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# SCALE TO FIT, PHYSICAL SCALE AND SOCIAL QUALITY OF HOUSING IN SHELTERED INDEPENDENT LIVING

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Since the eighties, Dutch residents of care homes have been housed in sheltered independent living in order to age in place and live with higher social quality of housing. Physical scale and social quality of housing of sheltered independent living have not yet been explored. Initiators decide on experience and intuition or guided by government policy and exploitation. The question arises: Are choices in scale for sheltered independent living based on quality factors or guided by institutional influences such as legislation and financing? A desk research of 265 projects and a multiple case study in 24 projects were conducted as a PhD research. Significant relations were found, partly in line with presuppositions on quality drivers, partly difficult to explain. Legislation and financing showed to have plausible relations. There are limiting factors of the physical scale towards the social quality of housing in sheltered independent living. Given the distribution of preferences of elderly, there is no single optimal value for the physical scale.

Keywords: Building performance, Decision analysis, Physical scale, Social Quality of Housing.

#### INTRODUCTION

Housing for the elderly in the Netherlands is changing constantly. Once-valued homes for the elderly have been replaced by care homes and nursing homes (van der Voordt & Terpstra 1995). These homes have subsequently been replaced by small-scale housing facilities (Boekhorst et al. 2008). And the residents of care homes are housed in sheltered independent living or more preferably, in areas with integrated neighbourhood services (Edwards 2001). The goal: independent living for longer.

The latest research on sheltered independent living dates from 2005 (Singelenberg, 2005). It is considered out of date as a form of housing and exhausted as a subject for research. Nevertheless, they are still being built, changing in character, intended for a wider variety of target groups, resulting in lighter and heavier versions of the concept (Singelenberg & Triest 2009) . Present definitions should be widened. The question is whether a wider group mix leads to more integration and a better social quality of housing?

Small-scale living has already been researched within the field of care for people with dementia (Hamel 2005; van Liempd, Hoekstra, Jans, Huibers, & van Oel 2010). Findings lead to a revaluation, and at the same time administrative measures are taken. Objections arise as well (Geelen 2005). The physical scale of ALFs and its effect on housing quality have not been explored. Initiators decide on the basis of previous experiences, intuition and good intentions, guided by policy and focused on exploitation.

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Decisions can scarcely be taken on the basis of general literature about the social quality of housing, as this seems to be lacking since 1990. Changing government involvement, less control and more customer orientation are possible causes. With new initiatives in which a number of target groups are deliberately mixed and facilities are strongly developed, decision-makers aim to improve the social quality of housing and improve integration, but almost without any scientific basis.

This paper concentrates on the influence of the psychical scale, which leads to the following main question: What is the effect of physical scale on the social quality of housing in sheltered independent living?

#### **METHODS**

An extensive literature review with regard to the notion of scale in organizational theory produced a composition in the independent variable physical scale, the structural scale and the mental scale (van Zijp 1997). This relates to concepts of scale derived from architectural theory that distinguish external, relative and internal scales (Boudon 1978, Ching 1979). In addition, the dependent variable social quality of living has been studied (Van der Voordt 2009, Alexander 1979, Zwart 1989, De Vreeze 1987).

In a preliminary study, thirteen locations were examined briefly to define the research question and explore the field. The first findings were: several very large-scale complexes with respect to the surrounding area of coverage, some facilities closed within a year, wide variety in terms of liveliness and calmness, leading to a first conceptual model.

#### Mixed method

This research provides insight into the effect of physical scale on the social quality of housing. It consists of a desk study of 265 projects and a case study of 24 projects. The aim is to contribute to a more informed and evidence-based assessment among initiators. For this purpose, the results will appear in a hard copy and an online atlas after the thesis has been completed.

The desk research on the basis of the CBZ archive (CBZ 1998-2010). and the Assisted Living Facilities databank of the Expertise Centre Housing and Care (KCWZ 2010) database shows the relationships between physical scale, target group mixture and level of facilities, and the relationship with legislation and funding during the research period. Both databases are controlled, filtered according to the research question, and analysed for associations and significance of correlations.

The multiple case study shows the influence of the variation found in physical scale, group mix, and level of facilities and the experience of social quality of living on the basis of a strategic selection of 24 cases from the desk research.

To this end, semi-structured interviews were conducted with 174 inhabitants, 40 professionals and 35 decision-making employees in sheltered independent living projects according to an intensive narrative research method (Van Biene 2008). In addition, the research team conducted 171 observations for triangulation of the primary narrative results.

The narratives are arranged in sets of cases according to the research variables of physical scale, group mix and amenity level in order to conduct not only a qualitative but also a quantitative analysis according to the Qualitative Comparative Analysis method (Ragin & Rihoux 2008; Wagemann & Schneider 2010).

All fourteen hypotheses were tested using this broad, combined approach. Of those, eight hypotheses were supported, five hypotheses were nuanced, and one was partly rejected. In addition, the exploratory method of data collecting provided eight meaningful conclusions.

#### Methodological reflection

The strategic selection regarding physical scale succeeded broadly. All three sets of physical scale (small, medium, large) were adequately represented in the sample in order to meet current requirements for a theoretical and practical saturation. However, attempts to find sufficient cases of less obvious combinations of small physical scale in towns and large physical scale in villages were unsuccessful. The addition of these deviant cases would be of great value for conclusions concerning the influence of physical scale and location. The relatively balanced number of positive and negative statements could indicate the relatively high reliability of the prevailing narrative method, which generates both positive and negative statements.

With the successful testing of all fourteen hypotheses, this combination of QCA with larger sets of narratives proves to be a potential hypothesis-testing methodology that requires further elaboration in future research. This is appropriate in the development of mixed methods and mixed models of research that combines quantitative and qualitative methods. Besides QCA, 'Big Data' techniques could be considered in exploring rather than testing hypotheses with the narrative data from this study or other studies.

For the professional field, the development of the draft hardcopy and online Sheltered Independent Living Atlas is recommended, much of the work for which has already been carried out. Since the observations are related to individual cases, this material can be incorporated. For further development of the atlas, it is desirable to present a prototype to decision-makers and residents as potential occupants.

#### **FINDINGS**

The desk research focuses on minor questions and hypotheses concerning the distribution of and relations between physical scale, group mix and level of facilities, and the legislation and funding in the period 1998-2010. The desk research offers quantitative overviews of these independent and mediating research variables related to time, to location and to each other, and thus a picture of the variation in ALFs in the period 1998-2010.

The distribution and variation was then the prime consideration in the strategic selection of the case study. For this selection, the KCWZ database was taken as the basis on account of the higher representative nature of this database for sheltered independent living, the larger time span and the completeness of the data.

The range in physical scale observed is used for classification into scale groups for the strategic selection. The observed correlation with changes in legislation and the larger variation in the city are key to the qualitative analysis of these aspects in the case study. The strategic selection of the multiple case study regarding the range of physical scale was successful.

The broad narrative analysis has delivered a very large amount of data. This is rich in content, but also complex. For the testing of the hypotheses the cases are arranged in sets, varying according to the three independent and mediating variables. These sets are quantitatively and qualitatively analysed to provide a combination of Qualitative Comparative Analysis (QCA) and a narrative method.

Due to the specific data per case, the triangulation method of the observations is of limited use for comparing the sets. The source triangulation of the interviews with residents, professionals and decision-makers proved to be valuable owing to the comparison of various perspectives. The most striking result in general is the finding that, in addition to the social function, ensuring security and belonging is a relatively important function of sheltered independent living for residents.

Regarding the influence of physical scale, the variation in the desired scale is surprising, with as many supporters of large scale as of small scale, related to the location in towns or villages.

#### CONCLUSIONS

The conclusions regarding the influence of physical scale are the following:

- There is an even distribution of physical scale among sheltered independent living in the Netherlands in the period 1998-2010 despite the increased focus on small scale and large scale.
- Smaller sheltered independent living projects are not relatively more common in villages, and larger complexes are not relatively more common in towns.
- The larger number of inhabitants in cities does not lead to small scale as a result of a broad variety in facilities. The smaller number of inhabitants in villages does not lead to large scale as a result of a concentration in facilities.
- Small scale is valued by inhabitants and decision makers because of the expected domesticity and safety and by decision makers because of the customization possibilities. However, large scale is valued to a similar extent by inhabitants and decision makers for its liveliness, anonymity, choice of contacts and activities.
- The desired scale for the social quality of housing does not differ according to the region in the Netherlands.

#### Recommendations

The recommendations regarding the influence of physical scale are:

- Realize enough vibrancy and viability. Range of lower limit: 25-40 housing units.
- Realize sufficient familiarity and identifiability. Range of upper limit: 300-350 housing units.
- Provide desired balance in social control and anonymity. Range for tipping point: 80-120 housing units.
- Provide for harmonization with location. Range for harmonization with village locations: 25-120 housing units; range for urban locations: 80-350 housing units. And regarding decision-making:
- Develop the concept Sheltered Independent Living Atlas with the professional field into a hard copy and online decision-making tool.

#### REFERENCES

Alexander, C. (1979). A timeless way of building. New York: Oxford University Press.

Boekhorst, S. t., Pot, A., Depla, M., Smit, D., Lange, J. d., & Eefsting, J. A. (2008). Group living homes for older people with dementia: The effects on psychological distress of informal caregivers. Aging & Mental Health, 12(6), 761 — 768.

Boudon, P. (1978). Richelieu, ville nouvelle : essai d'architecturologie. Parijs: Dunod.

CBZ. (2001-2007). Aanvragen V&V. Utrecht: CBZ.

Ching, F. D. K. (1979). chapter 6: Proportion @ Scale Architecture: Form Space & Order (pp. 291 t/m 330). New York: Van Nostrand Reinhold Company.

de Vreeze, A. S. G. (1987). Kwaliteitsbegrip in de volkhuisvesting. Archis, 11, 1.

Edwards, A. (2001). Interactieve beleidsvorming en de instituties van het lokale bestuur. In R. Edelenbos J. & Monnikhof (Ed.), Lokale interactieve beleidsvorming (pp. 117-142). Utrecht: Lemma.

Geelen, R. (2005). Is het traditionele verpleeghuis passe? Kanttekeningen bij kleinschalig wonen. Denkbeeld, 17, 129-132.

KCWZ. (2010). Databank Woonzorgcomplexen. from KCWZ

- Rihoux, B., & Lobe, B. (2009). The Case for Qualitative Comparative Analysis (QCA): Adding Leverage for Thick Cross-case Comparison. In D. Byrne & C. C. Ragin (Eds.), The SAGE Handbook of Case-Based Methods (pp. 222-242). London: Sage.
- Singelenberg, J. P. J. (1999). Nationale survey Woonzorgcomplexen. Rotterdam: SEV.
- Singelenberg, J. P. J. (2005). Woonzorgcomplexen, Beschut zelfstandig wonen met zorg op maat. Utrecht: Kenniscentrum Wonen/Zorg Aedes-Arcares.
- Singelenberg, J. P. J., & Triest, N., van. (2009). Voorstudies woonservicegebieden SEV-programma: Wonen, zorg en welzijn. Rotterdam: SEV.
- te Boekhorst, S., Pot, A., Depla, M., Smit, D., de Lange, J., & Eefsting, J. A. (2008). Group living homes for older people with dementia: The effects on psychological distress of informal caregivers. Aging & Mental Health, 12(6), 761 768.
- van Biene, M. A. W. (2008). De standaardvraag voorbij, narratief onderzoek naar vraagpatronen. Nijmegen: HAN, Faculteit Gezondheid Gedrag en Maatschappij.
- van der Voordt, D. J. M. (2009). Quality of design and usability: a vetruvian twin. Ambiente Construído, Porto Alegre, 9, nr 2, 13.
- van der Voordt, D. J. M., & Terpstra, D. (1995). Verpleeghuizen: varianten en alternatieven. Delft: Publikatieburo Faculteit Bouwkunde TU Delft.
- van Liempd, H. M. J. A., Hoekstra, E. K., Jans, J. M., Huibers, L. S., & van Oel, C. J. (2010). Evaluatieonderzoek naar de kwaliteit van de huisvesting van de kleinschalige woonvormen voor ouderen met dementie: Vilans, Akta.
- Wagemann, C., & Schneider, C. Q. (2010). Standards of good practice in qualitative comparative analysis (QCA) and fuzzy-sets. Comparative Sociology.
- van Zijp, C. (1997). Zorg(organisaties) op maat. Een zoektocht naar de gevolgen van schaalgrootte in gecombineerde verpleeghuizen. Utrecht: Moret & Young.
- Zwart, S. (1989). woonecologie. Wageningen: Vakgroep wonen LH.