suddenly changed states of mind that varied from anguish to worry.

The overarching conclusion of this study is that an appropriate architectural space for a residential care home reinforces the place-making process by the older residents. This process can be promoted by the older frail persons themselves, or staged by the staff in the communal space. Besides general requirements of accessibility, functionality, and usability, the residential care home architecture needs to employ spatial elements that foster an appropriative process by the resident of the communal space. This could be done by the sensuous stimulation that can be found at a particular place in the architectural space.

KEY WORDS: assisted living architecture, architectural design, age-related problems, appropriation, and mental maps.

Research Paper IV

"Touching up" Communal Space of a Care Home Setting. A Comparative Study of Tools for Assessing Changes in the Interior Architectural Space"

In this paper, the focal point of interest is that of a maintenance operation undertaken in the interior communal space of two existing residential care homes, situated in the city of Gothenburg. Both facilities were built in the early 1990s and neither of them has been renovated since. Inspired by another intervention project using colours and performed in an educational environment, the original maintenance operations envisioned for the two residential care home facilities were tuned in this direction. Allegedly, the intervention project tried to integrate empirically-based findings on colour discrimination and colour perception among older persons suffering from dementia. The municipal real estate company for care facilities partnered with the Painting Contractors Association, and formed a steering group.

The intervention project supposed that the painting works would be executed without relocating the residents and that these were adjusted to the daily eldercare activities and restricted to the communally shared space. Moreover, the intervention was based on the assumption that the staff members at the respective care home were the key experts on appropriate environments for frail older people. Thus, the initial phase of the intervention aimed at educating selected staff members about coloured space. This was done at a local theatre and an arts museum. During a walk-through evaluation of the care homes, this newly acquired knowledge by the staff was put into action. These evaluations supplied arguments for an individual colour scheme for each unit. The scheme constituted a tendering document that was subject to a tendering process.

Prior to the execution of the intervention project, the communal settings of the two residential care homes were evaluated by use of assessment methods developed within the architecture profession as well as the gerontological assessment instrument, the TESS-NH. This took place in late 2006. The following year, the intervention project was realized in the interior settings of the two residential care homes. In early 2008, the interventions were evaluated with the same instruments that were used prior to the change. The weather conditions and the penetration of daylight were similar on both occasions. Both evaluations supplied a qualitative assessment of the appropriateness of the interior setting. The intervention project did not produce a supportive architecture for the frail older residents. Rather, the one-sided focus on colour produced two outcomes: at the multi-storey care facility located in the city centre the intervention project resulted in a considerable deterioration of the existing environment, whereas in the mono-storey care facility some kilometres outside the city centre a slight improvement was produced.

This haphazard outcome is attributable to lack of respect shown to the wishes of the residents with the regard to the intervention project as well as the realized environmental adjustments. A second conclusion is that the TESS-NH instrument is easily integrated in the tool-box of architectural practice. The combination of the traditional environmental assessment method of the architecture profession, and the TESS-NH method constituted a protocol that could be used prior to undertaking maintenance

works in care facilities for frail older people. By use of these instruments, features other than purely visual ones, such as acoustical and olfactory phenomena, can be explored in a more accurate manner in the milieu where frail older people live.

KEY WORDS: interior remodelling, maintenance, residential home, architecture, TESS-NH.

Research Paper V

Creating Empathetic Architecture for the Frail Older, – Socio-political Goals as Criteria in an Architectural Competition

This paper describes in detail the considerations a municipal organizer of an architecture competition must contemplate before opting for an architecture competition with the aim of rethinking space for frail older people. The municipality is a suburban municipality some 35 kilometres northwest of the Swedish capital Stockholm. During the 1950s and the 1960s a considerable growth in population transformed the former mainly agrarian community into a region with varying types of industries in the vicinity of a large city region. The municipality forecasts a significant growth in the age group of 65 years and older within the next decade, and presently about 17 per cent of the citizens belong to this age group. Although the majority of this age group generally experience a healthy ageing process there is a tendency towards an accentuated dependency among the oldest persons, aged 85 years and over.

This suggests a forthcoming need for additional residential care homes, either as new buildings or refurbishments of one of the seven existing care homes. However, the municipal administration for social welfare considered these care homes to be institution-like milieus in offside locations. Therefore, the administration lobbied for rethinking space for frail older people. The subsequent municipal architecture competition in 2006, an open ideas competition on new housing for older people with or without frailties was organized as a consequence of the facts stated above. The aim of the study was to reconstruct the municipal handling of this matter. This study used an interviewing guide that included a section with three questions that were to be answered by using a personal choice of photographs. Twelve persons involved in the municipal process of organizing an architectural competition were questioned as to their recollections of events taking place prior to, contemporaneously with or after the realization of the competition. Official documents identified these persons as key actors in the process.

All of the interviewees were able to supply their recollection of the course of events. Nonetheless, they emphasized different aspects of the process. These aspects reflected their different approaches to the matter of appropriate housing for older people. A discursive landscape emerged that described how considerations concerning the appropriate built space for older people were discussed during the process of organizing the competition. By using an existing model of the practice of architecture (Cold et al., 1992), in which architecture, human interactions and the built environments are located in the centre of four opposing dimensions—the phenomenon versus ideologies,

and societal implications versus individual understanding—the discursive model of the considerations that a municipal organizer contemplates could be traced.

Around a general discourse on human-spatial bound issues concerning ageing and architecture, five detailed discourses were identified that dealt with architecture for the ageing society. One discourse prioritized ethical concerns that influenced the realization of both architecture and care and caring. Another discourse supplied concepts possible to use both in eldercare activities and in architecture. A third one detailed political visions on a comprehensive level that acquired a spatial implication. The most forceful of the five discourses was the planning-based discourse that aimed at the realization of the project. Nonetheless, this discourse tended to diminish the ethical concerns and opt for generalizable solutions. The competition documentation reflected these discourses, and the conceptual discourse was the one that the architects behind the winning competition entry had assimilated with a spatial vision for the site. This study contributes with knowledge about the organizer's angle of interest when it comes to architecture competitions. It describes in detail a municipal planning process that has reference for the realization of programming documents in an architecture competition.

KEY WORDS: architectural competition, municipal organizer, discursive model, frail older, and design process.

Research Paper VI

Optimal Competition Briefs for a Public Design Process, three Swedish Briefs in Architectural Competitions on Housing for Dependent Seniors

This paper focuses on the programming documents of three architecture competitions that were oriented towards appropriate housing for older people with or without cognitive or functional disorders, and organized during the first decade of the new millennium. These three competitions were: Architectural competition regarding housing for elderly people at the Town Block Eagle in the municipality of Tingsryd in 2006, Flottiljen – Future-oriented habitats for the elderly, senior housing and sheltered housing in the municipality of Järfälla also in 2006, and the architectural competition regarding a senior and sheltered housing at the Bandy-Pitch in the municipality of Ljungby, undertaken in 2009.[90] All of the three competitions were acknowledged by the Swedish Association of Architects (SAA), and the programming documents were elaborated with support from this organization. These competitions reflect the varying conditions for built environments intended for frail older people, either on virgin soil (like the municipalities of Järfälla and Ljungby) or as a refurbishment of a built space that has existed for decades, and is located to a particular site (Tingsryd).

The purpose of this paper is twofold. On the one hand, to describe the municipal organizers' considerations for opting for an architecture competition and the subsequent municipal process of writing the necessary competition documents and assigning jury members (competition brief, spatial requirements and the jury assessment report). On the other hand, to understand how the architects used these documents in their crea-

tive work of conceiving a competition entry. Subsequently, the competition documents of each architecture competition were subject to close reading. By use of interviews and questionnaires, six to thirteen respondents (representatives of the municipal administrations and of the winning architect's firm) became key informants about the competition process. The three competition briefs had various discursive traits that were related to the authorship and the particular design task of the competition.

The overarching conclusion of this study is that the successful competition brief fulfils four defined objectives: to convey the organizer's intentions to the competition participants; to challenge the creative thinking of the participants; to supply defined assessment criteria and to equip the jury members with argumentative embryos that can be developed into fundaments for the final assessment of the submitted entries. The study supplies ground for a general conclusion that the competition brief is the fundamental document that vouches for a well-executed architectural competition. It requires a thorough preparation in order to accurately define the limits and the possibilities of the design task, its parameters, assessment criteria, jury composition and the referential consultation process. This is a responsibility that is shared between the organizer and the national association of architects.

KEY WORDS: competition brief, public organizer, assessment process, competition jury, and appropriate housing for senior citizens.

Research Paper VII

Architecture for the Silver Generation: Exploring the Meaning of Appropriate Space for Ageing in a Swedish Municipality

This paper focuses on notions concerning the appropriate architectural space that emerged prior to, contemporaneously with, and after, the execution of the Future-oriented habitats for the elderly, senior housing and sheltered housing in the municipality of Järfälla that the municipality of Järfälla organized in 2006. This competition aimed for innovative concepts for housing and living on the tarmac of a former airfield that was intended for the silver generation, namely those aged 65 years and older (including those still active and those experiencing some age-related frailties). Twenty-seven informants that in differing ways and to various extents had been involved in the process surrounding the competition were interviewed.

In order to delimit the informant's possible bias of either overemphasizing or diminishing his or her participation in the process, a qualitative interviewing guide was used that included a photographic survey for assembling recollections of a spontaneous nature. This survey was inspired by the Photolanguage method and a collection of 25 photographs were used in conjunction with answering three open question themes. Two questions themes referring to key items in the competition briefs were singled out. In addition, a third theme was equally selected and this dealt with national guidelines for architecture intended for frail older people. Due to the nature of the informants' reasoning in relation to the questions in the interviewing guide, the answers on the

selected questions as well as the photographic section were sorted according to the discursive types that had been identified in a previous study. These discourses constituted the discursive model of an open architectural competition. In a second step, the discursive data was analysed with quantitative methods that summed up the frequency of informants who shared a particular notion. The photographs were sorted according to the number of positive and negative connotations that the motifs generated.

The respondents emphasised the aesthetic dimension in architecture as aspect that are vital for the prolongation of ageing in place and for independent living in a residential care home. Moreover, the informants highlighted the necessity for both of these types of housing to be situated in an integrated location within existing urban settings but at the same time close to nature. In addition, it had to be possible to adjust the individual habitat to personal needs and spatial requirements. Based on the empirical findings within the photographic survey question section, a habitational model for exploring the appropriate space for ageing could be formulated. This model contained supplied characteristics of five different habitats for ageing; the appropriate habitat, the assisted one, the communal one, individual one, and the institutional one.

The main conclusion of this study suggests that architecture, through its location and spatial features, needs to generate positive associations with the users. In the creation of architecture for the future ageing society, the aesthetical dimension that is inherent in built space has to be exploited. This dimension becomes vital in a situation of a long-term condition (LTC) that gradually creates an increasing dependency on others in order to maintain everyday living, both when this matter is manageable within the ordinary housing or when it necessitates a flat in a residential care home.

KEY WORDS: architecture, place making, ageing in place, residential homes, and user values.

Summary

This chapter has briefly presented the seven research papers on which this study is built. The order of the papers is not chronological. Rather, these are arranged in an order that supplies a contemporaneous, retrospective and future-oriented perspective to the question of creating appropriate architecture for dependent and frail seniors. This order has ultimately been decided by the research process. The research papers are centred on a specific research question that deals with the relationship between ageing and architecture. Based on the research papers, twenty-five conclusions about space for the frail ageing can be accumulated; see Figure 18. The papers have aimed at establishing a broad knowledge of architecture for frail older people as well as an in-depth understanding on the interaction between the ageing person and the architectural space.

RP I (RO1)	● The residential home is mainly found in an adjacent or integrated localization and in this case architecture is adjusted to the surrounding built environment. ● The residential home has a monolithic facade with vertical windows and the main entrance is architecturally visible. The facade materials and shapes are used so as to give the residence a residence-like look. ● Residential care homes designed contemporaneously with the ÄDEL-reformen have a more varied spatiality and can be perceived as a home-like or hotel-like environment. ● Residential homes, built after the new millennium, reflect a hospital-like environment with details similar to those found in hospital environments conditioned by high hygienic standards. In this type of architecture, the interior space is realized by use of a multipurpose space along with a corridor-like space. This goes for both the communally shared space and for the individual flat.
RP II (RO2)	● Architecture competitions have in Sweden been used as a socio-political instrument to promote new architectural space for frail older people and to reorient social work in a more personalized direction. The study lends support to an overarching conclusion that if the competitions suppose a questioning of existing socio-political paradigms and the formulation of new welfare goals the architecture competition can promote a rethinking of cultural and social beliefs about space for social work.
RP III (RO1)	● Frail older people's movements and sojourns in the communal space of a care unit indicate the degree of perceived homeliness. ● Mental maps demonstrate the capacity of the architectural space to add a sensuous dimension to the communal space for exploitation in everyday activities. Zones for sojourns appear in conjunction with architectural elements that allow for an external view, a spatial overlook and, which thanks to the attractiveness of these elements generate social interactions. ● Mental maps indicate the degree of the older residents' dependency on the staff, since voluntary movements decrease in relation to aggravated problems. Thus, the number of staged zones increases as an effect of the ageing process. ● Mental maps describe an ongoing place-making process initiated by the frail older people themselves and conditioned by their health. ● Mental maps of the movements and the sojourns found at a unit for dependent seniors combined with the TESS-NH protocol supply a generic environmental assessment of architectural space, interior setting and the eldercare provided.
RP IV (RO4)	● The remodelling programme adhered poorly to the holistic idea that home is constituted by the interrelated qualities of activities, setting, social interaction, and time. This study highlights maintenance operations in residential care homes that remain in use during restructuring works. Such operations necessitate a comprehensive approach to ageing with eldercare, architecture, and maintenance operations that aims to identify remodelling actions that can be integrated into a scheme with a double purpose: to safeguard a high level of maintenance internally and externally of the facility and to design interventions that interact positively with the frail older people. ● Architecture profession methods and the TESS-NH instrument are two complementary tools that can be used to assess environmental changes in residential care homes.
RP V (RO3)	● A municipal decision-making process for organizing an architectural competition offers a discursive model of architecture. The discourses in the model reflect divergent considerations. These discourses were driven by personal experiences of architecture and human interactions with built environments, but they were also coloured by an acquired professional bias. ● The planning-based discourse was the most influential as it supplied factual arguments. The visionary discourse was the second most influential discourse as it nurtured political ambitions. The ethical and the conceptual discourses had less influence as their argumen-

tative validity was weakened by their relationship with general beliefs about human interactions with architecture.

● A unifying concept harmonizes divergent discourses. The unifying concept has to have a multidimensional character, which allows for an understanding of the unifying concept within each discourse.

● The organizer's motives for organizing an architecture competition are connected to the possible outcome of the competition. An architecture competition must engender advantages for the municipality, solve internal problems, and create an aura of innovation around the municipality that is possible to market.

● The Swedish principle of creating a homelike and residential-like milieu that forms a supportive environment for both wayfinding and a spatial overview for frail older people is too vague to generate pertinent spatial concepts necessary for generating new architectural thinking for ageing and care.

RP VI (RO2)

● The competition brief's main focus is to define the parameters of the design task at stake in the competition.

● The competition brief has three objectives that need have to be elucidated: 1) to specify the organizer's hopes and expectations for the architectural space; 2) to nourish the creative work of the architects during the competition; 3), to equip the jury with solid arguments for the subsequent assessment process.

● The competition brief has to supply a precise definition of jury members, the referential consultation process, and assessment criteria.

● The competition brief has to be approved by all of the jury members, including the SAA representatives. Furthermore, the official representative of the SAA has to analyze the composition of the brief, and advice the municipal organizer on the design task. This person also needs to approve the document.

● The number of questions raised against the competition brief is an indicator of the document. A range of between 3 and 15 questions suggests that the participating architects are able to make use of the competition brief and produce a reasonable mixture of architectural space on the given design task. A higher number of questions implies that the competition brief produces a variety of architecture which will be difficult to relate to the design task.

● The jury assessment process depends on the redefinition of the brief in order to understand the design task as expressed by the submitted entries. A sample of the competition entries are used to define aspects of the design task. This is architectural criticism, which the jury members are required to apply.

● The discursive character of the competition brief is relative to which organizing administration the public organizer has appointed, and to the scope of the design task. A conceptual and rhetorical discourse seems to be more suited to a municipal administration in charge of public assistance and care activities, whereas the planning-based discourse is used by the administration of real estate property.

RP VII (RO3)

● The overarching conclusion is that the appropriate habitat for the ageing Swedish society should exploit the aesthetic dimension of architectural space both in ordinary and in residential homes. These are located within existing, urban built environments in close proximity to nature and greenery. The relationship between ageing, architecture, and urban planning is particularly important in the localization of the residential home. The study also suggests that a trans-disciplinary approach towards ageing and architecture is necessary. This could be done by use of discursive and photographic strategies to advance a multi–faceted understanding of space for the ageing society.

Figure 18. List of twenty-five findings that have been generated by the seven research papers.

Discussion and Concluding Remarks

The main purpose of this research project has been to generate new knowledge about appropriate architecture for frail older people. The focus of interest for this research project has been beliefs about ageing and the corresponding relationship with architectural space. These notions act as primary generators in the creative process of shaping new architecture for frail older people (Darke, 1984). The research project has been guided by four objectives. These objectives have been employed in a contemporaneous, retrospective and a future-oriented approach. The objectives are discussed below in connection with the conclusions that have been formulated under the ceiling of each objective. Moreover, the limitations or the research methods used will be addressed. A general conclusion is formulated. The chapter ends with some ideas for future research and concluding remarks.

Figure 19. The continuum of homelikeness and residence-likeness and its constituting parts (J. E. Andersson, 2005a).

Discussion

With age, muscular and sensory capacities of the human body slowly alter and gradually our relation towards the built environment changes. We become shorter, bent or stiff. We fall, limp or stumble. In some cases, a stick, a rollator walker or a wheelchair become vital personal assistive pieces of equipments in order to continue participation in social life. For some people, the functional capacities remain stable but the cognitive abilities evaporate progressively. Cognitive disability changes the older person's personality and personal skills, and it restrains participation in social life. Moreover, their individual perceptions and use of architecture change.

Contemporary Residential Care Homes, Research Objective 1

The first objective, namely to assess the exteriority and interiority of architectural space of residential care home facilities, was attained by Research papers I and III. Together, they contribute with nine conclusions about the contemporaneous realization of residential care homes.

A pseudo-homelike, hotel-like or hospital-like appearance

By use of a theory that contained four spatial entities, Research paper I demonstrated that the envisioned homelike appearance encountered fewer obstacles in the outer architectural space than in the inner space. Inside the homelikeness spanned from a pseudo-homelike appearance, a hotel-like milieu to a hospital-like environment. The exemplary models suggested that the current trend in the architectural design of residential care home facilities exemplified a spatial compaction with reference to the hospital-like environment. This architectural evolution is consistent with the tendency of a changed ageing process with a higher number of older people who suffer from dementia or several diagnoses (Thorslund et al., 2004). This type of architecture also suggests an ongoing trend of the re-institutionalization of space for ageing (Milligan, 2009).

In that sense, Research paper I reveals the weakness of an open guideline since the hospital-like environment prioritizes the use of the multi-purpose space. This is a type of space that is preferred by architects and care planners since it provides a spatial overview and promotes group activities, but the frail older person searches for a private space (Duffy et al., 1986). The residential care homes built prior to the new millennium offered a gradation of space that included both communal and private space that is preferred by older persons (Barnes, 2006). Furthermore, the analysis of the façade and fenestration evoked the problem with the frequently used combination of a monolithic facade and a membrane facade, the penetrating daylight that created glare and reflections. This is a common mistake in architectural design for residential care homes, and constitutes a barrier for the sufferers of dementia, since their visuo-spatial problems are worsened by the intense differences in light (Torrington & Tregenza, 2007).

Another conclusion that can be drawn from this study is that the next challenge for the development of space for ageing is to understand the deeper meaning of home in the context of ageing with cognitive deficiencies (Cooper_Marcus, 1995). This study demonstrates the need for a definition of the concept homelike, and suggests a preliminary

definition of the spatial implication of this key concept. Architecture attains an existential dimension, and acquires a therapeutic value in everyday living (Day et al., 2000). Homelikeness is mainly active in the interior architectural space and in the perception of this same. Residence-likeness refers to both the interior and exterior space, and is part of the final understanding of homelikeness, see Figure 19. If there is a balance between the architectural aspects along the continuum of homelike and residence-like, an individual sensation of comfort, safety and security will occur, and the older resident will experience a sensation of wellbeing (K. Möller & Knudstrup, 2008a, 2008b).

The interior space as a prolongation of the exterior space for the frail person

Research paper III demonstrated how the communal space was appropriated by frail older persons. This appropriation was described by transferring the older person's movements and sojourns to mental maps. These maps confirmed the older person's need for a spatial gradation of communal space into zones of private and communal space (Barnes, 2006), but demonstrated that this private space constantly communicated with a communal one. The maps emphasized the capacity of the interior space to create zones for various uses: For example, sojourns for a personal contemplation of the events taking place at the unit, or a place strongly connected to the staff members' presence and work.

The maps demonstrated that the older person's movements considerably decreased at wards with residents in the late stages of dementia. This finding is consistent with research on the ageing human body that has concluded that the locomotory ability is the first capacity that is touched by the ageing process (Seidel et al., 2009). Instead, the various places within the communal space came of need, and were animated by the staff. This spatial need can be explained by the cognitive decomposition that the sufferer of dementia experiences.

In order to sooth the older person's anguish that is a result of the degenerative brain disease, these places provide a spatial context for the caring situation. This situation involves a staff member and an older person. The staff member affirms the older person's individuality by being close by and by giving a gentle caress on the arm or on the shoulder (Le_Gouès, 2006; Melin Emilsson, 1998). This study also suggested that the interior architectural space is a prolongation of the exterior space which implies that the space between the individual flats needs an architectural upgrade.

Origin of Guidelines for Residential Care Homes, Research Objective 2

Research paper II explored the origins of the current Swedish national guidelines for the design of these residential care homes, while Research paper VI focused on how socio-political welfare goals were implemented in the local context. Together, these papers supply eight conclusions regarding guidelines for the design of residential care homes.

Inquiry by a design driven process towards space for the ageing

Research paper II explored how architecture and social work for dependent seniors have attracted a reformative interest since the end of the 19th century, and developed

considerably during the 20th century. This endeavour has included two opposing forces, either an altruistic approach that has focused on the older person's well-being and individual experience of space, the ageing in place, or a rationalistic advance of finding the universal solution in order to solve the problem once and for all, the frail ageing. The three national competitions prepared for the de-institutionalisation of housing for frail older people that occurred during the 1990s. The individualized, adjusted and homelike environment was put forward as the ideal milieu for the older frail person (NBSW, 1983). The home and the concept of homelikeness became a general remedy even for the spatial stalemate that had occurred in the conception of space for the frail ageing, and sanction by the new social services act of 1982 (Malmberg & Henning, 2002; SFS2001:453, 1982; Wånell, 2000).

Paper II suggests that the opposition between the two key concepts homelike versus institution-like is subject to a thirty or forty year cycle: In 1907, the public dismay with large institutions for people with small means in old age resulted in an architecture competition that was intended to find new spatial solutions. The architecture of the second-prize winning entry displayed an external similarity to traditional wooden architecture, while the interior space constituted a segregated space for men and women, resident and staff.

Forty years later, in 1948, a new architecture competition was organized to tackle the interior spatial deficiencies and promote the first steps towards an individual space even for an ageing person with low income. Thirty years later, in 1979, a new architecture competition forwarded the existential dimension of architecture by the focus on new nursing homes as a humanized space of the hospital environment. The use of the regular use of the architecture competition suggests an inquiry by a design driven process of defining space for the ageing (Zeisel, 2006).

Architecture competitions as a socio-political instrument of change

Research study VI was an explorative study into municipal actors' considerations for organizing an architecture competition on appropriate architecture for older people in general and dependent seniors in particular. This study demonstrated how closely integrated the matter of architecture for frail older people is in the municipal decision-making process that involves local and regional planning besides national welfare goals (Bloxham_Zettersten, 2000, 2007; Dunin-Woyseth, 2001; Hagelqvist, 2010). The three municipalities used different approaches to prepare the competition documents, and the conclusion of this study was that a procedure that included a consultation process similar to other municipal matter proved to provide the best results. Globally, these examples raised the question of whether the competition brief was directly linked with the subsequent realization of the winning entry.

Given the use in these three municipalities, it was evident that the competition brief is a preparatory documentation that is drawn up prior to tendering documents that will define the building process (Ryd, 2003). The study also stressed the role of the national association of architects in the preparation of the competition brief. According to competition rules, at least two architects shall participate in the jury assessment process as experts (SAA, 2008; C. Svensson, 2008), but the cases suggested that this role of the

experts started even before this the competition had reached its final phase. The cases demonstrated the need for the involvement of these experts early on in the writing of the competition documents in order to supply advice on the definition of the design task and its parameters. Globally, the three cases suggest the complexity of interpreting national welfare goals for architecture for frail older people to apply to the local context, and there is reason to question whether this type of design task necessitates a special dialogue-based competition form (Danielsen, 2010).

Notions concerning Appropriate Architecture, Research Objective 3

Research papers V and VII explored the third objective of this study—notions among people involved in the municipal planning of eldercare and the new built environments, about the appropriate architectural space for the future ageing society. The majority of the respondents were untrained in architectural thinking, but the sample of twenty-seven interviewees included five architects. The same sample of respondents was used in the two research papers. These papers generated six conclusions regarding architecture for the frail ageing.

Homelike versus institution-like environments for frail older people

Research paper V explored the underlying decision-making process of organizing a municipal architecture competition in order to promote an innovation of the local design of residential care homes. By this focus on the preparatory phase of an architecture competition, this study differs from other studies on architecture competitions since these have studied the main constituents of the competition: competition brief and competition entries (Rustad, 2009; Tostrup, 1999). This approach supplied information on the preparation time for a municipal competition, since the competition in the study had been prepared for two years by two municipal administrations, the Administration for Social Welfare (ASW) and the City Planning Office (CPO).

Moreover, the diversified information obtained from the respondents produced a discursive landscape of how the option of an architecture competition was discussed within the municipal organization. This discussion did not only involve the administrational officers and staff, but also the Municipal Executive Office (MEO) since the architecture competition was used as a means to attenuate local political controversies.

This emphasizes the closeness between architecture and the political agenda (Bloxham_Zettersten, 2007). A key issue in this discussion was to re-orientate the local design of residential care homes in a more homelike direction, and away from the existing institution-like environment. This motivated the ASW to write the competition brief, instead of what could normally be expected to be a task for the CPO or the administration for real estate matters. This attributed the competition with an organizational input, since the future users became involved (Stang_Våland, 2010), which necessitated the production, by the made the winning architects, of an entry with a certain fuzziness open for interpretation and later changes. This degree of openness was exploited in the realization process, but the study paves the way for a detailed discussion on the organizational form of architecture competitions that deal with buildings

subject to socio-political welfare goals (Bloxham_Zettersten, 2007; Danielsen, 2010; Stang_Våland, 2010).

Faceless users of appropriate space for the ageing with frailties

Research paper VII focused on the constituents of the appropriate space for the ageing society. The informants of these papers forwarded the aesthetic dimension of architecture as a means of creating events important for everyday life and consequently affecting the quality of life in terms of perceived wellbeing and participation in everyday life. It is noteworthy that although the general opinion among the group of respondents was that the existing residential care homes were institutional and situated in offside location, few models of the envisioned and ideal environment were advanced.

The probable cause of this lacuna is that ageing is an integral part of life (Messy, 1992), and that this refers to a comfortable ageing process without any particular frailties that would affect everyday life and social participation. The general understanding of ageing is that of a timeless and unchanging situation in a built environment, which during the appropriation period has become familiar and integrated in one's life (Hurtig et al., 1981; Malmberg & Henning, 2002; Rowles, 1993, 2000).

This evokes a dilemma in architecture for the ageing with severe frailties since people in general are horrified by two things, ageing and poverty, "these are two ugly things."[91] During the holiday period in the summer of 2003, the massive heat wave in Europe caused a considerable death rate among older people who were left at home in the ordinary stock of housing or in residential care homes (J. E. Andersson, 2004). This type of architecture is not discussed publically, and when addressed it centres on the ageing with mainly functional frailties. One example of this outcome is that of the two DEL reports (DEL, 2007a, 2007b), which mainly explored housing for older people with few frailties but called for more research in the matter of architecture for frail older people. This puts architecture for frail older people in a vulnerable situation since a spatial form of ageism occurs (L. Andersson, 2002): the possible users tend to avoid discussing important spatial qualities in a situation of a long-term condition with an extensive need for care and caring.

Environmental Assessments and Frail Older People, Research Objective 4

This objective was explored in Research paper IV. A colour intervention project in two residential care homes was assessed prior to and after completion by use of architecture professional methods and the TESS-NH instrument. This study generated two conclusions concerning the design of maintenance operations undertaken while residents remain in place, and the use of environmental assessment tools.

Colour interventions demand trans-disciplinary environmental assessments

This study evokes the ethical and practical dilemma of maintenance operations undertaken in the interior setting of a residential care home. The main intention with the residential care home is to offer a special type of housing for dependent seniors with a regular care and caring. This poses a legal status problem: The architectural design of the building and the forthcoming maintenance refers to building legislation that concerns

residential architecture and work environments in general (SFS1977:1160, ; SFS1987:10), whereas the eldercare activity undertaken inside the building is subject to the Social Service Act, the Health and Healthcare Act and the Patient Safety and Security Act (SFS1982:763, ; SFS2001:453, 1982; SFS2010:659).

The older resident's legal status when it comes to the flat is described in the Lease and Tenancy Agreement (SFS1970:994) by which the residential care home flat is juxtaposed with a flat in the ordinary stock of housing. This makes the resident's situation in case of a maintenance operation precarious. Since residential care homes are buildings in continuous use, it would be desirable that maintenance of these facilities would be adjusted to this situation rather than be undertaken according to standard procedure developed for the ordinary housing market. Consistent with other research on interventions in interior settings of care environments (Becker & Poe, 1980), the Research paper IV concluded that colour as the single parameter of an interior change of a ward for frail persons was a blunt and simplistic tool.

By this approach, the complexity of creating a supportive environment for dependent and frail seniors was never addressed, and the main factor of a successful operation, the residents' integration in the process, was omitted (Becker & Poe, 1980). The Research paper IV introduced the parallel use of two environmental assessment instruments, the Architecture Professional Method, APM, and the therapeutic environment screening scale for the nursing home, TESS-NH, which proved to be a successful match. This substantiates the need for a holistic approach in the assessment of appropriate architecture for frail older people (Lewis et al., 2010).

Limitations and Methodological Concerns

This research projects hold some limitations. The assessments, the interviews and the observations have been performed in a specific cultural context, and homogeneous Europe and or Swedish background may limit the representativeness of this study (the other nationalities were Austrian, Danish, and Finish). It is possible that some of the empirical findings that have been accumulated in this research project would only occur in a Swedish context. The seven case studies have been conducted in large city regions. Consequently, the findings presented in this study may suffer from this bias. Furthermore, language may have been a factor of influence on the accumulation and interpretation of research data: Swedish was used as the main language of communication in the interviews. Although Swedish is a Germanic language and shares the same linguistic origin as English, there is a risk that the translation process into British or American English may have disturbed the correct understanding of the collected discourse, since fine connotations of certain concepts or words along the personal use of language may also be lost in translation.

The findings in this research project necessitate some caution that is due to methodological concerns. The major objection that can be raised against this research project is that the empirical findings have been obtained by qualitative research methods. However, due to the complexity of assessing appropriate architecture for the frail older people, a qualitative research approach is valid, since this type of study demands a holis-

tic perspective in order to elucidate and explain correlations that are strongly linked to people's experiences of the built environment (Marshall & Rossman, 2011). Moreover, the use of qualitative research can be related to the user's competence of conducting such research. Therefore, the accumulation of research data may be biased by the researcher's approach towards the phenomenon to be explored. This possible bias has been circumscribed by the use of multiple and parallel cases along with a heterogeneous research strategies. This approach has allowed for the triangulation of the findings in the present study (Seamon, 1982; Yin, 1994, 2003). Moreover, the research data has mainly been interpreted by qualitative methods, although a mixed methods approach has been used in some of the research papers (research paper I, IV, VII) (Creswell et al., 2003; Onwuegbuzie & Johnson, 2008). This approach is believed to strengthen the validity of qualitative studies (Onwuegbuzie & Johnson, 2008).

Objections may also be raised against the representativeness of the samples used. The population group at the residential care homes has been accepted as a fundamental condition of the residential care home milieu. The only inclusion criterion was the resident's willingness to participate in the study and the fact that this person had acquired his or her flat in this particular residential care home after an individual assessment of his and her individual needs at the local administration for eldercare (research paper III). The actual grounds for this decision are classified information and have not been part of the research material (SFS2001:453, 1982, 2001). However, there has not been reason to believe that the assessment would be erroneous, and the inclusion of this data would have required an approval from an ethical research board (Swedish_Research_Council, 2002).

In the case of the sample of informants on notions concerning appropriate architecture for the ageing society, these have been identified through official documents that have been made available thanks to the principle of access to public archives (Research paper V and VII). The selection of individuals with a disparate professional or personal background and competence may seem to be ad hoc. However, this selection has been activated by the municipality that based its selection on the assumption that these persons would contribute positively to the organization of a municipal architecture competition. Given the Swedish civil administration with local governments implementing nationally defined welfare goals supervised by regional councils (SFS:1991:900), it is likely that the same ad hoc composition of informants would occur in relation to any other architecture competition that was chosen for similar research projects which, like this one, mainly focus on the built environment.

The sample of models of exemplary buildings may also suffer from a bias from the original assessor, in this case an older person, researcher, staff member or a jury assessment report, since the only inclusion criterion was a residential care home that was perceived as an appropriate example (Research paper I). However, some of these residential care homes have been assessed in a similar way and included in various documents (NBSW, 1999; Paulsson, 2001). In the case of the intervention project, these maintenance need was the ultimate cause for the inclusion in the project (Research paper IV).

The informant of each example may also have been influenced by the visit that might have led this person to overemphasize particular details. An attempt to limit this influence has been the use of multiple sources of evidence (field notes, photographs and drawings) (Yin, 2003). The sample of architecture competitions in this study was based on available documentation and presentation in official media. This inclusion criterion may have been erroneous and made other competitions of interest disappear. However, in this case too, secondary sources have corroborated this choice (K. Sundström, 1985; Waern, 1996).

Finally, the research project spans over a chronologically long period and involves the social evolution of a nation from being a poor and underdeveloped European country into becoming a modern democratic welfare state with a social insurance network. This broad approach towards architecture as a result of social changes has necessitated a trans-disciplinary approach that has included other fields of research on social work for dependent and frail seniors, namely history, human geography and gerontology. Furthermore, the research project expands into other fields of research that involve the human ageing process, medicine, nursing science, occupational science and psycho-gerontology, and this also constitutes a factor of caution.

The magnifying lens used in the study has been focused on architecture for frail older people. Therefore, it can be argued that this interest has created a bias that partially excludes other influencing factors. Viewed from these neighbouring fields, the conclusions of this research project might be considered as fragmented or shallow. In response to that criticism, an established model of architecture as a practice has been used that poignantly illustrates the all-inclusive-approach that the research project has necessitated (Cold et al., 1992). Furthermore, it can be said that the study supplies credible, consistent and valid conclusions (Groat & Wang, 2002; Guba & Lincoln, 1989), since the study complies with five fundamental criteria for qualitative research and data analysis: 1) the research strategies are grounded in architectural practice and explores human interactions with space; 2) these strategies have accumulated a multitude of research material that allow for broad and in-depth analyses; 3) the extensive sample of this study enhances the generalizability of the findings; 4) the study is based on ethical considerations and the interviewees have approved the transcriptions, and 5) the findings are grounded in real life settings and empirical (Curtis, Gesler, Smith, & Washburn, 2000; Miles & Hubermann, 1994; Patton, 2002).

General Conclusions

Globally, the seven research papers supply an ambiguous picture of the appropriate architecture for frail older people, and in a larger sense, for the ageing society. The following general conclusions can be extracted from the studies.

Stagnant Development of Space for Frail Older People

In 1907, the fin-de-siècle liberal interest in the matter propelled the idea of a homelike environment for the ageing person as a reward for an assiduous life. The size of the bed was the only spatial parameter that displayed some respect for the end-users of the space. The subsequent architecture competition transferred this idea into a residential-

like exteriority, while the architecture competition of 1948 upgraded the interior architectural space in a more individualized and user-friendly way. However, this competition was conditioned by a belief that there existed two types of ageing. The "normal" ageing was considered to mainly imply functional deficiencies with small cognitive flaws, while the "abnormal" ageing referred to cognitive disorders. The architectural space was adjusted to the functionally disabled person's need. The wheel-chair became and is still a significant factor in the proportioning of architectural space.

In a sense, there is a distant echo of the ancient belief regarding right to societal assistance, the worthy and unworthy type of poverty (Förhammar, 2000). This has created an unfortunate division of space for ageing, either within the ordinary stock of housing or special buildings for older frail people. By this division, architecture for the frail ageing has been randomized and continues to bear a certain stigma of the ancient institutions of the poor relief aid. One of the informants states that *"they are (...) set aside from the rest of the living, so to speak. Inside, it is the whole feeling inside: long corridors and individuals slithering up and down the corridors"* (J. E. Andersson, 2011, p. 285).

Until the end of the 1970s little was known about the spatial implications of the ageing with a long-term condition that resulted in cognitive or functional deficiencies. Instead, rational considerations active on a general level of understanding space for the ageing have dominated the architectural design. Therefore, another conclusion of this thesis is the stagnancy with regard to the development of architecture for dependent and frail seniors. For fear of seeing the negative implication of ageing, the future user of this architectural space, the older resident, is hidden behind the credo of the homelike environment.

The lack of definition of which spatial features characterizes such an environment makes requirements important for the eldercare activity as a working environment more influential on the architectural design than exploiting the aesthetical dimension of architecture that is vital for the residents. The long-term use of buildings that incorporate residential care homes are a particularity of this type of architectural space for the ageing with frailties. Another conclusion is that the public opinion and the political vision of space for the ageing and its implication through civil administration seem to be out of tune most of the time during the 20th century.

Space for the Future Ageing Society a Type of Inclusive Design

The development of architectural space for the dependent and frail of the first decade of the new millennium suggests that rational considerations have once again come to supersede the aforementioned vision. This has been a reoccurring combat that is illustrated in the use of the homelike environment as the ideal environment in opposition to the institution-like milieu that represents the de-individualized and negative space for ageing. Thus, the overarching conclusion of this research project is that the appropriate space for the future ageing society is a type of inclusive design. It is a type of a built space that is intentionally designed with a universal respect for the individual's possible deficiencies in terms of cognitive problems or functional disorders (Clarkson et al., 2003).

This built environment for either of the two possible scenarios for ageing—one that is predominantly free from age-related deficiencies and the other one with severe cognitive or functional disorders—is a type of residential architecture. In that sense, an important conclusion of this research project is that the localization of the residential care home needs to be integrated in an already existing residential area, and not in an offside location. However, this ideal position necessitates closeness to nature and social activities. Consequently, the localization principle of the residential care home is in need for a normalisation and of being treated on equal terms with any other type of residential architecture.

New Co-Operations to Achieve Architecture for the Frail Ageing

In order to become a valid design criterion for the future development of innovative architecture for frail and dependent seniors (Rönn, 2002), the concept of homelikeness needs a detailed definition of its constituents. This concept contains deeply rooted individual connotations but also by its use during the 20th century socio-political welfare ambitions for residential care home architecture. The overarching conclusion of this study is that architecture for the frail ageing constitutes a particular type of space that requires an extended dialogue in order to conceive appropriate architecture for the ageing society. This dialogue is active as well as on a conceptual level as on a level of realization.

The dialogue involves on equal terms dependent seniors, relatives, architects, building contractors and care planners as well as members of the care staff. Being at the threshold of the ageing society, there is a significant need for a better understanding of architectural space, and its ability to create a supportive framework for frail and dependent seniors and eldercare. The previously mentioned actors elucidate human interactions with the architectural space conditioned by the frail ageing, the older person, care and caring, whereas the latter ones can transform these interactions into an appropriate space for the frail older person suffering from long-term conditions. This exchange supposes an extended co-operation in order to promote trans-professional interactions regarding the design task, and contemplate long-term effects of the chosen solution (Dehan, 2007).[92]

By use of modern information technology, the future residential care home is assembled as an artefact in virtual reality (VR), and submitted to a trans-professional group of evaluators prior to the production of two-dimensional drawings (Bluyssen, 2008; Bridges & Charitos, 1997; Ivarsson, 2010). This co-operative manner of working will influence present models of construction works as well as organizational forms of architecture competitions. This co-operation between planners and end-users needs further development in order to create an empathic architectural design for frail older people with long-term conditions (LTC).

Future Research

In the 21st century, the ageing and the process of ageing have become design criteria and constituted spatial requirements for architecture. Still, due to the comparatively small number of people of a full population who gets severe age-related problems, the preparations for the ageing society are mainly addressed within a special type of architecture that materializes in answer to suffering from a long-term medical condition. Limited to the context of a thesis, this study has only made some superficial scratches on the surface to uncover the window on this emerging society. A desired avenue for future research would therefore be to integrate the changed human perception of architecture and space that is due to the ageing process on a general level of architectural thinking:

Given the fact that a large number of people in the western hemisphere reach the later stages in life, what type of architecture, infrastructure and spatial adjustments is necessary to produce? This would imply a trans-disciplinary approach that involves healthcare science, human geography, medicine, occupational science and social science. Which new types of habitats, which new types of spatial concepts would result from such an attempt? The architecture competition supplies an interface in which to do this in the visualization process of architecture as a virtual reality. This study has shown that the architecture competition has been used in this way to give social ambitions an architectural gestalt.

Another plausible avenue for future research on appropriate architecture for frail older people would be to make an inventory of spatial solutions that have been produced in connection with the current paradigm of active ageing, and to explore how this motto has been realized in the context of residential care homes. There is reason to believe that such a study with an explicit focus on the realized architectural space would demonstrate that new ideas are not necessarily followed by spatial rethinking, although architectural space has been used to reorient the residential care home from the hospital environment to the residential milieu (Selander, 2001).

However, the special requirements imposed on architectural space in order to create a supportive architecture for the frail person have neither been investigated within architectural research nor within the architectural practice. Instead, empirical findings with an architectural implication have been collected primarily within neighbouring fields of research as presented in Chapter six. Thus, the spatial realization of active ageing is still an item on the architects' drawing board that has to be addressed.

It is important to stress that the present study maintains a holistic interpretation of architecture as a combination of building design, interior design, landscape architecture and physical planning. In consequence, new avenues of research on the appropriate space for frail older people advocate a holistic approach towards the realization and perception of space. In this future direction of architectural research for the dependent and frail aged person, the focus of interest must be oriented towards the global outcome of environmental factors present in the computer-simulated space; daylight, material, lighting, interior colouring, sound and noise; these are ambient factors that in-

fluence the human perception of space (Vischer, 2006). By doing so, the effects of maintenance operations can be foreseen.

A third avenue of research would be to reform routines for building maintenance in an empathic way that would make maintenance user-friendly and allow older residents to stay in place during execution. Maintenance becomes part of the animation of the built environment. This implies research on the interaction between the architecture, building and real estate sectors and the local eldercare activity in residential care homes. It could either entail new empathic collaborative forms in the early stages of the design process, like the French SEPIA[91] model (Dehan, 2007), or detailing of the ethical values involved in eldercare in a process of interaction and knowledge integration (Kadefors, 2010).

A fourth avenue of research would be to further explore the Swedish use of the architecture competition as a socio-political instrument, and integrate it in an international perspective. This approach towards the appropriate architecture for frail older people constitutes an inquiry by design and it has been implemented in Sweden since the mid 19th century (Zeisel, 2006). Within this approach the distance between practice and theory has been considerably compressed, to some point at the expense of research into the matter. It is a Swedish particularity that there is little ongoing research with a focus on how to design appropriate environments for frail older people. In the other Nordic countries, continuous research into the matter is still upheld, for example the national institutes of research into the built environment that exist in Norway and Denmark.

Albeit this difference, during the preparation of research with a retrospective approach on the use of the architecture competition, some key details appeared that suggest that architecture competitions, and thereby the design by inquiry approach, have been used in ways similar to the Swedish one in Denmark and Norway[93]. Architects' drawings of old people's home and other similar buildings in these Nordic countries display similarities with the Swedish example. A pursuit of this line of research would be of interest, not only from an architectural point of view, but also from the perspectives of other disciplines, not in order to test a frequently referred to assumption in countries situated outside Europe that the Nordic countries hold a key to the development of future housing for frail older people.

Contribution

The main intention with this research project has been to provide knowledge that can improve design thinking when it comes to architecture for frail older people. This intention has been pursued in a contemporaneous, retrospective and future-oriented direction. At the beginning of the research project, it was assumed that in the final version of the doctoral thesis the centre of gravity would be found in the present situation with some references to past events but with a clear indication of future avenues for architecture for dependent and frail seniors. However, during the research project this ratio was overturned. The empirical findings suggested that beliefs and notions concerning the appropriate architecture for dependent and frail seniors suffered from an

influence inherited from the past. The focus on spatial prototypes found in institutional and private architecture and occurring in architectural press opened up for a historical investigation into the origins of contemporary recommendations for the architecture for ageing with frailties.

This research unravelled the recurrent use of the architecture competition as a socio-political instrument for programming architectural space for eldercare in Sweden. Therefore, the main contribution of this study is the demonstration that the comprehensive and generalizable level of understanding the relationship between human being and the built environment that architectural practice requires has also become the angle from which people within eldercare reason about spatial qualities for the ageing. By doing so, the existential aspects of architecture that are vital for the frail person in an everyday situation never appear in the discussion. This produces a void between architectural planning, care planning and the execution of eldercare on a daily basis. This discrepancy makes guidelines of a non-institutional environment—the ideal homelike and residential-like architecture—into a blunt instrument for promoting the qualities of the individual habitat. The key contribution of this thesis is to have forwarded the direct, the nano-level, of human interactions with architecture to the centre of the future discussion of the appropriate architectural space for the ageing with frailties.

Concluding Remarks

Ageing is an integral part of life: without ageing there is no possibility of expanding personal knowledge and having new experiences (Messy, 1992). This existential view has similarities with the creation of architecture: without a multitude of interpretations of a given design task there exist no possibility of analyzing the appropriateness of architectural design and its constituting elements in order to make it better. This research endeavours has resulted in a study that provides new findings with an architectonic perspective towards the matter of appropriate architecture for frail older people. The study has demonstrated that this type of architecture necessitates a closer exchange of ideas between architects and other building experts and the care and caring professions in the early phase of the design process in order to produce architectural features that will animate the interior space of the residential care home.

The current conception of ageing as a part of life with full activity, the concept of active ageing (WHO, 2002), describes an ethical framework that has to be further detailed in the context of ageing with long-term conditions. It is a matter of having a zooming faculty, zapping back and forth from the individual meaning of architectural space, to the tectonic idea of space, to the stereotomic perception of interior space. This has to be done with an ethical approach towards architecture for eldercare. Appropriate space for ageing is of general concern for everyone.

Overview in Swedish

När ett åldersrelaterat problem blir ett långvarigt sjukdomstillstånd (LTC), som medför en tilltagande oförmåga att utföra aktiviteter i dagligt liv (ADL), uppstår en ny livssituation för den äldre personen. Den äldre personen behöver ett ökat stöd från anhöriga eller äldreomsorg för att kunna upprätthålla ett självständigt liv och delta i sociala aktiviteter. Det funktionella eller kognitiva funktionshindret kan kräva att det byggda rummet anpassas efter den äldre personens individuella behov. I det fallet bekostas anpassningen med hjälp av ett bostadsanpassningsbidrag, som samhället erbjuder efter individuell prövning (SFS1992:1574). Den rumsliga anpassningen tillsammans med behovet av omsorg och stöd kan också vara så omfattande att den äldre personen behöver ansöka om en bostad inom utbudet av särskilda boendeformer för äldre personer med stora omsorgsbehov. Dessa bostäder beror av vad det utbud av boendeformer som de svenska kommunerna kan erbjuda inom ramen för sitt huvudansvar för äldreomsorg. I detta fall handlar det om en särskild form av arkitektur som är anpassad dels efter en bostadssituation för äldre personer med kognitiv och funktionell svikt, dels efter de krav på en funktionell och säker arbetsmiljö som dygnet-runt-service med vård och omsorg förutsätter.

Denna avhandling är förankrad i svenska förhållanden och handlar om arkitektur och rum för äldre personer med stora omsorgsbehov. Ett äldreboende är en boendeform där den privata bostaden förenas med en omsorgsfunktion (NBSW, 2011a). Idag bor ca 95 200 personer i ett äldreboende (SoS 2008). Den främsta anledningen till varför en äldre person behöver en bostad i ett äldreboende är numera demens, men det kan också handla om demens, hjärt- och kärlsjukdomar, eller andra inskränkningar i kroppens rörelseförmåga. Arkitektur som är utformad för ett åldrande med stora omsorgsbehov kan å ena sidan bejaka den äldre personens försök att upprätthålla ett självständigt liv, men den byggda miljön kan också motarbeta denna strävan genom att förbise anpassningar efter funktionella och kognitiva funktionshinder.

Studien har byggts upp kring fyra uttalade syften: a) att utvärdera samtidens arkitektur för sköra äldre personer; b) söka ursprunget till riktlinjer som påverkar utformningen av samtidens äldreboenden; c) identifiera föreställningar om framtidens goda rum för åldrande bland personer som huvudsakligen inte har en arkitektutbildning; samt att d) implementera olika metoder för att utvärdera arkitektur för sköra äldre personer. Genom designteori, fallstudiemetodik och parallella forskningsstrategier har syftet varit att

utforska samspelet mellan äldre personer med svåra åldersrelaterade och det byggda rummet som det gestaltar sig runt de boende och omsorgspersonalen i äldreboendet.

Detta forskningsarbete har resulterat i sju artiklar kring olika aspekter i denna samverkan mellan åldrande människor och det byggda rummet. Samspelet mellan arkitektur och personer med stora omsorgsbehov har undersökts i ett tredelat tidsperspektiv: ett tillbakablickande, ett samtidsbeskrivande och ett framtidsblickande perspektiv. Den utökade sammanfattningen börjar med en återblick på hur arkitektur och rum för åldrande med omsorgsbehov har samspelat över tid. Därpå följer ett avsnitt som handlar om samtida arkitektur för särskild boende-form för äldre. Detta avsnitt föreslår en rumsteori som kan användas för att analysera utformningen av äldreboendets arkitektur. Här presenteras även en studie som använder mentala kartor för att beskriva hur äldre personer interagerar med det byggda rummet. Det avslutande avsnittet har ett framåtblickande perspektiv. Det redovisar olika uppfattningar om det goda rummet för åldrande i det mognande samhället som växer fram i och med att befolkningen åldras. Dessa uppfattningar har fångats hos en grupp personer som varit inkopplade i arbetet med att organisera en kommunal arkitekttävling kring framtidsinriktade boendeformer för äldre med eller utan omsorgsbehov.

En återblick på arkitektur för samhällelig omsorg

I mitten av 1970-talet publicerades en översikt över byggnader som använts för olika samhälleliga ändamål. Den handlar om anstalter för bestraffning, omsorg, uppfostran eller vård, och översikten sträcker sig tillbaka till 1500-talet (Åman, 1976). Med stöd i denna grundliga sammanställning går det att påstå att dessa byggnader utgör en särskild form av arkitektur. Den har inte några större arkitektoniska ambitioner annat än att ge en rumslig gestalt åt de rationella krav, som en styrande samhällelig idé om det lämpliga rummet för bestraffning, omsorg, uppfostran eller vård ger upphov till. Ursprungligen har det handlat om stora salsbyggnader som med hjälp av möbler, skärmar, sängar eller enkla väggkonstruktioner kunnat delas av tillfälligt för ett varierande antal personer och en förändrad verksamhet.

I takt med samhällsutvecklingen har dessa stora rumsformer övergått till mindre rumsenheter för särskilda ändamål. I de fall där dessa byggnader blev en arkitektuppgift, så visar det stora tidsperspektivet tillbaka till 1500-talet på att det främst har handlat om byggnadernas yttre form. Det handlade om en hårdhänt omarbetning av byggnaderna för att möta andra behov och nya arkitektoniska ideal. Det har blivit till en typ av *talande arkitektur*, som genom sitt formspråk inger betraktaren en viss form a sinnesstämning (Blondel, 1771). Den eftersökta känsla som arkitekturen ska inge spänner från fruktan till hemtrevnad, den fullständiga och stränga institutionen (Foucault, 1975) till den hemlika och ideala miljön för äldre (Bergh, 1996).

Från reformationen till slutet av 1700-talet

Den svenska Reformationen innebar att den sociala omsorg och vård som Katolska kyrkan genom kloster, lasarett och olika välgörenhetsinrättningar försvann. Kloster- och hospitalsbyggnader övergick till att användas främst för sjukvård. Den samhälleliga om-

sorgen om personer i samhällets utkant upphörde, och den sociala misären på grund av dåliga skördar ökade. Reformationens fader Martin Luther predikade att "arbete var det bästa sättet att vörda Gud" (Unger, 1996, p. 22), och lösdriveri och tiggeri var straffbart. Kyrkoordningen från 1571 försökte lösa detta problem genom att de olika församlingarna påbjöds att uppföra *sjukstugor* med 4 till 6 bäddar. Under slutet av 1500-talet och början av 1600-talet förvärrades situationen ytterligare på grund av krig och fortsatt missväxt. Fler och fler personer tvingades till tiggeri, men kungamakten ansåg att de nyligen uppförda sjukstugorna hade orsakat missförhållandena i samhället.

I 1624 års hospitalsordning påbjöd Gustav II Adolf att de nyligen uppförda sjukstugorna skulle rivas. Istället skulle ett begränsat antal av de tidigare klostren, nu benämnda hospital, ta hand om personer som var i behov av samhällets omsorg och vård. Bönderna förhalade förverkligandet av beslutet, medan prästerskapet försökte få kungen att dra tillbaka förordningen (Unger, 1996). Efter kungens död 1632 blev läget alltmer kritiskt, och nya försök till lösning utarbetades (Unger, 1996). I 1642 års tiggarordning infördes förutom kravet på sjukstuga även regler för uppförande av särskilda *fattighus* inom städerna och församlingarna på landsbygden. Tiggarordningen anses av socialhistoriker som revolutionerande, eftersom den innebar ett första steg i utvecklingen av svensk sociallagstiftning (Unger, 1996, pp. 89-93). Förordningen definierade en tvådelad modell för samhällelig omsorg, å ena sidan medicinsk vård och omvårdnad på nationell och regional nivå, andra sidan samhälleligt stöd och omsorg på lokal nivå (Ibid.).

Den allmänna uppfattningen var att det fanns två typer av fattigdom: Den ena formen uppfattades som orättvis och handlade om hjälp till svaga individer, barn eller äldre personer (Sjögren, 1997; Unger, 1996). Den andra typen av fattigdom ansågs som ovärdig och självförvållad. Här handlade det om vuxna personer som av allmänheten utpekades som arbetsovilliga och därmed inte förtjänade sitt uppehälle (Ibid.). Denna dubbelbottnade uppfattning om vem som hade rätt till samhällets omsorg och stöd skulle komma att påverka socialt arbete i Sverige ända in på 1900-talet (Förhammar, 2000). Tiggarordningen från 1642 förblev i stort oförändrad framtill fattigvårdsreformen 1847 (Lindstedt, 1915). Tiggarordningen fastslog att fullt friska personer inte hade rätt att tigga, utom i särskilda fall när omständigheterna så krävde det, men enbart inom hemförsamlingen (E.-F. Lindberg, 1956). I kyrkoordningen 1686 inskärptes detta ytterligare, samtidigt som kravet på att församlingarna skulle tillhandahålla fattighus utökades. Kungliga dekret från 1698, 1788 och 1811 gick i samma riktning, men betonade samtidigt vikten av att samhället sörjde för fattiga människor genom bidrag eller välgörenhet (Lindstedt, 1915).

Samhälleliga institutioner under 1800-talet

Med inspiration av den översyn av fängelsebyggnader och sjukhusbyggnader som filantropen John Howard initierat i Storbritannien under 1770-talet genomförde den svenske läkaren och nationalekonomen David von Schulzenheim (1732-1823) en liknande översyn av byggnader för fattigvård, fångvård och sjukvård i Sverige. I ett tal i Vetenskapsakademien 1799 riktade han en skarp kritik mot både tillståndet i byggnader och verksamhetens innehåll (Schulzenheim, 1801). Talet fick en stor uppmärksamhet och befäste Schulzenheims position som moderat oppositionell mot det kungliga enväldet under Gustav IV Adolf. Efter kungens avsättande 1809, fick Schulzenheim en ny karriär

under Karl XIII och Carl XIV Johan. Han utsågs till ordförande i Collegium Medicum, som instiftats år 1663 för att övervaka medicinsk forskning och utveckling. År 1813 ombildades kollegiet till Sundhetskollegiet och kom att bli en föregångare till den moderna socialstyrelsen såsom den reformerades till att bli 1968 med inriktning på både hälso- och sjukvård liksom samhällelig omsorg.

Schulzenheim siktade mot en arkitektonisk förbättring av byggnader som användes för främst fångvård och sjukvård (Åman, 1976). År 1813 utlyste Kungl. Slottsbyggnadsdirektionen, som förvaltade statliga byggnader i Stockholm, en arkitekttävling om ett nytt garnisonssjukhus på Kungsholmen i Stockholm (B. Lindberg, 1937; Waern, 1996). Tävlingsprogrammet hade utarbetats i nära samråd med Sundhetskollegiet Trots två inlämnade förslag utsågs inte någon vinnare, utan det blev tävlingsjuryns ordförande, arkitekten C C Gjörwell dy (1766-1837), som ritade det nya sjukhuset med 430 platser. Inom fängelsevården uppmärksammades tidigt förtjänsterna med den enskilda cellen, både som uppfostringsmedel till bot och bättring och som medel för att bekämpa epidemier som drabbade både intagna och personal. Sundhetskollegiet initierade en upprustning av fängelser och sjukhus, medan byggnader för fattigvården kom att förbli oförändrade framtill 1900-talets början (Åman, 1976). Under 1840-talet genomfördes en genomgripande förändring av fängelseväsendet under den samhällsintresserade kung Oscar I (Oscar_I, 1840; Åman, 1976).

David von Schulzenheim ansåg att fattighusen var ett uttryck för ett inbyggt fel i samhällssystemet, som i dess ideala form inte skulle förekomma alls (Schulzenheim, 1801; Åman, 1976). Fattighuset var därför ett nödvändigt ont, och Schulzenheim förespråkade öppna fattigvårdsanstalter framför slutna institutioner.[94] År 1829 inleddes arbetet med att reformera tiggarordningen från 1642 och skapa en ny fattigvårdslagstiftning. En inventering genomfördes av landets fattigvård, som visade att bara ungefär hälften av landets då 2 792 församlingar hade uppfyllt kravet på att inrätta fattighus enligt förordningen (Skoglund, 1992). Det fanns ungefär 67 000 personer, 2,1 procent av hela befolkningen, som var i behov av fattigvård, huvudsakligen kvinnor, 78 procent, bland befolkningen på landsbygden (Skoglund, 1992). År 1829 fanns det 1276 byggnader runt om i landet som användes för fattigvård, vanligen i storleken 20-60 kvm (Skoglund, 1992). Om den dåtida statistiken bedöms som tillförlitlig, så innebar detta att 5-6 personer i snitt bodde på ett fattighus. Ställt mot byggnadsytan innebar det att varje person disponerade ca 6 kvm för sig själv (Skoglund, 1992). Byggnader var ofta av äldre datum och i mycket dåligt skick (Åman 1976). Vanligen handlade det om byggnader till hälften nedgrävda i marken, backstugor eller jordkulor (Skoglund, 1992). Den nya fattigvårdslagstiftningen från 1847 skapade en administrativ helhetslösning, som innebar att varje kyrkoförsamling eller grupp av församlingar bildade en fattigvårdsstyrelse som hanterade frågan om bistånd och byggnadsbehov.

Efter dansk förebild introducerades år 1868 ett nytt koncept för fattigvård: De så kallade fattiggårdarna beskrevs, och som innebar att understödstagarna, barn, vuxna och äldre personer, placerades på jordbruksanläggningar och genom sitt arbete fick en månatlig lön (Börresen, 1868; Åman, 1976). I slutet av 1800-talet fanns det närmare 16 000 understödstagare intagna på 285 olika fattiggårdar (Åman 1976). Framtill 1910 ökade antalet fattiggårdar i städerna och i de större kommunerna. Fattiggårdarna var ekonomiskt

lönsamma, eftersom produkterna från jordbruket och annan tillverkning såldes till marknadsmässiga priser, medan själva understödet till de personer som var intagna och beviljade fattigvård var begränsat till en minimumlön. Genom hemortsprincipen och husbonderätten blev understödstagarna helt knutna till fattiggården, och många kommuner såg fördelar med en fattigvård som både var självförsörjande och alstrade en vinst till kommunen (Åman, 1976).

Arkitekttävlingar som socialpolitiskt instrument (Research paper II)

Fattigvården kom att bli en viktig fråga i övergången från jordbrukssamhället till industrisamhället som skedde under 1800-talet. Fattigvårdslagen från 1847 reformerades två gånger: 1853 medgavs understödstagaren en viss rätt till att begära att understödet anpassades efter personliga förhållanden, men detta togs detta bort i reformen 1871, då understöd enbart medgavs för att täcka livets nödtorft. Kommunreformen 1863 flyttade över det formella ansvaret för fattigvården från församlingarna till de nybildade kommunerna. Konservativa krafter bromsade upp andra förändringar, medan liberalt sinnade personer i bourgeoisien och överklassen tillsammans med den organiserade arbetarrörelsen agerade för att göra fattigvården mer individbaserad och human. Det var i synnerhet två element i den tidens fattigvård som beskrevs i pressen och samtida litteratur: Det handlade dels om rotegången bland bönderna som äldre understödstagare ålades att göra av de fattigvårdande kommunerna, dels de offentliga auktionerna av barn till bönderna för att lösa samhällets av omsorg av föräldralösa barn.

Svenska Fattigvårdsförbundet och en mänskligare fattigvård

År 1907 bildade kommunala fattigvårdsstyrelser och välgörenhetsorganisationer en ny organisation som särskilt skulle arbeta för att få till stånd en reform av fattigvårdslagstiftningen. Svenska fattigvårdsförbundet (SFF) samlade främst liberala krafter bland bourgeoisien och överklassen. Den liberale politikern GH von Koch (1872-1948) blev förbundets vice ordförande, och författaren Ebba Pauli (1873-1941) förbundets sekreterare.[95] Som åttonde punkt på grundarmötets agenda fanns ett förslag om att anordna en allmän pristävling för arkitekter i syfte att hitta alternativa lösningar till de storskaliga fattiggårdarna. Tävlingsuppgiften handlade om att skapa arkitektur för mindre fattiggårdar med 25 till 50 boenden. Dessa gårdar skulle ha största möjliga karaktär av hem.

Tävlingen publicerades i förbundets nystartade tidskrift Svenska Fattigvårdsförbundets tidskrift men även i andra dagstidningar. Förbundets tidskrift spred råd och anvisningar för fattigvård, men den innehöll även omfattande reportage om arkitektur för svenska och europeiska ålderdomshem. Vid slutet av tävlingsperioden hade elva arkitektförslag inkommit, men juryn var djupt besviken med de inkomna förslagen. De tre förslag som avsåg den större utformningsuppgiften fattiggårdar för 50 boenden ansåg juryn vara helt förkastliga. Tävlingsjuryn menade att arkitekterna i allt för hög grad var fast i gamla föreställningar som gällde för stora fattiggårdar, och som man ville komma bort från. Enbart två arkitektförslag inom den mindre tävlingsuppgiften hade drag av det som juryn sökte, men juryn ansåg inte att något av förslagen hade så stora förtjänster att det kunde bli tal om ett första pris. Förhoppningen om ett drastiskt arkitektoniskt nytänkande uteblev, och resultatet blygsamt. Juryn manade arkitektkåren att aktivt arbeta med frågan om god utformning av samhällets institutioner (Svenska_Fattigvårdsförbundet, 1907b)

Två förslag till fattiggårdar med 25 boenden belönades med ett andra och ett tredje pris. Efter tävlingen genomgick bägge förslagen noggranna bearbetningar av tävlingsjuryns arkitekt inför en landsomfattande utställning av tävlingsförslagen. I samband med denna utställning inköptes också ett tredje förslag inom den mindre kategorin. De tre arkitektförslagen användes av Svenska Fattigvårdsförbundet som prototyper på ålderdomshem, som begreppet mindre fattiggård bytte namn till 1910. Mot en mindre ersättning kunde intresserade kommuner köpa ritningsunderlaget till dessa prototyper och uppföra på en lämplig tomt. Ritningarna redovisade rumsenheter för 1 till 4 personer i motsats till de stora fattiggårdarnas sovsalar. Ett enpersonsrum var cirka 9 kvm, ett tvåpersonsrum ca 10 kvm och ett fyrbäddsrum var ca 16 kvm. Anläggningen var uppdelade i en kvinno- och en mansavdelning med 12-13 boende i varje avdelning. Avdelningarna låg samlade kring en gemensam matsal.

Ålderdomshemmet förestods av en ogift föreståndarinna som bodde i en lägenhet en trappa upp ovanför matsalen. På vinden bodde också rättaren, som var en manlig vårdare, behjälplig vid tyngre lyft. I ett uthus på gården fanns hygienutrymmen liksom celler för personer som uppvisade ett avvikande beteende. Fram till 1950-talet användes sådana celler för främst äldre personer med demens (Berge, 2007). År 1909 började förbundet inse att typlösningarna krävde en viss omarbetning för att kunna passa in på de tomter som anvisades av kommunerna. 1910 öppnade förbundet därför en arkitektverksamhet samtidigt som man döpte om byggnaderna till ålderdomshem. Denna beteckning hade uppstått i Göteborg 1896 i samband med en större donation till bygget av en ny anläggning för fattigvård vid Slottsskogen i Göteborg, Göteborgs Ålderdomshem (Paulsson 2000). Donatorn angav vidare att den nya byggnaden skulle kallas ålderdomshem istället för fattiggård, liksom att de boende inte längre skulle gå under beteckningen hjon utan kallas understödstagare (Paulsson 2000). Två år senare infördes beteckningen ålderdomshem även in Stockholm (Nordisk Familjeordbok).

1918 års reform och Statens Fattigvårdsbyrå

Svenska Fattigvårdsförbundets arkitektverksamhet resulterade i att ett antal prototyper för 10 till 25 boenden arbetades fram. Under första världskriget uppfördes 26 olika ålderdomshem runt om i Sverige med plats för över 1200 personer. Sedan 1910 ingick flera av de ledande medlemmarna i Svenska Fattigvårdsförbundet i en parlamentarisk arbetsgrupp som förberedde en reform av fattigvårdslagstiftningen från 1847. Ett preliminärt förslag fanns färdigt redan samma år men kom på grund av andra reformer inom det sociala området att fördröjas till efter första världskriget. Bland annat instiftades Kungl. Socialstyrelsen 1912, som övertog Svenska Fattigvårdsförbundets arbetssätt att sprida råd och anvisningar kring fattigvård och byggnadsutformning genom tidskriftsartiklar och särtryck.

År 1918 uppstod ett inrikespolitiskt gynnsamt läge för en reform av fattigvårdslagen. I huvuddrag innebar fattigvårdslagen att understödstagarna fick ett bidrag anpassat efter den personliga situationen, samt rätt att ifrågasätta bidraget. Kommunerna ålades att tillhandahålla tre typer av byggnader för fattigvård, a) arbetsanstalter, b) ålderdomshem samt c) försörjningshem. Genom den nya fattigvårdslagen instiftades en särskild byrå, Statens fattigvårdsbyrå, som hade till uppgift att bevaka den kommunala utbyggnaden av ålderdomshem och andra byggnader enligt den nya lagstiftningen. Byrån administrerade

de statliga bidragen och övertog Svenska Fattigvårdsförbundets arkitektverksamhet. En nationell uppgradering av de kommunala byggnaderna avsågs vara avslutad till 1929.

De byggnadstyper som Svenska Fattigvårdsförbundet hade utarbetat fastställdes som normalritningar för det nationella byggandet av ålderdomshem, och som en konsekvens avvecklades den byggnadsutveckling som SFF initierat av arkitektur för åldrande personer i samhällets utkant. Fortfarande 1946 kontaktades SFF av fattigvårdsstyrelser runt om i Sverige med frågor om typritningar och arkitekthjälp. I ett svar på en sådan förfrågan skrev förbundets siste ordförande att "nya sådana kommer ej att ges ut, då det i praktiken visat sig olämpligt att bygga efter vissa ritningar. Läge och terrängförhållanden gör att det är högst sällan två hem kunna byggas exakt lika. Dessa typritningar ha för den skull ofta ändrats och förfuskats varvid byggnaderna icke fått den bästa och mest ändamålsenliga utformningen"(Hamrin, 1946).[96] Normalritningarna föreslog en placering av ålderdomshemmet till samhällets utkant, gärna i närheten av kyrkogården. Som en konsekvens arrangerades bara tre arkitekttävlingar med fokus på ålderdomshem under perioden 1910 till 1938. Den ekonomiska krisen under 1920-talet kan även bidragit till detta.

I den liberala tolkningen av lagen skulle kommunerna uppföra tre separata byggnader (Koch, 1937), men kommunerna satsade på att bygga ut ålderdomshemmen, eftersom det då demografiskt var de äldre som dominerade fattigvården i de flesta kommunerna (Berge, 2007). Ett annat incitament var att den nya lagen medgav kommunerna ersättning till halva kostnaden för vård av långvarigt eller obotligt sjuka, varför en primitiv sjukvårdsinrättning skapades inom ålderdomshemmet (Berge, 2007). Detta ledde till att inte bara äldre bebodde ålderdomshemmen, utan även personer i andra åldrar från barn, nyförlösta mödrar, långvarigt sjuka och tuberkulossjuka. I efterhand konverterades ålderdomshemmen till att även inkludera försörjningshem för barn och arbetsanstalt för vuxna. Till viss del medgav lagen ett begränsat dubbelutnyttjande, men ålderdomshemmen behövde inte uppfylla samma krav som en vårdinrättning eller sjukhem inom regional förvaltning. Kommunerna kom över bidraget på tveksamma grunder, eftersom sjukhus och sjukhem förvaltades av landsting och var underställda Kungl. Medicinalstyrelsen. Här gällde striktare krav på arkitekturen och medicinskt utbildad personal. År 1927 medgavs för första gången statliga bidrag till utbyggnaden av sjukhem som stod under överinseende av en sjukhusadministration.

Översyn av fattigvården 1938

I början av 1930-talet fanns det en stor grupp äldre personer i samhället parallellt med en generellt dålig bostadsstandard. Ett samhälleligt stöd till äldre personers boende diskuterades för att kunna erbjuda moderna bostäder. År 1939 infördes för första gången statliga bidrag till att uppföra en ny boendeform för äldre med få omsorgsbehov, de så kallade pensionärshemmen såg dagens ljus inom det ordinära bostadsbeståndet (1938_års_pensionärssakkunniga, 1938; Brodin, 2005). Arkitektkåren började kritisera normalritningarna för ålderdomshem för att vara oekonomiska och svåra att möblera eftersom korridoryta integrerades i vistelserum för olika aktiviteter (Göransson & Sundbärg, 1933). Vidare kritiserades att byggnadsuppgiften att rita ålderdomshem koncentrerades till en handfull arkitekter med kopplingar till Statens Fattigvårdsbyrå, samt att flertalet ålderdomshem uppfördes utan att någon arkitekt eller annan byggnadskunnig

person upprättat ett förslag som utgick från den kommande verksamhetens behov (Ibid.).

Samtidigt ritades den politiska kartan om i och med att de liberala partierna söndrades inifrån. I de allmänna valen 1932 gick det socialdemokratiska partiet framåt och kunde bilda en majoritetsregering. Upprustningen av byggnader för den kommunala fattigvården enligt fattigvårdsreformen 1918 hade planerats vara genomförd till 1929, men förlängdes med fem år. En uppföljning av reformen genomfördes genom att Socialvårdskommittén tillsattes 1938. Kommittén hade som uppgift att se över den verksamhet som bedrevs inom den kommunala fattigvårdens hägn. Kommittén inledde sitt arbete med att genomföra en inventering av de tre typer av fattigvårdsanstalter som angavs i fattigvårdslagen från 1918. Kommittén konstaterade att det förekom en tydlig blandning av personer som bodde på de kommunala ålderdomshemmen. I vissa fall ungdomar under 16 år, vuxna under 65 år samt äldre personer (Socialvårdskommittén, 1946).

På grund av andra världskriget kom Socialvårdskommitténs arbete att förlängas in på 1950-talet, och kommittén levererade en mängd rapporter inom det socialpolitiska området. Fram till 1943 låg kommitténs arbete nere, men frågan om utformningen av framtidens ålderdomshem diskuterades inom krigskommittéer som föreslog maximinormer för offentligt byggande. För ålderdomshemmets del innebar detta att det som uppnåtts genom Svenska Fattigvårdsförbundets tävling 1907, och fastställts i normalritningarna från 1920 minskades. Ett enkelrum bantades till 7 kvm och ett fyrbäddsrum från 16 kvm till 11 kvm. Dessa restriktiva normer kom att verka latent ända fram till 1970-talet när det gällde utformning av ålderdomshemmen (Lidmar, 1981).

Socialvårdskommittén förutsåg nödvändigheten av både en reform av fattigvårdslagen från 1918 och den civiladministrativa indelningen i kommuner, eftersom man menade att större kommuner var ett sätt att skapa medel för att kunna ge fattigvården ett mer tidsenligt och mänskligt ansikte. Kommittén förutsåg ett behov av att ålderdomshemmet enbart skulle vara öppet för äldre, och att boendet i ålderdomshemmets hägn skulle gå från ett understöd inom fattigvården till en betalningsprincip med stöd av allmän folkpension (Berge, 2007). Vidare föreslog kommittén att statsbidrag skulle utgå till upprustning och nybyggnad av ålderdomshem som skulle fungera som inackorderingshem.

Kommittén betonade vikten av att styra boendet i ålderdomshemmet till en grupp av äldre personer med ett huvudsakligt behov av omsorg, men i övrigt med få åldersrelaterade besvär. Kommittén menade att det fanns två typer av åldrande: Det normala åldrandet avsåg den större grupp äldre personer med huvudsakligen inskränkningar i rörelseförmåga, men som var i behov av regelbunden omsorg och stöd. Det fanns även en mindre grupp av äldre personer som led av kognitiv svikt. Detta menade kommittén var en abnorm typ av åldrande som krävde andra institutioner än ålderdomshemmet.

Kungl. Socialstyrelsens arkitekttävling 1948

Införandet av allmän folkpension1946 innebar att även äldre med små inkomster fick en stadigvarande inkomst och själva kunde betala hyra och viss äldreomsorg. Därmed ändrades förutsättningarna för samhälleligt stöd riktat till äldre personer, som därmed

kunde frigöras från fattigvården (Brodin, 2005). Socialvårdskommittén formulerade ett delbetänkande som presenterad förslaget att ålderdomshemmet skulle skiljas från fattigvårdslagstiftning och öppnas upp som en vanlig boendeform för äldre med ett s.k. normalt åldrande. De äldre skulle få ta med sina privata möbler och med dessa inredda sina rum. Äldre med kognitiva handikapp eller avvikande beteenden skulle erbjudas plats på nya institutioner som genom stadsbidrag skulle byggas för detta ändamål.

Rapporten skickades på remiss till berörda myndigheter. Kungliga socialstyrelsen lanserade idén om en ny arkitekttävling för att belysa frågan arkitektoniskt och rumsligt. I detta sammanhang framstod 1945 års vårdhemssakkunniga som särskilt viktiga. Kommittén hade redan i en egen rapport från 1946 behandlat frågan, och utvecklat egna typlösningar för framtidens ålderdomshem. Dessa byggde till stora delar på de maximalytor som krigskommittéerna lanserat för offentligt byggande. Vidare ställde sig de sakkunniga frågande till de äldres rätt att medföra egna möbler. Man menade att den grupp av äldre som skulle vara den huvudsakliga målgruppen för det nya äldreboendet inte var vana vid modern hygien, och man framhöll därför behovet av särskilda desinfektionsanläggningar för detta möblemang vid varje ålderdomshem (Kungl._Maj:t, 1947). Samtidigt var man inte beredd till att öka den enskilda tillgången till badrum, vilket visade sig under programskrivningen till Kungl. Socialstyrelsens arkitekttävling. Regeringens proposition om det nya ålderdomshemmet presenterades för riksdagen 1947. Propositionen antogs enhälligt i första kammaren, medan en ledamot i andra kammaren påpekade svårigheten att kategorisera åldrandet i ett normal och ett onormalt åldrande och därför valde att reservera sig.[97]

Programmet för Kungl. Socialstyrelsens arkitekttävling utvecklades per korrespondens mellan de nio jurymedlemmarna. En majoritet av medlemmarna hade en koppling till 1945 års vårdhemssakkunniga eller till de tidigare krigskommittéerna. Arkiverade anteckningar från programarbetet visar att det bara var HSB:s chefsarkitekt Sven Wallander, som förespråkade ett nytänkande av ålderdomshemmet. Han föreslog flera innovativa åtgärder som eget badrum, egen kokvrå, och balkong för att göra bostadsenheten i ålderdomshemmet mer lik en bostad inom det vanliga bostadsbeståndet. Övriga jurymedlemmar ansåg detta som onödigt och höll fast vid den restriktiva attityd som etablerats av kommittéer under krigstiden.[98] Det främsta skälet till denna inställning måste tillskrivas dessa medlemmars förutfattade och nedsättande tankar om de äldre personer som skulle komma att bebo ålderdomshemmen. Dessa uppfattades som redan beskrivits som föga renliga och oförmögna att kunna uppskatta de nymodigheter som Wallander föreslog. De övriga jurymedlemmarna valde därför att fokusera på utformningen av gemensamma ytor och personalens ytor.

Kungliga Socialstyrelsens idétävling 1948 utlystes i december 1948. Tävlingsuppgiften var helt idémässig och handlade om att utforma ett ålderdomshem för antingen 30 boenden eller 80 boenden. I juni 1949 hade 66 bidrag inlämnats, huvudsakligen inom den mindre kategorin för 30 boenden. I sin bedömning fokuserade juryn på att premiera rumsliga lösningar som minskade institutionskänslan, korta korridor, och en ökad hemtrevnad i lägenheten och de gemensamt delade utrymmena. Lägenheterna bedömdes efter sin möbleringsbarhet, och juryn underströk vikten av en kvadratisk rumsform. Hy-

gienrum och kök menade dock juryn måste delas av samtliga boenden, och inget tävlingsförslag avvek från den punkten i tävlingsprogrammet.

Juryn fortsatte att rekommendera småskaliga lösningar med omkring 30 boenden framför större anläggningar. Ålderdomshem med 80 platser ansågs olämpliga, eftersom byggnadens storlek skapade en institutionell miljö. Ett tävlingsförslag fick tävlingsjuryn att acceptera en lokalisering till en omgivande bostadsbebyggelse, även om utgångspunkten hade varit en placering i utkanten av bebyggelse i en parkliknande miljö på samma sätt som 1907. Juryn bedömde inte att något förslag i någon av de bägge kategorierna hade sådana kvaliteter att ett första pris kunde utdelas. Istället utdelades fyra andra pris och två tredje pris inom kategorierna. Vidare köptes fyra förslag in. De belönade och inköpta förslagen publicerades i en särpublikation 1950. Tidskriften Arkitektur var tveksam till om en förnyelse verkligen hade uppnåtts, och menade att tävlingsprogrammet hade låst möjligheten till ett totalt nytänkande (Virke, 1950).

Intresset för det nya ålderdomshemmet väcktes dock bland kommunerna genom statsbidragen till ombyggnader och nybyggnationer. Under perioden framtill 1979 arrangerades 29 arkitekttävlingar som till merparten handlade om utformningen av ålderdomshem, pensionärsbostäder, och serviceboenden.

Från fattigvård till inackorderingshem eller hemtjänst

Myndigheterna ansåg att det nya ålderdomshemmet skulle fungera som ett inackorderingshem eller pensionat för äldre personer med behov av omsorg, men ålderdomshemmets frigörelse från fattigvården mötte ett negativt gensvar bland allmänheten. I allmänhetens ögon var ålderdomshemmet en kall och opersonlig institutionsmiljö som äldre personer ville undvika att hamna på. Det fanns en nedvärderande stämpel i att bli intagen på ett ålderdomshem, som hängde ihop med bostadstypens ursprung inom fattigvården. I arbetarlitteraturen beskrevs den som en kränkning av den enskilda individen (Lo-Johansson, 1966). Pensionärshemmet inom den öppna bostadsmarknaden ansågs som den bästa lösningen.

Under ledning av författaren Ivar Lo-Johansson gick Sveriges Pensionärsförbund, SPF, till kraftig motattack. Slagkraftigt illustrerade Ivar Lo-Johansson den grå och tomma vardagen i ålderdomshemmet i en fotoreportagebok, som innehöll besök på ett antal ålderdomshem från norr till söder i Sverige. Lo-Johansson drev tesen att ålderdomshemmen, även i den nyutformning som studerats i arkitekttävlingen, var en modern form av ättestupa (Lo-Johansson, 1952). Lo-Johansson och SPF myntade begreppet "hemvård istället för vårdhem." Flera forskare menar att tack vare Lo-Johanssons och SPFs ingripande började den öppna bostadsmarknaden utforma alternativa boendeformer för äldre som pensionärslägenheter, servicelägenheter och inackorderingshem. Dessa hade mer av den miljö som erbjöds den äldre personen inom de privata bostadsformerna för bättre bemedlade, de s.k. pauvres honteux (Brodin, 2005; Gaunt, 1995, 1996; Paulsson, 2001).

Ålderdomshemmen renodlades som boendeform för äldre personer med huvudsakligen funktionella inskränkningar i kroppen, men ålderdomshemmets arkitektur ändrades dock föga av den kritik som Lo-Johansson och SPF framförde. De belönade förslagen från arkitekttävlingen blev vägledande för hur byggnadstypen utvecklades från 1950 till

tidigt 1970-tal: små enpersonsrum med egen hall med garderob, men andel i kök och delad WC och dusch. Arkitektur kopplades samman med ekonomisk planering och arbete pågick att hitta den optimala balansen mellan antal boenden och personalstyrkan. Den småskalighet som Kungl. Socialstyrelsen förespråkat i samband med arkitekttävlingen 1948 tummades på. Ålderdomshemmen utvecklades i storskalig inriktning med 70 upptill 90 boenden.

Under 1950-talet utvecklades äldreomsorgstjänster i hemmet på bred front, vilket befästes i den nya socialhjälpslagen från 1956. Kvarboendeprincipen etablerades som den goda formen av arkitektur för åldrandet och därmed möjligheten till att bo kvar i en invand bostad och bostadsmiljö (Malmberg & Henning, 2002; Wånell, 2000). Dock led äldreomsorgen fortfarande av sitt ursprung i den gamla fattigvårdslagen, och äldreomsorg hade en karaktär av akutåtgärd över sig (Brodin, 2005). Geriatrik infördes inom medicin och forskningsdisciplin. Äldre personer med kognitiva problem hänvisades dock till långvårdskliniker vid de stora sjukhus som byggdes upp under 1950- och 1960-talen. På så vis uppstod tre parallella spår för boendeformer på ålderns höst, en insikt som skulle blomma upp under 1970-talet, dels kvarboendet i den gamla boendemiljön eller inackorderingsboendet på ålderdomshemmet, dels det undanskymda boendet för det sköra åldrandet inom sjukhusmiljön.

Arkitekttävling om lokala sjukhem 1979

Granskningsansvaret över arkitektur för landets kommunala ålderdomshem fanns kvar genom att Statens fattigvårdsbyrå 1946 hade förts över från Civildepartementet till Kungl. Socialstyrelsen. Byrån bytte också namn till socialvårdsbyrå. 1968 sammanslogs Kungl. Socialstyrelsen med Kungl. Medicinalstyrelsen och bildade den nuvarande Socialstyrelsen. Samma år bildades även SPRI, Sjukvårdens Planerings och Rationaliseringsinstitut, genom att tre forskningsinstitut för sjukvårdens utveckling slogs samman.[43] Här kom också den gamla ritningsgranskningen att hamna efter sammanslagningen.

År 1973 fanns det över en miljon personer i ålder 67 år och äldre. Under perioden 1960 till 1975 ökade antalet platser i ålderdomshem med 50 procent, och det fanns ungefär 60 000 platser på 1 154 olika kommunala äldreboenden. I jämförelse med boendeformer på den öppna bostadsmarknaden var standarden låg med delade badrum och kök. Samtidigt planerades en kraftig utbyggnad av långvården, med målet att det 1985 skulle finnas närmare 31 000 platser fördelade i geriatriska kliniker inom sjukhusen samt lokala och regionala sjukhem. En inrikespolitisk debatt blossade upp när allmänheten insåg att mer än en miljon gamla människor med långvariga sjukdomstillstånd tvingades leva på långvårdsavdelningar i en sjukhusmiljö. Här var deras liv helt underställda sjukhusets omsorgs- och vårdrutiner.

1979 utlyste SPRI en arkitekttävling kring utformning av lokala sjukhem som skulle fungera som nya boendemiljöer för äldre och andra personer med långvariga sjukdomstillstånd och ett behov av omsorg och vård dygnet runt. Målet med tävlingen var att skapa nydanande sjukhem som erbjöd en värdig levnadsmiljö för personer i svåra livssituationer (SPRI, 1979, p. 21). I tävlingsprogrammet jämställdes situationen i ålderdomshemmet med omständigheterna för sjukhemmet. Förhoppningen var att tävlingsförslagen även skulle komma ålderdomshemmet till godo och utveckla den

boendeformen inför framtiden. I slutet av tävlingsperioden hade 55 tävlingsförslag lämnats in och juryn började sitt bedömningsarbete. Juryn intog den sjuke personens perperspektiv och studerade förslagen sett från möjligheten att vara inom räckhåll av en privat sfär, en gemensam yta med sociala kontakter, personal och utemiljö.

Tävlingsjuryn vägde också in arbetsmiljön som en viktig parameter för att personalen skulle kunna arbeta på ett annat sätt än i den traditionella sjukhusmiljön. Slutligen valdes åtta förslag ut där prissumman gav en ledning om den individuella rangordningen. Tävlingsförslagen presenterades i ett särtryck 1980 tillsammans med juryns bedömningsgrunder. Under tiden pågick ett reformarbete av sociallagstiftningen från 1956 och normaliseringsprincipen, dvs. att erbjuda personer med kognitiva och funktionella funktionshinder lika möjligheter som andra i samhället, präglade samhällsdebatten sedan 1960-talet. SPRIs arkitekttävling kom dock inte att få den avsedda genomslagskraften för utformningen av sjukhemmet. Den nya socialtjänstlagen (SoL) från 1982 lade drastiskt om kursen för utbyggnaden av sjukhem och ålderdomshem, och bägge bostadsformerna kom att bli överspelade av samhällsutvecklingen. Socialstyrelsens granskningsansvar för ålderdomshemmen upphörde och boendeformen upphörde att existera.

Kvarboendeprincipen lyftes fram och den privata hemmiljön framställdes som den goda miljön att åldras i. Under 1980-talet arrangerades 19 arkitekttävlingar, men samtliga tävlingar handlade om en ny boendeform för äldre, serviceboendet. Serviceboendet var en vidareutveckling av pensionärshemmen från 1930-talen, men gemensamma funktioner som restaurang, bibliotek och sportlokaler, som samtliga boende kunde disponera efter eget behag och förmåga, hade fogats till i en gemensam byggnad. Tillkommande äldreomsorg i hemmet erbjöds efter den omfattning som den äldre personen behövde det.

En samtidsbeskrivning av arkitektur för svaga äldre personer

Under 1980-talet ändrades synen på åldrandet från en uppfattning om åldrandet som ett livsskede med en successiv nedsättning av kroppsliga funktioner och förmågor och tilltagande beroende av vård och omsorg till en positiv period i livet. Åldrandets effekter kunde styras genom individuella förmågor och kunskaper. Anpassningar av den byggda miljön och samhället bidrog ytterligare till ett positivt åldrande. Livslängden hade i välfärdssamhället ökat med 25 år genom bättre livsmedel och allmän tillgång till hälso- och sjukvård (Grimby & Grimby, 2001; NBSW, 2004). Framtidsprognoser pekade på att majoriteten av de äldre skulle få ett huvudsakligen gott åldrande. Det handlade om inskränkningar i kroppens rörelseförmåga, men med bibehållen intellektuell förmåga.

Med paralleller till boendeformer för yngre personer med funktionella och kognitiva funktionshinder utvecklades gruppboendetanken med inspiration från Danmark och Frankrike (Dehan, 2007; Melin Emilsson, 1998; Paulsson, 2001). Arkitekttävlingen om lokala sjukhem 1979 innehöll spår av denna tanke, där sex till åtta boenderum med eget badrum och hall grupperades runt ett gemensamt utrymme med kök, matplats och vardagsrum. Under 1980-talet var kunskapen liten om demenssjukdomar och demensforskningen var ännu i sin linda (Boller & Forbes, 1998). 1988 tillsattes en parlamentarisk kommitté som skulle se över ansvarsfördelningen mellan de kommunala och regionala aktörerna som var inblandade i samhällets äldreomsorg. Kommitténs betänkande pre-

senterades ett år senare och infördes 1992 under namnet ÄDEL-reformen.[99] Organisatoriskt innebar reformen att kommunerna fick ett samlat ansvar för att tillhandahålla goda bostäder för äldre personer samt en primär hälso- och sjukvård för äldre. Landsting och regionala aktörer behöll ansvaret om en högt utvecklad medicinsk specialistsjukvård (Hedin, 1991; Henriksen, 2003a).

Med fokus på arkitektur för äldre så innebar ÄDEL-reformen att hela den flora av bostadsformer som byggts upp för äldre sedan slutet av 1800-talet övergick i kommunal förvaltning. Praktiskt medförde ÄDEL-reformen att flera av de övertagna byggnaderna behövde genomgå en ombyggnation för att komma bort från ett tidigare synsätt om en medikaliserad långvård av äldre (Akner, 2004). Vidare krävdes det en nybyggnad av bostäder för äldre personer för att kunna tillskapa det nödvändiga antalet lägenheter för äldre med stora omsorgsbehov inom kommun. En annan följd av reformen var att beteckningarna på byggnaderna åter ändrades, och begreppet äldreboende blev ett samlingsnamn för tidigare beteckningar som ålderdomshem och sjukhem. Det mångtydiga begreppet hemlikhet blev ett nyckelbegrepp för utformningen av äldreboendet (Lundberg, 2000). Samtidigt ställdes kravet på att en bostad även inom den s.k. särskilda boendeformen, som boendeformen för äldre personer med stora omsorgsbehov kallades i lagstiftningen, skulle vara en fullgod bostad med hemmets alla funktioner. Dessa ytor var möjliga att delvis fördela på en gemensam yta för kök, matplats och vardagsrum inom en boendegrupp av sex till åtta lägenheter. Både Socialtjänstlagen och ÄDEL-reformen är fortfarande i kraft och påverkar utformningen av boendeformer för äldre med stora omsorgsbehov.

Tolv förebildliga exempel på äldreboende (Research paper I)

Sju år efter ÄDEL-reformens införande gjordes en uppföljning avseende de äldres behovsbild, personal och verksamhet inom äldreboenden i femtio svenska kommuner (NBSW, 2001). Uppföljningen konstaterade då att vistelsetiden för äldre personer i genomsnitt var mindre än 2 år och personaltätheten var 0,74 heltidsarbetande personal per boende. Äldreboendet hade ofta någon av de beteckningar som etablerats under 1900-talet, men att de äldre personernas behovsbild, främst demensdiagnoser, gjorde att innehållet inte längre svarade mot beteckningen.

I samband med Socialstyrelsens regeringsuppdrag, 2006, att skapa öppna jämförelser inom äldreomsorg och äldreboenden i kommunerna, har ytterligare uppföljningar gjorts. Det finns dock en svårighet att få en klar bild över situationen eftersom enhetliga beteckningar och register över äldreboenden saknas (NBSW, 2008b). Vidare har uppföljningarna fokuserat på kvalitetsparametrar som handlar om äldres upplevelse av trygghet med omsorg i vardagen, och mål för äldreomsorgen. Några liknande uppföljningar avseende den byggda miljön eller den arkitektur som riktlinjer för äldreboende skapar har dock inte gjorts.

Ett år efter ÄDEL-reformens införande reformerades även Plan- och Bygglagen (PBL) (SFS1987:10), och lagstiftningen gick från normerande funktionskrav som skulle uppfyllas i arkitekturen till målformuleringar och rekommendationer som var öppna för tolkning vid tillämpning i ett specifikt byggprojekt. Vad gäller äldreboendet anger Boverkets till-

lämpning av PBL att de "enskilda bostadslägenheternas rum med inredning och utrust-
ning för matlagning och för daglig samvaro samt utrymme för måltider delvis (kan)
sammanföras till gemensamma utrymmen" (BBR1993:57, 2008, p. 85).

Den ursprungliga handledningen från 1989 om hur krav på tillgänglighet och använd-
barhet praktiskt skall tolkas och tillämpas i byggd miljö har efter hand reviderats för att
passa mot den nya bygglagstiftningen (E. Svensson, 1989, 1995, 2001, 2008). I samman-
fattning anger denna handledning att arkitekturen i äldreboendet handlar om att skapa
bostadslikhet och hemlikhet i arkitekturen genom tydliga rumsformer för särskilda funk-
tioner, samt orienterbarhet och överblickbarhet i det inre gemensamma rummet (E.
Svensson, 2008, s. 58-59, 230, 232, 241, 244).

Hemlik, hotellik eller sjukhuslik miljö

Baserad på en kartläggning av tolv slumpvis rekommenderade äldreboenden uppförda
under perioden 1983 till 2003, är en slutsats att arkitekturen i äldreboendet beskriver
tre möjliga designscenarior som ytterst är tolkningar och tillämpningar av begreppen bo-
stadslikhet, hemlikhet, orienterbarhet och överblickbarhet. I det mest lyckosamma scen-
ariot skapas den eftersökta hemlika miljön där omsorgsverksamheten förstärker den
hemlika karaktären genom sättet att utföra omsorg och vård för äldre personer som
bebor anläggningen. Det finns en balans i målsättningen för byggnadens utformning och
verksamhetens kvalitetsmål.

I det andra utfallet får arkitekturen en hotellik karaktär med fina arkitektoniska kvalite-
ter och materialval. Ett problem är att den arkitektoniska utformningen inte helt passar
mot den omsorgsverksamhet som bedrivs i byggnaden. De äldre upplever en stor trivsel
i den noggrant utformade miljön, samtidigt som anpassningar för omsorgsverksamheten
måste lösas i efterhand, exempelvis plats för journalföring och medicinhantering. I det
tredje utfallet skapas en sjukhuslik arkitektur med en rationalitet. Detaljlösningar och
materialval klarar hög hygienkrav och påminner om den utformning som används i loka-
ler för sjukvård. Miljön är anpassad mot omsorgsverksamhetens arbetsmiljökrav i första
hand och boendekvaliteter för de äldre personerna som bebor huset i andra hand.

De tre designscenariorna är även möjliga att spåra i utformningen av den individuella
lägenheten i äldreboendet. I det hemlika scenariot har lägenheten tydliga drag av den
bostadsarkitektur som förekommer på den öppna bostadsmarknaden. Lägenheten är
rumsligt uppdelad efter rumsfunktioner. I det hotelliknande scenariot, blir lägenheten fö-
remål för en optimering av lägenhetsytan. Detta leder till att rumsfunktioner
sammansmälter till en storrumslösning. De hemlika och hotellika lägenheterna är upp-
skattningsvis ca 30 kvm eller större. I det sjukhuslika scenariot, blir den enskilda
lägenheten yteffektiv och har släktskap med utformningen av sjukhusets individuella pati-
entrum. Lägenheten är mindre än 30 kvadratmeter.

I en jämförelse mellan de olika scenariorna går det att konstatera att kontakten mellan
ute och inne får en mindre arkitektonisk bearbetning i det sjukhusliknande scenariot.
Det gäller även kontakten mellan sängplats och badrum, där badrummet i det hemlika
och hotelliknande scenariot nås över en hall. I det sjukhusliknande scenariot finns en di-
rekt kontakt från säng till badrum. På liknande sätt finns skillnader i utformning av pen-

tryenheter som ytterst speglar hur värderingar som styr bostadsarkitekturen blir alltmer hårddraget tolkade i det sjukhusliknande scenariot. Fokuset för utformningen har förskjutits från brukaren till arbetsrutiner och rationalitet.

Kännetecken i äldreboendets arkitektur

För att analysera äldreboendets tvådimensionella utformning kan en rumsteori med fyra grundläggande rumsformer användas. Enligt rumsteorin finns: a) cellen = ett rum med fyra väggar, b) nischen = ett rum med tre väggar och en stor öppning, c) korridoren = ett rum som är mer smalt än brett med två parallella väggar och två öppning, samt d) ett storrum = ett rum som till sin storlek är så stort att det inkluderar de tre andra rumsformerna, vilka kan markeras genom drag i utformningen eller inredningen.

I de tre designscenariorna hemlikt, hotellikt och sjukhuslikt förekommer cellen, nischen och korridoren mer frekvent i de hemlika och hotellika varianterna, medan korridoren och storrummet har ett tydligt företräde i den sjukhuslika utformningen. Baserat på de tolv förebildliga exemplen utformas mer samtida äldreboenden enligt ett sjukhusliknande designscenario. Detta gör att det finns en risk för att äldreboendet återinstitutionaliseras istället för att betona de hemlika kvaliteterna (Milligan, 2009).

I de tre designscenariorna hemlikt, hotellikt och sjukhuslikt markeras bostadslikheten genom en arkitektonisk utformning som använder fönstren i en sluten fasad. Arkitekturen är tydligt uppdelad i de delar som rymmer bostäder och de delar som innehåller gemensamma lokaler. Stora fönsteröppningar och överstora balkonger markerar det centrala läget för gemensamt kök, matplats och vardagsrum. Invändigt är dessa rum djupa, vilket skapar bländningseffekter mellan det stora ljusintaget och den dämpade belysningen inomhus. Ur den äldre personens perspektiv blir en sådan lösning problematisk eftersom ögats naturliga åldrandeprocess skapar svårigheter att skilja mellan ljusheterna.

Utformningen av entrén till äldreboendet är en annan byggnadsdetalj som gör att äldreboendet avviker mot omgivningen. Byggnadens placering i den omgivande bebyggelsen påverkar också arkitekturens utformning. Vanligen ligger äldreboendet i anslutning till en befintlig bebyggd miljö, i centrum av den eller som en isolerad anläggning långt ifrån den. I det centrala läget används äldreboendets byggnadsvolym medvetet för att skapa en arkitektur som bryter av mot omgivningen. Äldreboendet får därmed en funktion av att vara ett landmärke i bebyggelsen. I det solitära läget får äldreboendet en friare arkitektonisk utformning, medan äldreboendet i ett anslutande läge tar upp drag från den omgivande bebyggelsen för att smälta in i helheten.

Äldre personers användning av gemensamma ytor (Research Paper III)

Genom möjligheten i bygglagstiftningen att i äldreboendet kunna överföra yta från den enskilda lägenheten till en gemensam yta för kök, matplats och vardagsrum går det att påstå att den privata sfären för den äldre personen både ökar och minskar. Det uppstår en särskild boendesituation vars motsvarighet endast finns inom gruppboende för personer med olika funktionshinder, studentbostäder och ungdomsbostäder (BBR1993:57,

2008, s. 85-86). Inom äldreboendet skapas en frågeställning om hur privata och gemen-samma ytor används av de äldre personerna som bebor en boendegrupp.

Den personliga användningen av det arkitektoniska rummet för personligt bruk kallas för tillägnelse av rummet (Lefebvre, 1985). Åldrandeprocessen innebär att det sociala nätverket minskas, och i forskningsstudier har konstaterats att äldre personer snarast söker rum med avskildhet framför social samvaro (Barnes, 2006; Duffy et al., 1986). Andra forskningsstudier av äldreboendet visar på att rummet i den särskilda boende-formen behöver rum som medger både avskildhet och samvaro (Barnes, 2006; Barnes & et_al., 2002). Samtidigt finns det en uppfattning inom arkitektkåren och bland omsorgs-personal att prioritera ytor för social samvaro vid utformningen av äldreboendet (Duffy et al., 1986). Som ett mellanting mellan det avskilda och det gemensamma betonar andra riktlinjer för utformningen av äldreboendet vikten av att skapa rum för de små mötena mellan 2 till 3 personer (Regnier, 2002).

Åldrandeprocessen i sig kan medföra problem för den äldre personen att använda och tillägna sig det gemensamma rummet. Inskränkningar i kroppens rörelseförmåga medför att den äldre personen blir beroende av personliga hjälpmedel för att kunna utnyttja det gemensamma rummet. Synproblem kan göra att äldre personer får svårigheter att ur-skilja platser i rummet, och lättare bländas av infallande dagsljus eller stark belysning. Kognitiva funktionshinder kan ytterligare förvärra sådana problem, även om demens i ti-diga skeden ofta innebär ett ökat behov av att kunna röra sig i det gemensamma rum-met för att gå av sig den kroppsliga oro som demenssjukdomen orsakar (J. E. Anders-son, 2005a, 2005b; Day et al., 2000; Dehan, 2007; Hoof et al., 2010; Regnier, 2002), I den äldre personens rumsliga tillägnelse spelar omsorgspersonalen en viktig roll för att hjälpa den äldre personen att använda sig av det gemensamma rummet för att skapa upplevelser som ger ett mervärde i vardagen, och inte huvudsakligen tillbringa sin tid i lägenheten (Nord, 2010).

Varierad rumslighet för att öka äldres rumsliga tillägnelse

En studie av arton äldre personers rumsliga tillägnelse av den gemensamma ytan inom fyra boendeavdelningar på ett särskilt boende pekar på att arkitekturen har en förmåga att skapa olika former av vistelser, som har betydelse för den äldre personens tillägnelse av det gemensamma rummet. På motsvarande sätt har arkitekturen betydelse även för omsorgsarbetet genom att skapa platser för olika situationer som uppstår i vardagen. I den aktuella studien hade varje boendeavdelning 20 lägenheter. I studien kartlades äldre personers användning av den gemensamma ytan med hjälp av deltagande observationer.

Observationerna överfördes till mentala kartor som beskrev platser för vistelser och rörelser över avdelningarna till dessa platser. På två avdelningar för äldre personer som huvudsakligen besvärades av funktionella besvär uppstod ett mönster av rörelser till platser som erbjöd utblickar över den omgivande miljön, att kunna sitta i solen eller att vara i avskildhet. Det var platser som samtidigt medgav en indirekt överblick över ske-endet på hela avdelningen, på vem som kom in och var personalen befann sig. Den avdelning som genom gåvor från släktingar till tidigare boende hade fått en rikare interi-ör med hjälp av möbler och prydnadsföremål för att kunna skapa platserna fick en

attraktionskraft som motiverade äldre personer som bodde på den intilliggande avdelningen att förflytta sig till dessa platser.

På två avdelningar som var avsedda för äldre personer med kognitiva besvär, främst demensdiagnoser i olika skeden, uppstod helt andra mönster av rörelser och vistelser. På den ena avdelningen innebar en äldre persons behov av rörelse på grund av demenssjukdomen att hela avdelningen liksom trädgården annekterades som vistelsezon. Ett mönster av osynliga gränser för olika typer av vistelser uppstod som varken andra boenden eller personal fick överskrida. Om så skedde uppstod häftiga konflikter mellan denna person och andra boende eller personal. Som en följd av detta gick det inte att upprätthålla en inredning som gav alla boende en plats i det gemensamma rummet. Enbart tre andra äldre personer använde det gemensamma rummet.

På den andra avdelningen för äldre personer med kognitiv svikt så hade demenssjukdomen i de flesta fallen förvärrats. De äldre personerna var helt beroende av personalens omsorg och stöd för att kunna ta sig till olika platser inom det gemensamma rummet på avdelningen. Som ett stöd för omsorgsarbetet skapade personalen platser inom avdelningen för att möta olika behov som kunde uppstå hos de äldre personerna. I synnerhet handlade det om att dämpa ångesttillstånd som uppstod vid skymning. Här uppkom ett samspel mellan de platser som arkitekturen tillhandahöll och som omsorgspersonalen iscensatt för olika omsorgssituationer. Den övergripande slutsatsen från studien är att arkitektur för ett äldreboende behöver beakta att det inre och gemensamma rummet fungerar som en ersättning för den äldre personens minskade existentiella rum av platser för vistelser och rörelse.

Färgintervention i äldreboenden (Research Paper IV)

Som alla fastigheter behöver även äldreboenden för personer med stora omsorgsbehov ett regelbundet fastighetsunderhåll. Detta gäller både invändiga och utvändiga underhållsåtgärder. På den öppna bostadsmarknaden förekommer att fastigheter underhålls enligt ett schema för löpande underhåll med ett intervall på 15-20 år (Bejram, 1999; Rönn, 1989, p. 63). Det är också vanligt att lägenheterna på den öppna bostadsmarknaden omtapetseras inför varje ny person som flyttar in i lägenheten.

En lägenhet i ett äldreboende lyder under samma regelverk som en lägenhet inom det vanliga bostadsbeståndet (SFS1970:994), men med den skillnaden att boendeformen även inkluderar omsorg och vård efter ett personligt behov. Hyran för lägenheten och omsorgen och vården betalas månadsvis. På den öppna bostadsmarknaden kan fastighetsunderhåll ske parallellt med ett kvarboende genom tillfällig evakuering för en begränsad tid eller flytt till en annan bostad under hela den tid som byggnadsåtgärderna behöver för att kunna genomföras. I det sammanhang där underhållsåtgärden berör ett äldreboende blir situationen mer komplex.

Att flytta till ett äldreboende innebär en emotionell och psykisk press på den äldre personen (Nirenberg, 1983). Med tanke på att vistelsetiden för äldre personer i ett äldreboende i genomsnitt är 2 år eller mindre (NBSW, 2001), så innebär detta i många fall att de äldre personerna redan genomgått en flytt relativt nyligen. De äldre personer som lyckas hitta en jämvikt i sin nya bostadssituation kommer troligen att leva längre

där, än den person som inte lyckas med sin omställning (Nirenberg, 1983; Ratiu, 1997; Toyama, 1988). För en äldre person innebär ett byte av den invanda bostadsmiljön en stor psykisk påfrestning förutom ett redan allmänt nedsatt hälsotillstånd. Hemmet är en källa till trygghet och en del av den personliga identiteten (Oswald, Wahl, Naumann, Mollenkopf, & Hieber, 2006).

Denna studie fokuserar på ett interventionsprojekt i två befintliga äldreboenden som bägge var byggda 1992. I det ena äldreboendet bodde det 49 antal äldre personer, medan det på det andra äldreboendet bodde 20 antal personer. Funktionella funktionshinder dominerade, men på bägge boendena så fanns det särskilda avdelningar för äldre personer med demensproblem. Interventionsprojektet avsåg en upprustning av de gemensamma ytorna på de respektive boendeavdelningarna på de bägge äldreboendena. Dessa utrymmen utvärderades före och efter intervention med hjälp av två instrument, dels metoder som är baserade på det praktiska arkitektarbetet (APM), dels med ett amerikanskt utvärderingsinstrument (TESS-NH) (Sloane et al., 2002). De två utvärderingsmetoderna fungerade som komplement till varandra. Den första utvärde-ringen visade på att äldreboendena höll en tekniskt sett hög klass på material och ytskikt i de gemensamma utrymmena, men i varierande grad uppfattades som hemlik. Den andra utvärderingen av miljöerna på de två äldreboendena visade på att interventionsprojektet i det ena fallet lyckats skapa en förbättring i en hemlik riktning, medan projektet på det andra äldreboendet förstört den hemlikhet som den ursprungliga miljön ägde.

Slutsatsen från interventionsprojektet är att färg som enda parameter i en interiör förändring är ett för svagt rumsskapande element. Upplevelsen av trivsel består av ett komplex samspel mellan ett antal kriterier som spänner från sinnesintryck, personal, bostad och komfort behöver uppfyllas för att man ska uppleva trivsel (K. Möller & Knudstrup, 2008a, 2008b). Vidare inkluderades inte de äldre personernas åsikter i projektet, utan personalen fungerade som företrädare för de äldre personerna som bebodde äldreboendena. En så bred förankring som möjligt bland boende och personal är en förutsättning för lyckade interventionsprojekt (Becker & Poe, 1980). Projektet hade inte heller genomgått en etisk prövning eller bygglovhantering för att kunna bedöma de sidoeffekter som färginterventionen skulle medföra i form av damm, ljud och lukt. En parallell studie över de äldre personernas livskvalitet under interventionsprojektet visade på att de äldre personerna, som bodde på det äldreboende där miljön försämrats, hade upplevt ett starkt obehag under den period som projekt genomfördes (Falk et al., 2008).

Projektet visar på ett behov av att utveckla underhållsplaner för äldreboenden som har ett holistiskt perspektiv. Förutom rent fastighetsmässiga övervägande kring underhållsåtgärder som är förebyggande, korrigerande och villkorsbaserad (Horner, El-Haram, & Munns, 1997), så behöver åtgärderna justeras i en riktning så att de kan bli ett positivt tillskott i en äldreomsorgsverksamhet.

Framtidens arkitektur för det åldrande samhället

År 1998 tillsattes den parlamentariska beredningen SENIOR 2005 med representanter från samtliga riksdagspartier. Ett slutbetänkande presenterades fyra år senare som i ett

hundra punkters program beskriver den kommande utvecklingen mot det mognande samhället, där åldrandet är en faktor som kan påverkas av individuella ställningstaganden och samhällets förberedelser (SOU2003:91). Betänkandet är förankrat i den åldrande individens perspektiv och förespråkar ett aktivt åldrande (WHO, 2002). Genom förändring i dagspolitik, lagstiftning och förvaltning ska åldersbarriärer rivas (SOU2003:91). Målet är att åldrandet på precis samma sätt som det är en självklar del i livet (Messy, 1992), även blir en integrerad del i välfärdssamhället.

I betänkandet sätts en stor tilltro till teknik anpassad till äldre personers behov, vilket lett till satsningar på att utveckla sådana tekniska hjälpmedel (SIAT, 2010). Nya boendeformer särskilt anpassade för äldre personers behov inom den öppna bostadsmarknaden förutses också (SOU2003:91). Centralt i tänkandet kring sådana boendeformer är att likartade intressen bland bostadsinnehavarna kommer att skapa gemenskap och trygghet. Det handlar om en form av seniorboende som förenar äldre personer med olika bakgrund till en boendegemenskap (Paulsson & Sundberg, 2002). Den särskilda boendeformen för äldre personer med stora omsorgsbehov, äldreboendet, får dock inte samma genomlysning, vare sig i betänkande från SENIOR 2005 eller i den utredning om boendeformer för äldre som genomfördes av Äldreboendedelegationen under åren 2006 till 2008 (DEL, 2008). Tre studier i denna avhandling har behandlat aspekter av framtidens arkitektur för den särskilda boendeformen.

Från institution till integration av äldreboendet (Research paper V)

I den historiska återblicken refererades tre arkitekttävlingar som på nationell nivå använts som ett socialpolitiskt instrument för att definiera arkitektur för äldre personer i behov av samhällets omsorg. Merparten av arkitekttävlingarna, ca 70 tävlingar under perioden 1864 till 2010 och godkända av arkitekternas yrkesorganisation Sveriges Arkitekter eller dess tidigare företrädare, har dock arrangerats av kommunerna som projekttävlingar med ett nytt äldreboende som slutmål.

Den kommunala processen bakom ett beslut att organisera en arkitekttävling innehåller flera ställningstaganden som behandlats inom kommunfullmäktige och kommunala nämnder. Denna fallstudie handlar om beslutsprocessen inför den kommunala arkitekttävlingen "Flottiljen, Framtidens boende för äldre", som Järfälla kommun arrangerade 2006 till 2007. I det här fallet är det möjligt att spåra frågan om ett nytt äldreboende två år tillbaka i tiden. Behovet undersöktes genom en kartläggning av kommande behov för den åldrande befolkningen inom kommunen, samt olika tomtutredningar för att pröva placeringar av ett nytt äldreboende på tillgängliga tomter inom kommunal ägo.

Detta förarbete visade på att Järfälla kommun i likhet med de flesta svenska kommuner hade svårigheter att hitta lämpliga placeringar för ett nytt äldreboende i och med att behovet hade förbisetts under den kommunala detaljplaneringen (NBHBP & NBWH, 2004, p. 48). Arbetet med att hitta den rätta lokaliseringen av äldreboendet och att definiera de nödvändiga programkrav för äldreboendets arkitektur medförde att Järfälla kommun började ompröva de utgångspunkter som gällt för de åtta befintliga äldreboenden som redan finns i kommun. Generellt ansåg man inom Järfälla kommun att dessa boenden var storskaliga, låg i ett perifert läge och hade en tydlig institutionskänsla. För att komma

bort från detta och istället integrera äldreboendet i en omgivande bostadsmiljö som skulle kunna skapa mervärde för de boende och äldreomsorgsverksamheten började idén om att utlysa en arkitekttävling ta form. Det kommunala socialkontoret blev motorn och den samlade kraften i detta arbete. Nyckelpersoner inom kontoret formulerade i samarbete med en extern konsult programmet för arkitekttävlingen. Integration och samutnyttjande blev viktiga nyckelord. De vinnande danska arkitekterna använde dessa nyckelord i sin kreativa process för att skapa ett tävlingsförslag efter Järfälla kommuns behov. Detta resulterade i att äldreboendet placerades i centrum för den nya bebyggelsen.

Intervjuerna med de tolv nyckelpersonerna som var inblandade i beslutsprocessen visade på att arbetet med att utforma programmet skapade olika språkfält inom vilka frågan om arkitektur och åldrande behandlades och som berodde av vilka kommunala förvaltningar som var inblandade i förberedelserna inför tävlingen. I detta fall var Kommunledningskontoret, Stadsbyggnadskontoret, och Socialkontoret de aktiva parterna i beslutsprocessen bakom den kommunala arkitekttävlingen. Fem språkfält kunde identifieras och sammanställas till en modell. Centralt i modellen finns ett allmänt språkfält som diskuterar sambandet mellan arkitektur och åldrande baserat på nyckelpersonernas allmänna erfarenheter. Runt om detta finns fyra språkfält som behandlar frågeställningen om innovativ arkitektur för ett äldreboende ur ett etiskt, konceptuellt, planeringsmässigt och visionärt perspektiv.

När väl tanken om en arkitekttävling hade formulerats så var det planeringsmässiga och visionära perspektivet som hade störst betydelse för att driva processen framåt i att organisera en arkitekttävling. Dessa språkfält förenade behovet av ett nytt äldreboende med ett större sammanhang, som hade betydelse för hela kommunens framtidsplanering. Tävlingen förlades till ett område som var föremål för beslut om en ny översiktsplan för en kommande bebyggelse. De etiska och konceptuella språkfälten tillförde tankar och värderingar till tävlingsprogrammet, som i sin tur födde den kreativa processen som de deltagande arkitekterna i en arkitekttävling använde för att skapa olika tävlingsförslag.

Arkitekturprogram för framtidens äldreboende (Research Paper VI)

Under det första decenniet av det nya århundradet har tre kommunala arkitekttävlingar arrangerats med bistånd av Sveriges Arkitekter, arkitekternas yrkesorganisation. De första två arkitekttävlingarna inträffade samma år 2006, och arrangerades av Järfälla respektive Tingsryds kommun. Tävlingen i Järfälla kommun har beskrivits ovan inom ramen för artikel V. Detta var en allmän tävling öppen för intresserade arkitekter. Sammanlagt lämnades 33 arkitektförslag in på tävlingsuppgiften. Endast belönade förslag eller inköp erhöll någon ersättning för sitt arbete. Arkitekttävlingen i Tingsryds kommun var en öppen tävling med ett prekvalificeringsförfarande. Tävlingen kallades 'Arkitekttävling avseende nytt äldreboende och ombyggnad av andra byggnader på kv. Örnen, Tingsryds kommun.' Intresserade arkitekter skickade in sitt svar tillsammans med en förteckning över genomförda projekt och uppdragsprofil. Tjugofyra arkitekter anmälde sitt intresse, och 3 arkitektkontor valdes ut av kommunen. Ett arvode utgick till de tävlande för att

framställa tävlingsförslag. Jurybedömningarna av tävlingarna i Järfälla och Tingsryd avgjordes under 2007.

Den tredje arkitekttävlingen anordnades i Ljungby kommun under våren 2009. Denna tävling kallades för 'Arkitekttävling avseende nybyggnad av äldre- och trygghetsboende inom Kvarteret Bandybanan.' Detta var också en öppen arkitekttävling med ett prekvalificeringsförfarande. Ett stort antal arkitekter anmälde sitt intresse för att delta, 60 stycken. Tävlingsarrangören, det lokala fastighetsbolaget valde ut 5 arkitektkontor, som mot ett arvode framställde ett tävlingsförslag. Denna artikel har studerat hur de olika kommunerna gick tillväga för att arbeta fram tävlingsprogrammet, jurybedömningen och juryutlåtandet inom respektive arkitekttävling.

I Järfälla kommun hade Socialkontoret det samlade ansvaret i tävlingens förskede, och Stadsbyggnadskontoret under själva tävlingen. I Ljungby kommun ansvarade det kommunala fastighetsbolaget för framtagandet av tävlingsprogram genom anlitande av en extern konsult. Socialkontoret bidrog med kompletterande handlingar till programmet. Tävlingsförutsättningarna var friare i Järfälla Kommun och Ljungby kommun. I Tingsryds kommun, arbetade fastighetskontoret fram både tävlingsprogram och ansvarade för genomförandet. Tekniskt sett var tävlingen i Tingsryds kommun den mest komplicerade arbetsuppgiften, eftersom den spände över både kommunal och regional planering. Inom det aktuella kvarteret fanns det redan ett antal byggnader som användes för folktandvård, primärvård, räddningstjänst och äldreboende.

I bedömningsarbetet arbetade arkitektrepresentanterna i arkitekttävlingarna i Järfälla och Tingsryds kommun som sakkunniga inom arkitektur och byggnadsplanering. Detta skedde både under programarbetet och under själva bedömningsprocessen. Representanternas sakliga arkitekturkritik av de inkomna tävlingsförslagen fungerade som ett pedagogiskt exempel för övriga jurymedlemmar att analysera de olika förslagen på byggnadslösningar. Arkitekturkritik bygger på att hitta fördelar och nackdelar i de inlämnade arkitektförslagen, och göra en avvägning vilka som bäst uppfyller målsättningen (Rönn, 2007). Bedömningen skedde mot tre tydligt definierade kriterier: idéstyrka, hållbarhet och arkitektonisk gestalt. I dessa tävlingar nådde juryn ett enigt utslag kring vilket förslag som skulle vinna arkitekttävlingen. I Ljungby kommun var juryutslaget oenigt, och lekmannajuryn bestämde vilket arkitektförslag som skulle vinna. Lekmannajuryn introducerade ett argument om lokalkaraktär som ett bedömningskriterium sent i diskussionen. Arkitektrepresentanterna i juryn reserverade sig mot detta beslut och föreslog ett annat förslag som bedömdes vara mer i linje med tävlingsuppgiften.

De tre exemplen på kommunala arkitekttävlingar visar på två olika sätt att arbeta fram förutsättningarna för arkitekttävlingen. I arkitekttävlingen i Ljungby kommun uppstod en ovanlig situation i och med att tävlingsjuryn inte lyckades nå ett enigt beslut om vinnare. Anledningen kan spåras till ett tävlingsprogram som innehöll oklara beslutsgrunder och programförutsättningar. En slutsats är att den kommunala ärendehanteringen och samrådsprocessen är ett system som skapar tävlingsprogram med en tydligt definierad tävlingsuppgift och en uppsättning av entydiga bedömningskriterier. De vinnande arkitekterna i tävlingarna i Järfälla och Tingsryd ansåg att programmen fungerade väl för att definiera tävlingsuppgiften och var ett stöd i arkitektarbetet. Däremot, ansåg den vin-

nande arkitekten i arkitekttävlingen i Ljungby att programmet var problematiskt, med en bilagedel med detaljlösningar som var alltför styrande av tävlingsuppgiften. Situationen i denna tävling skapade även ett missnöje hos den vinnande arkitekten, eftersom det oeniga beslutet gav sken av att ett sämre arkitektförslag skulle ha vunnit tävlingen.

Arkitektur för ett mognande samhälle (Research Paper VII)

Den fastlagda kursen för den rådande äldrepolitiken, SENIOR 2005, förutser ett aktivt åldrande med förändrade boendemönster och vanor (SOU2003:91). Det finns ett allmänt önskemål att äldre personer ska få njuta sin ålderdom i en invand bostadsmiljö och i hemmet. På samma sätt som åldrandet är en integrerad del av livet, blir bostaden en del av livet inom vilken livets alla skeende utspelar sig. De flesta personer tänker inte på sin ålder, och funderar därmed inte aktivt över hur ett kommande boende på ålderns höst kan gestalta sig, eller vad som händer om kognitiva eller funktionella funktionshinder påverkar boendesituationen. Inför anordnandet av en arkitekttävling "Flottiljen, framtidens boende för äldre" i Järfälla kommun skapades en diskussion kring framtidens arkitektur för det mognande samhället.

I en uppföljande studie över de föreställningar och tankar som hade aktiverats i diskussionen kring bostadsarkitektur för det mognande samhället identifierades 27 informanter. Detta var nyckelpersoner som på olika sätt deltagit i förberedelserna inför arkitekttävlingen. Det var huvudsakligen kommunala tjänstemän, lokalpolitiker, och medlemmar av det kommunala pensionärsrådet. Representanterna i det kommunala pensionärsrådet var i sin tur utsedda av sina respektive intresseorganisationer: PRO, RPG och SPF.[100] Bland informanterna ingick även tre representanter från Sveriges Arkitekter, tävlingssekreteraren och två ledamöter av tävlingsjuryn. Majoriteten av de intervjuade var i åldern 55 år och äldre. För att locka fram hågkomster från beslutsprocessen och argument om arkitektur för det åldrande samhället användes en fotokollektion. Tre tematiska frågor kring begreppen bostadslik, hemlik, institutionslik, orienterbar och överblickbar skulle besvaras med hjälp av ett urval av en till tre bilder ur kollektionen.

De tjugosju informanterna betonade arkitekturens estetiska förmåga som en viktig aspekt i att förlänga möjligheten att bo kvar i hemmet och i den invanda bostadsmiljön. Den goda arkitekturen för det mognande samhället skapade rumsliga upplevelser som berikade vardagen. Estetiska kvaliteter i äldreboendets arkitektur var på samma sätt viktiga. Informanterna underströk att de båda boendeformerna behövde vara integrerade i en omgivande bebyggelse för att vara del i ett socialt sammanhang. På samma gång var närheten till natur och grönska betydelsefull, eftersom dagsljuset och årstidens skiftningar var viktiga i upplevelsen av livskvalitet. Dessutom skulle den enskilda bostaden inom både det ordinära bostadsbeståndet liksom äldreboendet vara lätta att anpassa efter personliga behov som kunde uppkomma som följd av åldrandet. Genom sin placering i befintlig bebyggelse och arkitektoniska detaljer genererade arkitekturen positiva associationer hos brukaren som var viktiga för boendet i det åldrande samhället.

Informanternas användning av fotografierna i fotokollektionen beskrev arkitektoniska kvaliteter i den goda bostaden inom ett kvarboende och i en boendesituation med omsorg och vård dygnet rum. Bilderna som informanterna valde ut gick att ordna i en

modell som beskrev allmänna kvaliteter i god bostadsarkitektur, samt aspekter viktiga för omsorgsboendet, den enskilda bostaden, ytor som disponerades gemensamt av flera boenden, samt den institutionella bostadsformen. Urvalet beskrev en arkitektur med en minskande grad av anpassning för den enskilde individen och en ökande grad av rationalitet. Samtidigt som informanterna kunde peka ut viktiga aspekter i arkitektur för det åldrande samhället, var det få av informanterna som kunde namnge ett äldreboende som i något avseende kunde framställas som ett föredöme för nybyggnationer av boendeformer för äldre med stora omsorgsbehov. En slutsats från studien är att forskning med en tvärvetenskaplig ansats kring samspelet mellan arkitektur, människa och åldrande krävs för att förstå kvaliteter i arkitektur som är anpassad efter äldre personer med stora omsorgsbehov.

Diskussion

Denna avhandling har studerat arkitektur som är utformad för sköra äldre personer. Det är personer som har komplexa långvariga sjukdomstillstånd som kräver daglig omsorg och vård i ett äldreboende, s.k. särskild boendeform. Detta är en byggd miljö, som är anpassad efter funktionella eller kognitiva funktionshinder. Den avgörande skillnaden mellan en bostad inom det ordinarie bostadsbeståndet och skör äldre personers bostad i ett äldreboende, den särskilda boendeformen, är att bygglagstiftningen tillåter att en godtycklig del av den individuella bostadens utrymme för kök, matplats och samvaro får överföras till en gemensam yta som disponeras av en grupp liknande lägenheter. Vanligen består denna grupp av sex till tio lägenheter. Dessa lägenheter är huvudsakligen avsedda för en person. Lägenheter för parboende är undantagsfall i äldreboendet.

I äldreboendet samsas den privata sfären med en sfär som är ett gemensamt rum för andra äldre personer. Integrerad i bägge sfärerna finns dessutom en arbetsfunktion som ger de äldre personerna stöd och omsorg. Under hela 1900-talet har det mångdimensionella begreppet *hemlikhet* använts för att integrera den positiva kraft som finns i den privata bostaden i äldreboendets arkitektur och ställa den mot den negativa miljö som uppstår i en komplett och stramt reglerad institution (Foucault, 1975). Hemlikheten har använts som samlande begrepp för att komma bort från 1800-talets storskaliga institutioner och en tydlig fattigvårdsprägel och skapa rum för det moderna välfärdssamhället. Inom avhandlingsprojektet har olika aspekter av äldreboendets arkitektur studerats i sju enskilda forskningsstudier med tillhörande artiklar.

Forskningsmaterial och metoder

Denna avhandling kring arkitektur för sköra äldre personer är ett exempel på en kvalitativ forskning, som använt ett samtidsbeskrivande, framtidsinriktat och tillbakablickande perspektiv för att beskriva den särskilda boendeformen, äldreboendet. I likhet med annan kvalitativ forskning, har denna studie använt ett holistiskt perspektiv för att belysa och förklara orsakssamband för en företeelse som är förankrad i människors livserfarenheter (Marshall & Rossman, 2011). Fallstudiemetodik har använts tillsammans med parallella forskningsmetoder för att skapa ett empiriskt underlag som ger ett brett forskningsmaterial, men samtidigt medger fördjupade studier kring aspekter av arkitektur för sköra äldre personer. Forskningsmetoderna har omfattat strukturerade och

tematiska intervjuer liksom olika utvärderingar av byggd miljö. Dessa utvärderingar har dels baserat sig på fotografier och ritningar för att analysera den arkitektoniska ambition, dels besök på plats för att förstå samspelet mellan den byggda miljön och människa, åldrande och omsorgsverksamhet. Sammantaget har detta medgett en möjlighet till att dra slutsatser från flera parallella fall, triangulering (Stake, 1995; Yin, 1994, 2003).

  Det empiriska underlaget har omfattat 7 arkitekttävlingar från perioden 1864 till 2009, 14 äldreboenden av förebildlig karaktär, samt intervjuer med sammanlagt 90 personer. Majoriteten av de intervjuade personerna har varit kvinnor, medan de män som förekommer ofta arbetat i ledande positioner. Slutsatserna i forskningsstudien kan ha påverkats av detta förhållande, men det är osäkert till vilken utsträckning. Vidare kan författarens bakgrund som arkitekt med fokus på att använda generaliserbar fakta inom byggnadsplanering (Cross, 2011; Rowe, 1987), påverkat tolkningen av de uppgifter som informanterna lämnade. Det finns en tendens inom formgivningsyrken att betona perceptuella effekter, medan personer utan en sådan bakgrund bedömer miljön genom de associationer som miljön ger upphov till (Cuff, 1992; Fawcett et al., 2008; Rapoport, 1982). För att motverka denna möjliga påverkan har flera parallella fall använts. Studiens trovärdighet ligger i att den uppfyller fem grundläggande kriterier för kvalitativ forskning och dataanalys: 1) forskningsmetoderna är utformade med inriktning på fenomenet som studeras; 2) metoderna har skapat ett omfattande forskningsmaterial som både belyser detaljer och tendenser; 3) ett brett forskningsmaterial ger grund för trovärdiga och generaliserbara slutsatser; 4) forskningsstudien har ett etiskt förhållningssätt och informanterna har godkänt intervjuerna, samt 5) samtliga slutsatser är empiriskt grundade (Curtis et al., 2000; Groat & Wang, 2002; Guba & Lincoln, 1989; Miles & Hubermann, 1994; Patton, 2002).

Slutsatser om arkitektur för sköra äldre

  Aspekter av arkitektur för sköra äldre personer har behandlats i sju enskilda artiklar inom avhandlingsprojektet. I denna strävan bort från institutionen och mot den hemlika miljön har arkitekttävlingar använts som ett socialpolitiskt instrument för att definiera de rumsliga förutsättningarna för det byggda rummet kring äldre med stora omsorgsbehov. Med stöd av artiklarna i denna avhandling går det att beskriva arkitektur för det sköra åldrandet som ett slags "talande arkitektur" (Blondel, 1771). Denna typ av arkitektur syftar till att genom sin fysiska form både gestalta byggnadsmässigt och på ett emotionellt plan en hemlik miljö, där den privata bostadens trevnad samsas med arbetsmiljöns krav på funktion och effektivitet. Samtidigt är den äldre personen med de stora omsorgsbehoven vanligen frånvarande i diskussionen kring utformningen av arkitektur för ett äldreboende, som är anpassat för det sköra åldrandets problematik. De sju artiklarna har skapat underlag för att formulera 25 delslutsatser kring arkitektur för den särskilda boendeformen. Dessa delslutsatser kan samlas under taket av två övergripande slutsatser:

En hämmad utveckling av boende för långvariga sjukdomstillstånd

Arkitektur för den särskilda boendeformen har fastnat i en låst form, som ytterst beror på en idealiserad uppfattning om åldrandet. Komplexa långvariga sjukdomstillstånd som demens, hjärt- och kärlsjukdomar eller flera parallella diagnoser skapar andra krav på

omsorgs- och vårdinsatser, än vad som har förutsetts inom ramen för äldreboendets hemliknande arkitektur. Därav följer att arkitekturen måste passas in i den ekonomiska verklighet som samhället lyder under för att tillmötesgå dessa behov. Under 1900-talet har detta lett till en normativ arkitektur där övergripande målsättningar för en god äldreomsorg uppfylls, men där den enskilde äldre personen och de påföljande rumsliga anpassningar som krävs för att möta funktionella och kognitiva funktionshinder kommer i andra hand.

Sambandet mellan det sköra åldrandets rumsliga behov sett ur den äldre brukarens perspektiv har inte funnit sitt arkitektoniska svar. Detta gäller även de rumsliga och utformningsmässiga avvägningar som behöver göras av etiska och moraliska skäl för att den privata boendemiljön, ska kunna utvidgas till att bli en fungerande miljö för flera äldre personer med olika långvariga sjukdomstillstånd, samtidigt som arbetsmiljökrav måste uppfyllas för att skapa en god arbetsmiljö.

En inkluderande arkitektur för sköra äldre personer

Föreställningar om det goda rummet för framtidens åldrande avsett både för äldre personer med ett litet behov av samhälleliga insatser och för sköra äldre personer med stora behov av omsorg och vård ställer krav på en form av en inkluderande arkitektur: Detta innebär att arkitekturen genom sitt läge och utformning erbjuder en fortsatt kontakt med sociala aktiviteter och vardagslivets förströelser, men möjlig att ta del av efter den äldre personens egen förmåga och smak. Studien bekräftar visserligen att få aktivt tänker på hur det arkitektoniska rummet kring deras åldrande kommer att gestalta sig, men på förekommen anledning svarar att de trots ett långvarigt och komplicerat sjukdomstillstånd fortsatt vill vara en del av samhällslivet.

Den tidigare typen av undanskymd arkitektur för det sköra åldrandet, placerad i utkanten av befintlig bebyggelse och som förespråkats under 1900-talet, är inte önskvärd av framtidens äldre. Trots detta, så finns det ett kvardröjande drag av institutionellt tänkande kvar när det gäller planering av arkitektur för den särskilda boendeformen, som uttrycks både på en fysisk planeringsnivå och i den mest direkta relationen mellan byggnad och dess åldrande invånare. Det sköra åldrandets problematik saknar rumsliga förebilder.

Nya samarbetsformer för att skapa god arkitektur för sköra äldre personer

Inför framtiden behöver begreppet hemlikhet förklaras och definieras för att kunna fungera som ett verksamt designkriterium i utformningen av innovativ arkitektur för äldre personer med stora omsorgsbehov (Rönn, 2002). Hemlikhet inrymmer både djupt personliga aspekter men även genom sin användning under 1900-talet politiska ambitioner för äldreboendets arkitektur. Den sammanfattande slutsatsen av denna avhandling är att arkitektur för äldre personer med stora omsorgsbehov är en särskild byggnadsuppgift om rum i livets slutskede som förutsätter en fördjupad dialog kring samspelet arkitektur, människa och åldrande. Denna dialog hör hemma i designprocessen som är det allra tidigaste skedet i utformningen av ett nytt byggprojekt.

Dialogen under designprocessen inkluderar i lika hög grad den åldrande personen med stora omsorgsbehov, anhöriga, omsorgspersonal och planerare av äldreomsorg som ar-

kitekter, ingenjörer, byggentreprenörer och fastighetsutvecklare. De förra kan beskriva det dagliga samspelet mellan arkitektur, människa, omsorg och åldrande, medan de senare kan överföra beskrivningen till rum för goda miljöer för äldre personer med långvariga sjukdomstillstånd. Dialogen förutsätter fördjupade transprofessionella samarbetsformer för att skapa interaktivitet kring utformningsuppgiften och se den i ett verksamhetsperspektiv (Dehan, 2007). Med modern informationsteknologi byggs äldreboendet upp som en virtuell designprodukt, som utvärderas av en transprofessionell grupp av bedömare före ritningsproduktion (Bluyssen, 2008; Bridges & Charitos, 1997; Ivarsson, 2010). Detta arbetssätt påverkar både befintliga modellerna av byggprojektering, liksom nya typer av arkitekttävlingar. Dialogformen mellan brukare, arkitekt och byggare behöver utvecklas för att skapa en interaktiv arkitektur för sköra äldre personer med långvarigt sjukdomstillstånd.

Slutord

Boendet för det sköra åldrandet är utmaningen inför det mognande samhället som håller på att förverkligas genom den ökande andelen äldre personer bland befolkningen: Den traditionella pyramidformen på en befolknings sammansättning kommer att övergå till en lökform. I detta perspektiv kommer även det långvariga sjukdomstillståndet att bli en del i samhällsutvecklingen. Utformningsmässigt innebär detta att en ny typ av arkitektoniskt rum behöver skapas—det sköra åldrandets arkitektur. Detta är en utmaning i det nära framtidsperspektivet, och berör både tvärdisciplinära forskargrupper inom arkitekturforskning, medicin, och omvårdnadsforskning liksom multiprofessionella konstellationer av arkitekter, omsorgsplanerare och omsorgsentreprenörer. Inom bägge grupperna finns ett behov av ett gränsöverskridande kunskapsuppbyggande, men även mellan teori och praktik. Arkitekturen erbjuder ett medel för att nå en sådan dialog genom att involvera forskning om åldrandet och åldrandets rumsliga effekter i designprocessen, och belysa designprocessens positiva och negativa följder forskningsmässigt i syfte att skapa en långsiktigt god arkitektur även för det sköra åldrandet. Det behövs en interaktivitet i designprocessens organisation, byggandets projekteringsmodeller och arkitekttävlingarnas organisationsformer för att skapa en empatisk arkitektur för framtidens sköra äldre personer.

ENDNOTES

^q This is a quotation from the French philosopher and sociologist Henri Lefebvre that has been translated by the author (Lefebvre, 1985). For Lefebvre space is the outcome of a certain societal model and its dominating forces of production. There is a relationship between society and the architectural gestalt that this space assumes. This social space is a concrete representation of cultural, economical and ethical values. In turn, these values generate an abstract space that might lead to changes in the present form of the social space. The same line of thinking is echoed in design methodology, but with the distinction that generator images (Darke, 1979) of an ideal architectural space initiate and promote the design process. This dissertation posits that these generator images are influenced by the social space and the abstract space that a certain societal model constitutes. Hence, architecture is a built realization of human living conditions in this type of society (Norberg-Schulz, 1971). There is political dimension of this reasoning, and this dissertation is open to any political force that defends modern democracy and human rights. However, the main focus of the dissertation is not to create a political polemic, but to understand the vital constituents of architecture intended for frail and dependent seniors.

[1] Although the term is complicated due to the different regulatory statuses found in the European countries and the US (Andrews, 2005), this dissertation uses the British term residential homes to describe the Swedish type of sheltered housing for frail older people. The American homologue would be *assisted living*. The equivalent French term is an abbreviation for housing for dependent and older persons, l' EHPAD, (*l'établissement d'hébergement pour des personnes dépendantes et âgées*). The Swedish residential homes imply an individual apartment of approximately 20–40 m2 offered by the municipality after an assessment of the individual's need for assistance and eldercare. The dependent senior has a lease on the apartment. In addition to the monthly rent, the tenant pays a fee proportional to the assessed need for eldercare. The apartment is spatially optimised, and this type of housing together with special housing for university students, holds a special section in the Swedish Building Act. Here, additional space for cooking, dining, and socializing is found in a communally shared space in order to meet the national guidelines of an appropriate housing environment (NBHBP, 2008). Besides this space for the residents, additional space is required so as to provide an appropriate working environment. The actual assistance and eldercare is provided either by the municipal eldercare or by entrepreneurs in this field of service. The Swedish municipalities define these care commissions, and they imply a time-limited contract open for renegotiation in case of badly provided eldercare.

[2] This is the ÄDEL reform, named after the Swedish abbreviation for the parliamentary committee preparing the reform in 1989. The reformed was accepted by the Swedish Parliament in 1992 and attributed the responsibility of providing housing and a primary health care service for older people to the municipalities while the regional level of Swedish administration (the counties), were entrusted to supply medical care within the hospitals.

[3] This parliamentary committee, Äldreboendedelegationen, was active between 2006 and 2008. It was appointed by the resigning minority government that the Social Democratic party had formed after the election in 2002. The entering coalition government consisting of the Conservatists, the Liberals, the Center party and the Christ-Democrats expanded the committee's work to include beside the original assignment to investigate good housing for seniors with few or no frailties the question of appropriate housing for the small group of dependent older people.

[4] This study was made nine months after the introduction of grants for new constructions of municipal special accommodations for older frail people.

[5] Safe-haven residence is not the official translation of the Swedish denomination "Trygghetsboende". According to the Ministry of Health and Social Affairs (MSHA) the official translation should be *sheltered housing* (MHSA, 2007a). But since this term also is used to designate housing for dependent seniors with a complex set of personal needs (multi-diagnoses, dementia), this term seems to be inappropriate. Therefore, safe-haven residence will be used in this dissertation since it better encapsulates the core concept of the Swedish denomination. To this housing, older people move in order to experience a sense of safety, security and social companionship. In some cases, they know each other from before, but in most cases not. Still, the main characteristic of the residents is that they have little or none age-related frailties.

[6] These denominations are in descending order group living (gruppboende); residential care home (äldreboende); block of service flats (servicehus); nursing home (sjukhem); old people's home (ålderdomshem); and other denominations (vårdboende/vårdbostäder, särskilt boende, korttidsboende, demensboende, servicelägenheter, rehabenhet, omsorgsboende, gemensamhetsboende, vårdhem, omvårdnadsboende, psykboende, korttidsvård) (NBSW, 2001).

[7] Accommodation for care and caring is not the official translation of the Swedish denomination Vård- och omsorgsboende. Still, as in the case of the Trygghetsboende stated above, the official translation that also in this case employs sheltered housing, misses important connotations (MHSA, 2007a). This is a type of housing that supplies safety and security in the event that the older person develop an age-related long-term condition that necessitates a 24 hour caring and care (DEL, 2008). Therefore, in the following the term accommodation for caring and care will be used in this dissertation. A move to this type of housing presumes an assessment of individual needs at the local administration for social welfare (ASW). The common denominator for the residents is complex diagnoses involving both cognitive and functional frailties and disorders (dementia and multi-diagnoses).

[8] This refers to the Swedish term "fullvärdig bostad" that, in this dissertation, has been translated in to an appropriate space for living and any activity in everyday life associated with it. This is a term that has been associated with the local authorities' responsibility to provide appropriate housing for their citizens. This act was introduced in 1947 (SOU2003:91) as a way to improve the then poor status of Swedish residential buildings. The act was abolished in 1993 when some municipal responsibilities (housing, infra structure, various services) were restructured into profit generating companies and the market was opened to private entrepreneurs.

[9] This also applies to housing for people who study at universities and who live at students' hostels or residences.

[10] The Swedish Building Act has included the concern of a built environment that is accessible and usable for people with cognitive and functional disorders since 1966 (Bexelius, Nordenstam, & Körlof, 1970). Then, the focus was to make the built environment accessible and usable to persons with mainly functional disorders, but gradually the awareness of the relationship between cognitive problems and space increased. The Building Act was reformed in that direction in 1977 (Paulsson, 2008, p. 53). Since 1989, a special handbook for architects and other persons involved

in the creation of new buildings for public and residential use has been published, the so-called Bygg ikapp Handikapp (E. Svensson, 1989, 1995, 2001, 2008). This book interprets welfare goals and recommendations stated in the Building Act (Plan- o Bygglagen, PBL), the Social Service Act (Socialtjänstlagen, SoL) and the Act concerning Support and Service for Persons with Certain Functional Impairments (Lagen om särskilt stöd och service, LSS) into spatial requirements by use of exemplary models and illustrations.

[11] For the rest of the European countries, the proportions are: 17 per cent (Austria, Belgium, Bulgaria, Estonia, Finland, France, Latvia, Spain, Portugal), 16 per cent (Denmark, Lithuania, Hungary, Slovenia, United Kingdom) and 11 to 15 per cent (Czech Republic, Ireland, Cyprus, Luxemburg, Malta, Netherlands, Poland, Romania, Slovakia). Source ((European_Commission, 2008, p 46).

[12] The exact surface of the Swedish mini-apartments in a special accommodation for older frail people is not possible to establish due to the lack of official statistics. The Swedish Building Regulations allow for a transferral of space for kitchen, dining and social activities to a communally shared space between a group of residents, and this is the case of housing for older people and students (BFS1993:57, 1993). Yet, the regulations do not stipulate a minimum surface area, only that "the communal spaces shall be so large and well equipped that they provide reasonable compensation for the limitations in the individual apartments" (BFS1993:57, 1993, p. 26). The rent of the mini-apartment includes a basic level of daily assistance and care, which can be individually adjusted.

[13] This was the ÄDEL-reformen that concentrated a heteroclite form of eldercare on both a regional and a municipal level of civil administration to the later one. Besides a primary health care service, the municipalities also agreed to supply appropriate housing for older people with special needs.

[14] In Swedish: "Om bostaden ska användas av en person lämnas bidrag för högst 35 kvm per bostadslägenhet och för 15 kvm per bostadslägenhet när det gäller gemensamma utrymmen, alltså sammanlagt högst 50 kvm. För en bostad som ska användas av två personer, t.ex. makar, sambor, registrerade partners eller syskon, lämnas bidrag för högst 50 kvm per bostadslägenhet och 20 kvm för gemensamma utrymmen, alltså sammanlagt högst 70 kvm" (NBHBP, 2011) .

[15] This governmental initiative was based on an idea of using the architecture competition as a programming tool for new environments for older people. The original idea envisioned this programming work as a learning process that integrated empirical findings established within research on appropriate housing for older people and experiences emanating from practice and users. The authors of this idea were professor Mrs Susanne Iwarsson, CASE Research group, Lund University, associate professor Mr Magnus Rönn, and the author of this dissertation. In spring 2009, the National Board of Health and Welfare (NBWH) was contacted. Mr Christer Neleryd, responsible for the project of public access to quality and efficiency in health and medical care, and social services provided by the municipalities and regions, NBHW supported the idea and made further preparations to promote the initiative. In November 2009, the authors and Mr Neleryd met with representatives of the Ministry of Health and Social Affairs (MHSA). The idea found further supporters. The idea became a matter for the ministry, and it was prepared further within the national administration. In July 2010, the MSHA presented the idea in a decree that commissioned the Swedish Institute of Assistive Technology (SIAT) to organize architecture competitions on a municipal level. Means were allocated to be distributed to municipalities that presented a feasible idea on appropriate housing for independent seniors or architecture for frail older people (MHSA, 2010).

[16] The pioneering research on buildings in use for various societal purposes of the Swedish art historian Anders Åman has supplied an access of entering the type of architectural space that is in focus for this dissertation. Without this research, this study would have been much more complicated to realize.

[17] In Sweden, some twenty-six institutions of this type are believed to have existed in the medieval towns (Åman, 1976). The oldest one was situated in Lund and it was inaugurated in 1269. It was in use as a hospital until 1734 (Persson, 1973).

[18] In Swedish this would be "själohus" or "själabad" in which poor people or people on the move could find a temporary shelter for the night.

[19] In some cases this function was integrated in the parish house that functioned as building for communal matters in the church, the parish or as a venue for meetings.

[20] 'Outbuilding' is an approximate translation of the Swedish word "undantaget" (literally the exception). This was a legal construction in agrarian society whereby a farm was transferred to a younger relative who, in exchange, was obliged to provide the retiring farmer with food and supplies for the remainder of this person's life. It has been difficult to find a direct translation for this word in English. The conclusion of two parallel research studies in the United Kingdom and in the USA is that this type of building did not exist in neither of the countries. This might be explained by the fact that the Swedish peasantry owned their land to a larger extent than in other parts of Europe, since feudalism never achieved the same impact as in other European countries. On the other hand, this does not explain why this type of building with the same conditions is vacant in the USA. Either way, I am indebted to professor Kevin McKee, Dalarna University, Falun, Sweden, and Marika Snider, PhD, University of Utah, Salt Lake City, USA, who kindly have assisted me in this matter.

[21] The term 'Pauvres Honteux' is French and refers to impoverished people who were either aristocrats themselves or were in their service. The proper English translation would be the 'genteel poor' or the 'impoverished nobility'. The French word has been assimilated in Swedish with the same meaning as in French. This is probably due to the Franco-Swedish alliance that was established during the 17th century. In spite of the French revolution, this influence continued during the 18th century, since one of Napoleon Bonaparte's marshals, Jean-Baptiste Bernadotte, was elected heir to the throne by the Swedish parliament in 1810. His son Oscar I, 1799-1859, succeeded him in 1844, and during his reign new socio-liberal reforms of the Swedish correctional and poor relief system were introduced. Anonymously, he wrote a book on innovative ideas for new prisons (Oscar_I, 1840). Charitable institutions for older people of the upper classes and members of their households had been built as early as by the end of the 17th century; for instance the Queen's House (Drottinghuset) that was realized through a donation from the Swedish queen Ulrika Eleonora, in Stockholm. However, the normal practice was that the noble older noble persons were provided for by their relatives. During this research project, the first use of the word 'pauvres honteux' has been found in an inventory made by David von Schulzenheim that concerned various hospital buildings in Sweden. In 1792, the so-called "Strandbergske Inrättningen pour les pauvres honteux" was opened in Stockholm to administer medical help and assistance to the aristocracy and members of their households (Schulzenheim, 1801, p. 148). This healthcare service was made available for the upper classes by a donation by a Zacharias Strandberg, allegedly a doctor but no other information regarding this person has been found. In 1863, the first Asylum for Pauvres Honteux was opened in Stockholm in commemoration of Oscar I. This association "Sällskapet vänner till pauvres honteux" still exists today, and runs a privately operated residential care home. In 1873, the queen mother Joséphine, daughter of Napoleon's step-son Eugène de Beauharnais, opened a second asylum for the pauvres honteux that also commemorated

Oscar I, Kung Oscar I:s Minne. Joséphine also introduced a catholic home for pauvres honteux, the so-called Josefinahemmet, still existing today. Sources: (Linköpings_Universitet, 2009; Åman, 1976). I am indebted to professor Kevin McKee, Dalarna University, Falun, Sweden, and Chris Gilleard, Honorary Research Fellow at University College London Medical School who have kindly assisted me in this matter.

[22] Within this term lie at least twenty variations in Swedish on the same theme. These have not been translated into English. The Swedish words are: arbetshus, fattiggård, fattighem, fattighus, fattiginrätting, fattigstuga, fattigvårdsanstalt, församlingshem, försörjningshem, försörjningsinrättning, hjälphem, kommunalhem, kommungård, kommunhem, kommunhus, skyddshem, sockenhem, understödshem, vårdhem, ålderdomshem.

[23] The following Swedish words are supposed to be paired with the English homologues: convalescent home - konvalescent hem, gentry home - pauvres honteux, group housing - gruppboende, hospital - sjukhus, nursing home - sjukhem, old people's home - ålderdomshem/nya ålderdomshem, parish house - sockenstuga, paupers' asylum - fattiggård, poor house - fattighus, outbuilding - undantag, residential care home (assisted living) - äldreboende/ vård- och omsorgsboende, safe haven residence - trygghetsboende, senior co-housing - seniorboende, sick house - sjukstuga.

[24] This was the decision in Västerås in 1527, in Swedish the so-called "Västerås Recess".

[25] The most important Swedish monastic order was the one that Bridget of Sweden (heliga Birgitta) founded in 1384 in Vadstena. This monastery continued to exist until 1595 when the last nuns moved out of the premises (Nationalencyclopedien, 1996).

[26] This was the decree on the organizations of hospitals, (1624 års hospitalordning).

[27] This was the decree on beggaring and loitering (1642 års tiggarordning).

[28] This survey was entitled "The State of the Prisons in England, and an Account of the Principal Lazarettos of Europe" and it was published in 1777.

[29] This was the decree on the organization of poor relief aid (1847 års fattigvårdsförordning).

[30] In Swedish these poor relief commissions were called "lokala fattigvårdsstyrelser."

[31] This was the paupers' asylum of Fridlevstad which accommodated 50 persons. Additional buildings were moved to the site in 1888, a former barrack for ship's boys in Karlskrona. The original buildings were torn down in 1920, but the barrack is still standing, and has been converted into a residential building ((sources: (Åman, 1976) and www.lansstyrelsen.se/NR/rdonlyres/4CF723CA-B133.../0/Karlskro.pdf (2010-05-23)).

[32] När man går igenom äldre fattigvårdsanstalter, får man ofta en beklämmande känsla av deras kasernartade anstaltsprägel: *lång, nakna korridorer, stora, nakna rum, nakna golv och väggar, de senare mången gång ej prydda med något annat än ordningsreglerna* för "hjonen." (Hirsch, 1916, p. 200).

[33] In Swedish, the name of the association was Svenska Fattigvårdsförbundet, (SFF). In 1925, the association and another association that promoted child welfare merge into the Svenska Fattigvårds- och barnavårdsförbundet (SFBF),Swedish Association of Poor Relief and Child Aid in English. In 1948, the association changed its name once again. This time the association was called Svenska Socialvårdsförbundet (Swedish Association for Social Care). In this new constellation, the association existed in a continuously stagnating form until 1965. Then, its remaining activity as a scholarship fund was transferred to the Swedish organization for provincial municipalities. In 1968, this organization teamed up its twin organization representing the Swedish town municipalities. Yet another change of this organization occurred in 2007, when this municipal organization and the association for Swedish counties, founded in 1920, merged into the Swedish Association of Local Authorities and Regions (SALAR). But by then, the remaining activity of

scholarship funding that originated from the Swedish Association of Poor Relief Aid had already transferred to a third organization, the one of the Centralförbundet för Social Arbete, CSA (Central Association of Social Welfare, CASW, in Swedish). Sources: the Swedish National Encyclopaedia, memorial publications of the SAPRA, SASC and the CASW and (Koch, 1937; Sjögren, 1997).

[34] This drawing of the facade was part of the submitted competition entry in 1907, while the floor plan is a revision of the original layout. This revision was made after the competition but prior to the nationwide tour in the Swedish municipalities, in late 1907 or early 1908.

To the best of our knowledge, the entry winning the second prize resulted in two buildings. In 1909 the second prize winning architect Jakob Gate, 1881-1938, was commissioned to design the old people's home in Djursholm. This building was in use until the end of the 1960s. The building was first extended in 1930, which meant that the original U-shape was converted into an enclosed courtyard. During the 1950s, a separate wing according to the new directives formulated in an architecture competition of 1948 was added.

The second building according to the second prize winning entry was built in Kyrkhult in 1910. It was in use as an old people's home until 1969. In this case the rewarded entry by Gate served as a guiding principle for the floor plan while C Ulrich, a local engineer, designed new façades in a local wooden architectural style.

Both these old people's homes are still standing, but both have a new usage: The one in Djursholm outside Stockholm has been converted into a British primary school, while the one in Kyrkhult in Southern Sweden is a combined private home and studio. Some words about the architect: Jakob Gate mainly designed several bank offices around Sweden and various villas in the vicinity of Stockholm and.

[35] The SFF would introduce the use of normative drawings in order to improve the quality of architecture for municipal poor relief aid oriented towards frail older people. The architecture competition of 1907 was one step in this direction. In 1909 the SFF employed the architect Theodor Kellgren (1880-1936). Mr Kellgren also designed several old people's home for the non-profit foundation Blomsterfonden (the Flower foundation) in Stockholm and was the town architect of Uppsala 1914-1920. Due to the fact that the normative drawings that Kellgren had designed were supplements to the Poor Law Act of 1918, Kellgren continued his architectural career as a state employee at the SFVI. Parallel to the architecture activity in the SFF between the years 1909 to 1918 Mr Kellgren, together with his colleague, Hjalmar Hammarling (1885-1963), maintained an architect's office, called Kellgren & Hammarling. Together, they designed several residential buildings in Stockholm. In 1916 they won the architectural competition for the new hospital in Mörby, approximately 10 kilometres outside of Stockholm. Little is known of Mr Hammarling who was a young relative of GH von Koch's wife. He submitted eight applications for patents. Six patents were submitted in Germany, the United Kingdom, and the US in 1935, 1937, and in 1939 concerning an apparatus for the cleaning of carpets and garments (GB462086 (A), DE678564 (C), DE673552 (C), GB434526 (A), US2050569A, US2156389A) and also, together with Mr Kellgren were submitted in 1918 and 1921 in Denmark. These concerned a heating regulating device for central hot water heating in buildings (DK25831C, DK32954C). The common denominator of these patents seems to be the imagined use in facilities for poor relief aid.

Mr Hammarling continued to work as an architect for the SFF but after 1918 he focused on children's homes, care homes for people with long-term conditions (LTC), and institutions for juveniles. According to notes in the national registry of architects at the Swedish Museum of Architecture he produced about 300 to 400 buildings for these usages. However, the Second World War seemed to have slackened this activity or the activity might have stopped completely while

Mr Hammarling was in the US during the war, which the patent applications suggest. In the National Archives and the regional state archives of Sweden, there are some drawings made by Mr Hammarling dated 1941 displaying a project for a children's home. The chairman of the SFBF, Greta Hamrin, wrote in 196 to a municipal representative in search of model drawings for an old people's home saying that: "the association had previously supplied model plans for old people's homes, but these drawings have become obsolete. New drawings will not be issued since practice has shown that construction according to these drawings have not been adequate. Location and topography make it difficult to duplicate the same building. As a consequence, these model drawings have had to be altered, which often spoils the intention with the layout. Thus buildings produced according to the model drawings have not acquired the most optimal and functional layout" (Letter, Greta Hamrin 18 June 1946). The chairman recommended her correspondent to get in touch with Mr Hammarling or with a female architect, Ingrid Uddenberg who would come to participate in the 1947 architecture competition.

The memorial publication of the SFBF association published in 1956 does not supply any further information on the matter except that the architect activity continued for almost thirty years. The architect activity of the SFF and the SFBF accordingly continued between 1909 and 1939. All the same the architect activity of the SFF is an unexplored field and a forerunner of the more renowned architect activity within the Swedish Co-operative Union and the Wholesale Society (SCUWS, Kooperativa Förbundet, KF). In 1899 GH von Koch was one of the founders of this organisation and fifteen years later, in 1924, this association opened an architect's office. (Sources:

(Aléx, 1994; Hirsch, 1931. pp. 309-311; Nasenius, 1956, pp. 189-192), Arkitektregistret, Arkitekturmuseet 4 May 2010).

[36] This bureau was part of the Civildepartementet (Home Ministry), but in 1948 it was transferred The Royal Board of Social Welfare (RBSW). It was then renamed the Bureau for Social Work. It continued to supervise municipal constructions of old people's home until 1968 when it was integrated in the research activities of the SPRI, see endnote 44. The national supervision of the municipal buildings for eldercare use continued until 1982, when the new social act, Socialtjänstlagen, abolished this prerequisite.

[37] The Magazine Tidskriften Arkitektur (Architecture Magazine) was founded in 1901. During its 109 years of existence, the magazine has changed names several times. Between 1901 and 1909, the magazine was called Teknisk Tidskriften, Arkitektur och dekorativ konst (The Technical Magazine—Architecture and Decorative Art). Between 1910 and 1922 the magazine was called Arkitektur (Architecture). During the period of 1922 to 1958 the magazine was called Byggmästaren (Master Builder) with two subsections; one on architecture and one on construction techniques. In 1959, the magazine was divided into two separate magazines, Arkitektur and Byggmästaren. The magazines existed parallel to each other until 1988, when the Byggmästaren magazine was discontinued.

[38] In Swedish, this committee was called the Socialvårdskommittén. It was active from 1938 to 1951. The main reason for this 13 year existence was the Second World War that both postponed and prolonged the committee's work period. This gave the committee time to contemplate and prepare several reforms within the field of poor relief and eldercare.

[39] The earliest examples of such buildings for older people can be traced to Gothenburg on the western coast of Sweden. In 1920 and in remembrance of the monarch's 50th birthday, the town council decided to build two residential facilities with small compacted flats for older people with low income (Sjöström, 1943). These buildings are still in use. They must be considered to be the earliest examples of pensioners' homes that received state grants in 1938 (Brodin, 2005).

[40] The Royal board of Social Welfare (RBSW) was founded in 1912. Until 1968, the board used this original name, in Swedish "Kungliga Socialstyrelsen." After a swiftly prepared reform in 1968, the RBSW joined with the Royal Board of Health (RBH), in Swedish "Kungliga Medicinal-styrelsen," in order to form the present authority, the National Board of Health and Welfare (NBHW).

[41] This organization was founded in 1939. In Swedish, the organization's name is "Sveriges Pensionärsförbund," SPF.

[42] The Swedish name of this institute was Sjukvårdens och Socialvårdens planerings och rationaliseringsinstitut, (SPRI) that was active between 1968 and 2000. The Institute for the Planning and Rationalisation of Health and Social Welfare Services in Sweden (SPRI), in Swedish Sjukvårdens Planerings- och Rationaliseringsinstitut (SPRI), was founded in 1968 by the Swedish government together with a special foundation formed by the Federation of Swedish County Councils (FSCC) and the three large cities of Stockholm, Gothenburg and Malmö. The foundation was formed solely to govern and finance the SPRI. Later, Swedish Association of Municipalities (SAM) joined the foundation. The institute was meant to develop knowledge pertaining to the planning and the rationalisation of health and welfare services, to inseminate these findings on different levels of health and welfare services, and to promote the integration between these levels, and approve standard specifications for hospital equipment. At its foundation, the SPRI took over three existing organisations: 1) the Central Board of Hospital Planning, in Swedish Centrala Sjukvårdsberedningen, CSB, 2) the Council for Hospital Operation Rationalisation, in Swedish SJURA, and 3) the Organisation Department of the Federation of Swedish County Councils. The SPRI was a large-scaled activity and in 1995 about ninety persons were employed on an overall budget of approximately 90 million Swedish crowns (SEK). The SPRI was closely interconnected with the NBWH and the ministries for Finance and Social Affairs. The institute was divided into five departments (general, planning, organisation, and construction and equipment matters). This knowledge had a multi-professional character and the institute issued several guidelines affecting the architectural space and the equipment of various care facilities, such as primary health centres, hospitals, nursing homes and old people's homes. The achievements of the competition on nursing homes concerning space for ageing with long-term conditions were implemented by the SPRI until the beginning of the 1990s, when the branch for architecture and building requirements was eventually dismantled (Bergdahl, 2002). Due to a decreasing interest from the founders the institute was closed in 2000. Sources: (SPRI, 1968). Swedish National Encyclopedia, Dahlin, Bengt & Kuuse, Jan, 2005-2006: Öppen vård i Mittenälvsborg då, nu och sedan_med_fokus_på_Lerum_http://www.bengtdahlin.se/HoSstoryn2/filer_del2A/intro2.html).

[43] The French influence goes to the special type of housing that was built for older people with dementia, the so-called CANTOU (Centre d'Animation Naturel Tiré d'Occupations Utiles). This housing made use of local traditions in order to animate a residential like milieu for a group of people (Dehan, 1997; Melin Emilsson, 1998). The Danish reference pertains to sheltered housing (plejeboliger) that people in great need for care and caring were referred to.

[44] The name of the "Ädelreform" has been used as a pun since the direct translation into English would be the Noble reform. As such, the mere name of the reform presents its main aim, an individualized and dignified reception of the older citizen despite cognitive or functional disabilities (Hedin, 1991).

[45] Just to give an example from the Swedish context: the former monastery in the Swedish town Vadstena that was converted into a hospital in 1540. During the 18th century, the building underwent a refurbishment that was supervised by one of the most influential architects of that century, Carl Fredrik Adelcrantz, 1716-1796 (Åman 1976). Mostly, his talent as an architect was used for

public buildings or prestigious buildings like the Chinese Palace, the royal sans-souci at Drottingholm, outside Stockholm. In addition, other architects associated with the Royal Supervision committee of public buildings (RSCPB) participated in this work. During the 18th century several manuals concerning exemplary buildings were published (C Winblad's models for residential buildings intended for the higher commands of the army, and CG Kronstedts model of tiled stoves as means of economising wood consumption for heating).

[46] This architecture competition was arranged by the municipality of Skön. This building was in use until 1962. It was tore down two years later. The first prize meant that the winning architect Emil Befwe could start his own architect's office and make a career as an architect in Eskilstuna. The most prestigious of his many projects was the city hall of Eskilstuna, erected between 1894 and 1897. From 1902 to 1926, he worked as the town architect of Eskilstuna. He continued to practice architecture parallel to this post, and designed several educational buildings in this town.

[47] The architectural competition is a European invention, born in Renaissance Italy during the 15th century. The architecture competition has most often been used to chisel grand architectural splendour. Technical inventions of the 19th century initiated a transformation of the agrarian society into the early industrialized society. This change also had societal repercussions. The reform of the Swedish royal absolutism into a liberal parliamentary system meant that the architecture profession changed. A new clientele among the bourgeoisie compelled the former stock of noble or royal commissioners. To adjust to the new societal situation, an organization in defence of the architects' interest was founded in 1877. In addition, the first professional code for the organization of architectural competitions was formulated (Waern 1996). Beside the use of the competition to conceive architecture for various purposes, the architecture competition has been used as an element of training to become an architect. It was introduced during the 18th century and was a significant part of the French Beaux-Art tradition (Waern, 1996)

[48] Prior to the competition, the city councillor of Helsingborg had contacted its homologue in the Danish town Hillerød and had submitted a humble request of obtaining the drawings of the newly built poor house (Waern, 1996). This request was rejected, and a competition was announced. Still, the jury did not acclaim the submitted entries, since they did not meet the requested standards of good ventilation. In the end the town architect developed the new architectural design for the new poor house.

[49] This was an architecture competition that was arranged in the rural municipality of Skön situated in northern Sweden, also see endnote 50. However, during the process of preparing this dissertation, the competition brief has remained impossible to trace in the archives of the National Library despite the fact that it was stated to be found by art historian Anders Åman (Åman, 1976).

[50] Professor Emeritus Jan Paulsson at the Chalmers University of Technology, is a renowned Swedish researcher the field of housing for frail older people. In his numerous lectures and presentations, he uses a similar graph over housing types for older people restricted to the ones developed during the 20th century. According to his reasoning, the two lines of development of architecture for either ordinary housing or sheltered housing converged when the residential care home begun to develop. However, put in the historical and social legislative context, this dissertation states that this never has happened, since it is two separate lines of development with little exchange. The sheltered housing constitutes a singular evolution since the spatial requirements are regulated by legal acts concerning social care, healthcare and healthcare work. Furthermore, the building act presumes that the individual flat in the sheltered housing is possible to compact and thus allowing a transferral of space for kitchen, dining and socializing to a communal space shared by a group of older residents. Besides, this type of architecture for frail older people evolves architectural features important on a comprehensive level whereas the ordinary housing is closely in tune with

what the housing market client wants. The sheltered housing is assessed in terms of its efficiency, performance, and work environment, while new types of housing within the ordinary stock of flats for older people who experience few frailties focus on architectural values that add an extra existential dimension to architecture: location, spatial configuration, information technology, smart house concept and user-friendliness.

[51] The concept of genius loci (Latin) is an expansion of the protective spirit of the private home. This spirit (genius) was originally a deceased family member who was believed to protect the family, mainly a paternal figure. Later, this notion was transferred to the Roman emperor and the idea of a protective spirit was then connected with a certain place (locum) by use of plaque that was placed at the site (Nationalencyclopedien, 2011).

[52] This illustration pays homage to the French 18th century architect Claude Nicolas Ledoux, 1736-1806. Ledoux was the architect of the Royal Saltworks at Arc-et-Senans, France (Vidler, 1987).

[53] This reasoning is inspired by the Swiss development psychologist and philosopher Jean Piaget (1896-1980) and his theory of the child's cognitive development.

[54] The original quotation is: "La généralité de l'essence ne signifie rien d'autre que sa transspatialité, c'est-à-dire finalement la pluralité des événements qu'elle engendre: en cela, on pourrait dire que l'espace-temps, au sens où nous l'avons décrit est l'essence de l'essence." (Barbaras, 2000). Translation by author.

[55] Quotation from the legal document:" Older persons. Section 4: The social welfare committee shall endeavour to ensure that older persons are enabled to live independently and securely and to lead active, meaningful lives in the company of others. Section 5: The social welfare committee shall endeavour to ensure that older persons obtain good housing and shall provide support and assistance in the home and other readily available services for those in need for the same. The municipality shall establish special forms of accommodation to provide service and care for older persons in need for special support. Section 6: The social welfare committee shall make itself closely acquainted with the living conditions of older persons within its boundaries and, in its activation measures, shall disseminate information concerning social services activities in this field. The municipality shall plan its measures for older persons. In this planning the municipality shall co-operate with the county council and with other public bodies and organisations. English translation of the Swedish legal text (SFS2001:453, 2001, p. 10).

[56] The Norwegian model has been revised for this paper, and this has resulted in a relocation of some of the items in the original model. Also, the items have been approximately translated from Norwegian into English. The following changes have been undertaken and noted in the model: 1) In the original model this item is placed at the current position of "Work/ Processes"; 2) In the original model this item is placed at the current position of "Emotional Experiences"; 3) In the original model, this item is placed at the current position of "Institutions/ Resources"; 4) In the original model, this item is place at the current position of "Care/ Taken Care of".

[57] "Mon corps est la texture commune de tous les objets et il est, au moins à l'égard du monde perçu, l'instrument général de ma « compréhension »" (Merleau-Ponty, 1945, p. 272, translation by the author).

[58] This threefold characteristics of the function of design is based on a quotation from the American philosopher Charles Sander Peirce: "We conceive of rational designing as having three tasks—(1) the creation of a novel composition, which is accomplished by productive reasoning; (2) the prediction of performance characteristics, which is accomplished by deduction; and (3) the accumulation of habitual notions and established values, an evolving typology, which is accomplished by induction." In: (March, 1984, p. 269).

[59] This is an approximate translation of the Swedish term "rationellt samtal" (Lundequist, 1995).

[60] The architecture competition as an instrument of public commissions is mostly frequently used in Portugal, France, Italy and Denmark (Biau et al., 1998).

[61] According to the Swedish Planning and Building Act, a detailed development plan should supply a programme which describes in a comprehensive way the goals and the intentions for the built environment to be ("The Planning and Building Act. The Act on Technical Requirements for Construction Works, etc. The Enviromental Code with ordinances of relevance.," 2006, chap 5, sect 18). This type of programme has various names depending on the municipality's way of addressing the issue. In this paper, the term *architectural programme* is used, referring to findings in a recent licentiate thesis on the subject (Tornberg, 2008)

[62] These revisions were made by the architect Nils Nordén, 1861-1922, after the completion of the competition. The handwritten note on the drawing sheet says: Revision of the entry Sunflower: Cells (intended for older people with dementia) in a separate building next to the asylum that includes laundry, bakery and outhouse. (In Swedish: Omarbetat efter "Solros"; Celler i särskild byggnad jämte tvättstuga, bagarstuga och uthus). The authors of the second and third prize were then to adjust their competition entries according to these instructions prior to the exposition. Nordén also participated as a jury member in the 1907 competition, and designed several paupers' asylums of his own. Nordén also produced a number of normative drawings for paupers' asylums until 1911. The spatial relations in one of his buildings that still stands today are described in a study on older people and built environment (Nord, 2010).

[63] This is a direct reference GD Rowles' book Prisoners of space? Exploring the geographical experience of older people. Boulder, CO: Westview Press. This book does not exist in Sweden.

[64] This example owes its ascension to an exemplary model due to the inclusion in the book by the American architect and gerontologist Victor Regnier who visited the building in 1999. This residential care home is an example of a high quality environment where flaws affect the execution of care. This pertains to the lack of necessary space for filing out personal records for each resident with respect to confidentiality and the dispensation of medicine. As a consequence, this has to be done in the kitchen area. Furthermore, the residents complain about the indoor climate, especially in the flats that face the sunny courtyard. The intentions for the courtyard with trees aimed to create a more agreeable outdoor environment and indoor climate with light and shade have not been realized. This might be attributed to the costs of clearing the soil from its previous use as a plantation for roses.

[65] It was the British physician James Parkinson who was the first to describe the shaking, the rigid arms and legs and the slowness in movements by an older man aged 72 years. In 1817, he published his observations in 'An Essay on the Shaking Palsy, (Kolb & Whishaw, 2002). Parkinson's disease is caused by a decreasing amount of the neurohormone dopamine in the brain. However, Parkinson's disease is not a dementia disease.

[66] The table is slightly distorted compared to the original one due to layout concerns.

[67] The Swedish author and fencing-master Per-Henrik Ling, 1776-1839, is one of the founders of medical gymnastics.

[68] The ICF instrument can be further refined by other quantifiable instruments such as the so-called WHODAS instrument that measures cognition – understanding & communicating; mobility– moving & getting around; self-care– hygiene, dressing, eating & staying alone; getting along– interacting with other people; life activities– domestic responsibilities, leisure, work & school and; participation– joining in community activities. Still, other scales and instruments that supposedly

measure human cognitive and functional capacities have been developed long before the introduction of the ICF instrument.

[69] Environmental psychology combines psychological theory with architecture theory and dates back to the 1950s. Today, environmental psychology and humanistic approaches dominate the orientation of environmental psychology. In Sweden, it was originally referred to as architectural psychology (Küller, 1973). However, this field of research has suffered from a tendency towards a causal relationship between a certain physical setting and the individual behaviour, and consequently a behaviourist approach that assumed the human response in relation to a certain environmental stimulus could be predicted and controlled (Philip, 1996). During the latter half of the 20th century, environmental psychology has developed and assimilated the field of architectural psychology. A new direction has emerged that prioritizes the understanding of the characteristics of that are involved in an individual attachment to a certain place (Philip, 1996).

[70] There is an ongoing Ph D project at the Chalmers University of Technology, Gothenburg, Sweden, that focuses on the implication of the ISO Classification system, ISO 9241-11:1998, in the context of housing for frail older people (M. Andersson, 2011).

[71] In Sweden, there are several research groups that focus on ageing and the habitat: At the Linköping University, the National Institute for the Study of Ageing and Later Life (NISAL) has a multi-facet approach that combines sociology, cultural geography and architectural research. Studies have been executed on older people's patterns of moving from a familiar habitat to a new one, attitudes towards ageing people and existential conditions in residential care homes. The NISAL manages a research network, Nordic network for research on older people's housing. In addition, research is pursued at the School of Health Sciences, Jönköping University, but expands towards societal planning for ageing and attitudes with eldercare work. At Dalarna University, attempts have been made to develop a new assessment tool of the milieu found in residential care homes. The focus on appropriate architecture for dependent and frail seniors are pursued at the two main Swedish technical universities, the Royal Institute of Technology, the KTH, Stockholm and the Chalmers University of Technology, the Chalmers, Gothenburg. The dissertation at hand is an example of research on the overarching notion of architectural quality pursued at the research group ARC Plan, School of Architecture, the KTH. Internationally, studies similar to the ones of these universities exist all over Europe and in the United States. Of particular interest for architectural research is the research pursued at the Aalborg University, Denmark, The Health and Care Infrastructure Research and Innovation Centre (HACIRIC) units at five British universities (Imperial College of London, Loughborough University, Universities of Reading and Salford, X) and the Department of Architectural Studies at Missouri-Columbia University, USA.

[72] This refers to the caryatids and the atlants. The caryatids are sculpted after the woman's body and act as a pillar, whereas the atlants portray a male body supporting a heavy load in analogy with the myth of Atlas who was eternally doomed to support the sky on his shoulders.

[73] Homunculus is Latin for the little man. It refers to a miniature representation of a human being that has been used in the traditional thinking to explain the human evaluation. It is a mysterious being that can be created by magic power, similar to the golem in the Jewish tradition. The notion has entered a pseudo-science like alchemy, but also modern neuro science.

[74] The first university of the third age was founded by the French professor Pierre Vellas in Toulouse, France in 1973.

[75] This might be a language issue, but in Swedish people who suffer from dementia not only lose their personality and life, they also become associated with the disease. The diagnosis is used as an epithet and finally replaces the individual name. The sufferer of dementia is not only depersonalized by the degeneration, even his or her surrounding environment take part in this process. The

probable reason for this double infliction is that dementia and demented in Swedish have lost their roots in Latin. In languages closer to Latin, the implication is much more evident since the use of the word suggests a person without a soul. This is offensive not only to religious persons but also to others since the general belief is that we as humans possess an individual will.

[76] These years of creation refers to specific events that can be connected with the words. In the case of gerontology, 1946 is often used as a year of birth since it was the year when the first scientific conference on various aspects of ageing (social, financial, medical) was held in New York. This conference was organized by the Gerontological Society of America that had been founded in 1945 by a group of researchers who had studied ageing and global age-related problems since the 1930s. In 1909, the American pathologist Ignatz Nascher claimed the need for a new scientific area within medicine that should focus on ageing and age-related diseases.

[77] This refers to the Swedish term "fullvärdig bostad" that, in this dissertation, has been translated in to an appropriate space for living and any activity in everyday life associated with it. This is a term that has been associated with the local authorities' responsibility to provide appropriate housing for their citizens. This act was introduced in 1947 (SOU2003:91) as a way to improve the then poor status of Swedish residential buildings. The act was abolished in 1993 when some municipal responsibilities (housing, infra structure, various services) were restructured into profit generating companies and the market was opened to private entrepreneurs.

[78] The Swedish Building Act has included the concern of a built environment that is accessible and usable for people with cognitive and functional disorders since 1966 (Bexelius et al., 1970). Then, the focus was to make the built environment accessible and usable to persons with mainly functional disorders, but gradually the awareness of the relationship between cognitive problems and space increased. The Building Act was reformed in that direction in 1977 (Paulsson, 2008, p. 53). Since 1989, a special handbook for architects and other persons involved in the creation of new buildings for public and residential use has been published, the so-called Bygg ikapp Handikapp (E. Svensson, 1989, 1995, 2001, 2008). This book interprets welfare goals and recommendations stated in the Building Act (Plan- o Bygglagen, PBL), the Social Service Act (Socialtjänstlagen, SoL) and the Act concerning Support and Service for Persons with Certain Functional Impairments (Lagen om särskilt stöd och service, LSS) into spatial requirements by use of exemplary models and illustrations.

[79] This also applies to housing for people who study at universities and who live at students' hostels or residences.

[80] The Swedish terminology is diversified and includes the following denominations in a ranking order: 1. Gruppboende 2. Äldreboende 3. Servicehus 4. Sjukhem 5. Ålderdomshem 6. Annan benämning (vårdboende/vårdbostäder, särskilt boende, korttidsboende, demensboende, servicelägenheter, rehabenhet, omsorgsboende, gemensamhetsboende, vårdhem, omvårdnadsboende, psykboende, korttidsvård) (NBHW, 2001).

[81] This is an intermediary thesis prior to the doctoral dissertation that exists at the Swedish technical universities.

[82] The Therapeutic Environment Screening Survey for Nursing Homes (TESS-NH) instrument has been updated, but an earlier version of the American instrument (with manual) was used. Source: http://www.unc.edu/depts/tessnh/tess_info.htm viewed online 2005-03-11. The choice of the earlier version was due to the fact that this version had been tested in the pilot study of 2005 (J. E. Andersson, 2005b). The TESS-NH instrument and the SCUEQS have only been validated in the USA. A translated or validated instrument in Swedish does not yet exist. One difference between American and Swedish standards refers to question A1 and questions A2a-A2c, which deal with the nursing station: In Swedish accommodation for the elderly frail people, this function is nor-

mally placed outside the unit, which serves several units at the same time. The medicine dispensary and patient records are found in a locked room nearby the nurse's office. A second difference occurs in questions which refer to the patients' rooms (questions 21-22, and question 29). In a Swedish context, living in an accommodation for the frail older people does not imply being medically taken care of, rather occupying a rented apartment, that includes a 24-hours assistance and care adapted to the individual's needs. Due to the potential for intrusion into the privacy of the occupier questions 21, 22, and 29 have been answered by the inventory of one apartment at each unit. The choice of apartment has been suggested by the staff and approved by the occupier. Tenants supply their own furniture and arrange the apartment according to their own taste and liking. Communally shared space for dining and socializing, and kitchen areas are set by an interior decorator (or in some cases by the nursing staff). In order to improve working conditions, the bed in each apartment is replaced by an ergonomic hospital bed, which can be raised and lowered down by the occupant or by the nursing staff.

[83] In the case of the architecture competition in the municipality of Järfälla, realized during 2006 to 2007, the author first participated as an adviser in the work of writing the competition brief. This work included revising the text and giving suggestions of improvements of what to include or exclude. In addition, the author wrote an overview concerning housing for the frail elderly with definitions of commonly used terms in Swedish eldercare that was included in an appendix to the brief. During the competition period, the author participated a second time as an expert on appropriate architecture for frail older people in one of the two advisory working committees that were at the competition jury's disposal for further comments on competition entries. This committee existed during the assessment period from the end of November 2006 to the announcement of the winner in February 2007. This committee included the following experts: Eva Arvidsson, then head of the eldercare department of the municipal Administration for Social Welfare in the municipality of Järfälla, Aina de Besche, who represented a private entrepreneur in eldercare, Bernt Kraft, expert on buildings for societal use in the municipality of Järfälla, Michael Yhr, coordinator of the project at the Municipal Executive Office, Helle Wijk, RN/ Ph D of the Gothenburg University. The other advisory committee included local representatives of the major national organizations in defence of older people's rights, two politicians who represented either the political right-wing majority or the left-wing minority. This committee was headed by Åke Svenson, head of the Administration of Social Welfare of the municipality of Järfälla. Moreover, the author was contracted by the Administration of Social Welfare of the municipality of Järfälla to put together a program of spatial requirements for the revision of the design of the housing for the frail elderly in the winning Danish entry. This program was entitled "Flottiljen, future-oriented habitats for the elderly" (Socialförvaltningen, 2007). Beside this possible bias, the author had earlier met Lillemor Husberg, architect and head of the residential care home Vigs Ängar, the municipality of Ystad, during the preparation of the initial phase of this study (J. E. Andersson, 2005b). In addition, the author added a text to the book that Mrs Husberg published in 2007 (Husberg & Ovesen, 2007). In 2006, Mrs Husberg was contracted as a consultant to write the competition brief for the architecture competition in the municipality of Järfälla. The information mentioned above was noted in an endnote to the research paper V that deals with the preparations for the architecture competition of the municipality of Järfälla, but for reasons that are probably due to the layout rework of the paper for the book publication (Rönn et al., 2010), this longer endnote was omitted.

[84] In 2003, when I began searching for suitable research methods for the initial part of this research project, the licentiate thesis, the Photolanguage method was the only method that I managed to target in my Internet-based searches on www.google.fr (key words architecture, ageing, photograph in English or in French) (Baptiste, Belisle, Pechenart, & Vacheret, 1991). I found the ultimate argument for using this method when I read a thesis that focused on the design of care homes for

children with severe disabilities (Courteix, 2001). The method has been in use in French educational environments since the beginning of the 1960s with the aim of training the individual pu-pupil's oral skills (Vacheret, 2000). In addition, the method has been used for therapeutic purpose to bring relief to people who suffer from mental disorders (Vacheret, 2000). This long period of the various usages of the Photolanguage method convinced me of its appropriateness when I was preparing interviews with older people who suffered from cognitive problems like dementia in different stages. In conjunction with the final seminar of my licentiate thesis, 30 August, 2005, my discussant Professor Emeritus Jan Paulsson, Chalmers University of Technology, CTH, Gothenburg, Sweden, referred to a another method, the so-called CONCEPTO, that had been developed at the CTH (Rehal, 2004). This method has been developed in order to study architects' generator images in the early stages of a building project. Still, a comparison between the Photolanguage method and the Concepto method demonstrates several similarities; such as the group situation and the multiple choices from a collection of photographs. The main difference is that Concepto uses photographic collections of built environments and is oriented towards architects and other persons involved in a design process. Chronologically, the Photolanguage method is the older method, and suggests a broader use and adaptability to various interview situations. The Concepto method seems to owe some credit to the former method, and confirms the use of the image as a key to expand and renew established views (Baptiste et al., 1991; Rehal, 2004; Vacheret, 2000).

[85] At Swedish residential care homes, the medical diagnoses are classified information. The characteristics of each elderly person are based upon the information that the individual provided herself or himself, or on that which the staff members had reported. The medical conditions used in Research paper III are a layman's assessment based on information provided and correlated with characteristics of the Alzheimer's disease (Blennow, Leon, & Zetterberg, 2006).

[86] This definition of discourse is a layman's understanding of the word, and based upon the dictionary definition of "A connected series of utterances by which meaning is communicated, esp. forming a unit for analysis; spoken or written communication regarded as consisting of such utterances" (Oxford_English_Dictionary, 2009).

[87] This paper is a revision of a previous paper that was part of the licentiate thesis (J. E. Andersson, 2005b). It was originally written in Swedish, but has been thoroughly revised with regard to research analysis and conclusions in order to prepare a version for publication in a foreign language. In this case, the paper has been written in French and for a French research publication.

[88] This paper is a revision of a previous paper that was part of the licentiate thesis (J. E. Andersson, 2005b). It was originally written in Swedish, but has been thoroughly revised with regard to research analysis and conclusions in order to meet the demands for a publication in a foreign language. The paper has been prepared as a peer reviewed conference paper. It is published in the conference proceedings report of ARCC Detroit 2011, Lawrence University.

[89] This refers to the American architect and gerontologist, Victor Regnier, professor at the University of South Carolina, USC, USA.

[90] The Swedish names were: Arkitekttävling avseende boende för äldre i kvarteret Örnen, Tingsryds kommun, 2006; Flottiljen, framtidens boende för äldre, seniorboende och särskilt boende i Järfälla kommun, Järfälla kommun 2006, samt arkitekttävling avseende trygghetsboende och vård- och omsorgsboende på kvarteret Bandybanan, Ljungby kommun 2009.

[91] "Je suis trop vieux maintenant, se disait-il, le monde a horreur de la vieillesse et de la pauvreté, deux laides choses. Je ne veux plus aller nulle part sans invitation." The principal character Monsieur Pons of the novel "Cousin Pons" utters these words when he realizes that he is no longer regarded as a member of the rich family to whom he is related, but only as a poor relative with a lower status than the servants (Balzac, 1847, Chap. XI, p. 1).

[92] In France, a trans-professional model for the design of residential care homes has existed since 1989, when the French Health Ministry initiated a trans-disciplinary model for the conception of care homes for older people. This model called SEPIA (Secteur Expérimental pour la Programmation Innovante de l'habitat des Personnes Âgées) involves the architects, building contractors, commissioners, constructional engineers, and property developers as well as various care professionals and older dependent seniors (Dehan, 2007).

[93] For some reason, the documentation of the architecture competition of 1948 was missing in the national archives of the former Royal Board of Social Welfare (RBSW). A copy of the board's publication of the rewarded entries was found at the Swedish museum of Architecture, but it turned out that this copy originated from Denmark. A Danish architects' office had used these drawings until 1983 when the office was dismantled. Later, a copy of this publication was found in the regional archive in northern Sweden. Moreover, in the library of the Royal Institute of Technology a copy of a Norwegian publication on housing for older people was found. This publication was published during the 1950s and the text made references to the Swedish architecture competition of 1948. Other details also suggest that the architecture competition was used as a socio-political instrument to improve the built environment of hospitals and schools.

[94] Despite his predilection for the United Kingdom and the British approach in matters concerning healthcare, David von Schulzenheim was against the British system with enclosed institutions for poor relief aid. In Schulzenheim's vision, these were to be chosen in the last resort, and in that case equipped with a list of requirements to be met for the activity and the building. Instead, he advocated the open and voluntary system for poor relief aid that had been organized in Hamburg, Germany. The German merchant and social reformer Caspar von Voght (1752-1839) divided the city in care zones with approximately 200 inhabitants that were entrusted to find voluntary means of caring for the poor within this zone; he managed to lower the number of occupants in Hamburg's penitentiaries. The poor relief aid was distributed at open institutions (Allgemeinen Armeranstalten) that provided medical care and financial support to the persons in need for societal support. The main aim was to give help to self-improvement without religious overtones that was the common form of poor relief aid at that time (Source http://en.wikipedia.org/wiki/Caspar_Voght).

[95] Svenska Fattigvårdsförbundets förste ordförande var J Widén, vice ordförande GH von Koch, sekreterare Ebba Pauli, samt kassaförvaltare Oscar Hirsch. GH von Koch var också redaktör för förbundets tidskrift Svenska Fattigvårdsförbundets tidskrift (Svenska_Fattigvårdsförbundet, 1907a).

[96] I ett brevsvar till Väse fattigvårdsstyrelse, 18 juni 1946 skriver Greta Hamrin: "Svenska Fattig- och Barnavårdsförbundet har tidigare tillhandahållit normalritningar för ålderdomshem, men dessa är numera föråldrade. Nya sådana kommer ej att ges ut, då det i praktiken visat sig olämpligt att bygga efter vissa ritningar. Läge och terrrängförhållanden gör att det är högst sällan två hem kunna byggas exakt lika. Dessa typritningar ha förden skull ofta ändrats och förfuskats varvid byggnaderna icke fått den bästa och mest ändamålsenliga utformningen." English: The chairman of the SFBF, Greta Hamrin, wrote in 196 to a municipal representative in search of model drawings for an old people's home saying that: "the association had previously supplied model plans for old people's homes, but these drawings have become obsolete. New drawings will not be issued since practice has shown that construction according to these drawings have not been adequate. Location and topography make it difficult to duplicate the same building. As a consequence, these model drawings have had to be altered, which often spoils the intention with the layout. Thus buildings produced according to the model drawings have not acquired the most optimal and functional layout" (Letter, Greta Hamrin 18 June 1946).

[97] The parliament member Greta Möller objected to the division of ageing into two groups, since she claimed that "persons whose nature changed due to ageing (...) and in several cases displayed psychological deficiencies not could be classified as mentally ill." In Swedish: "Här avses de s.k. åldersförändrade personer, d.v.s personer behäftade med åderförkalkning och övriga av hög ålder beroende hjärnförändringar, som tagit sig uttryck i många gånger utpräglade psykiska defekter utan att sinnesjukdom i vanlig bemärkelse kan anses föreligga" (G. Möller, 1947), p. 21-22.

[98] A competition brief for an old women's home realized in 1946 in Gothenburg was included in the material that was used to prepare the RBSW's competition brief. In this competition, each flat had an individual bathroom and a small kitchenette. This competition is of some interest since Ralph Erskine participated as an assisting architect in the winning competition entry.

[99] ÄDEL efter den parlamentariska kommitténs namn ÄldreDELegationen.

[100] Förkortningarna står för : PRO = Pensionärernas RiksOrganisation; RPG = Riksförbundet PensionärGemenskap; SPF = Sveriges PensionärsFörbund.