Traces of Social Sustainability in Garden Cities-Karlsruhe as a Case Study

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Abstract

Discussions about sustainable communities as a significant measure in social sustainability began in the 2000s. Sustainable communities are defined as places in which existing and future generations would like to work and live. They contribute to the well-being and quality of life and offer equal opportunities to their residents. The definitions are similar to the objectives of one of the most influential movements in the history of urban planning: the Garden City. The principles of the Garden City are applicable to new and existing towns and its concept has been adopted in different contexts until today. Therefore, many lessons can be learnt regarding sustainable urbanism by studying social sustainability in this type of urban settlement. As a first step towards this aim, this paper studies the experience of living in the Garden City of Karlsruhe today. A survey was conducted among the current inhabitants. The study shows a high level of satisfaction and the tendency for a long residency in the Garden City because of the reasons like ample greenery, central location, and quietness of the settlement. The results will be used as the first dataset for developing a framework for urban social sustainability in the Garden Cities.

Keywords: sustainable urbanism, social sustainability, sustainable communities, user satisfaction, Garden Cities

1. Introduction

Since introducing the concept of sustainability in the 80s, several scholars have tried to define and interpret it. The concept of sustainable development was soon spread all around the world, covering the discussions at different levels, ranging from local to global. Its flexibility resulted in several attempts in redefining and reinterpreting the concept, in order to make it compatible with the discussed issues. The topic has been addressed by scholars from different disciplines including urban studies. Making the cities and communities more sustainable is one of the 17 sustainable development goals (SDG 11) set by the United Nations General Assembly (United Nations, 2015). Among the three pillars of sustainability, the social dimension, especially in relation to the built environment (Dempsey et al., 2011) has received the least attention compared to the environmental and economic dimensions. However, the recent discussions in sustainability are not limited to the environmental dimension only, instead they include economic and social aspects. Including the social dimension in sustainability discussion increased around the beginning of the 21st century (Colantonio, 2007). As a context related concept (Dempsey et al., 2011) social sustainability has been discussed at different urban levels: from small-scale urban units (e.g. Ghahramanpouri et al., 2015) and neighborhoods (e.g. Bramley et al., 2009) to large-scale cities (e.g. Panda, Chakraborty, and Misra, 2016) and regions (Spangenberg and Omann 2006). Having considered

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community as one of the three key components of the urban social sustainability by scholars like (Yiftachel and Hedgcock 1993) shows the importance of sustainable communities in enhancing social sustainability. Bristol Accord (ODPM 2005) defines sustainable communities as "places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all" (ODPM 2005). Dempsey et al. (2011) describe the community stability as one of the measures in community sustainability and Silburn (1999) indicates that a sustainable community requires long term residents.

In today's societies career paths have become more mobile and consequently people relocate more often compared to the past (Sennett, 1999). This frequent spatial mobility and its effects on social attachment and stability of the society has been previously addressed by some scholars (see Toffler, 1970; Packard, 1972; Long, Boertlein, and United States. Bureau of the Census, 1976 and Long and DeAre, 1981). According to the world pictured by these authors, one would assume that the concepts like place attachment and sense of belonging, which are among the measuring factors of social sustainability, have no meaning in contemporary societies. However, most of the debates about the increased rate of mobility and its consequences in the society concern the United States. According to Schneider, Stahl, and Struyk (2013), the residential mobility in West Germany is much lower than in the US, nevertheless German residents still have a higher mobility rate compared to the average in the EU (European Union, 2015).

2. Notion of Social Sustainability in the Garden City

The *Garden City* movement, one of the most influential movements in the history of urban planning, targets the uncontrolled growth of the cities and its consequences. In 1898, Ebenezer Howard introduced the Garden City concept as a response to overcrowded and deteriorated cities like London and as a solution to improve the quality of life of the residents. Howard provided some ground rules for the concept but left the room open for the Garden City to be designed based on the site characteristics and the social and cultural backgrounds of the society. The aim of the Garden City was to improve the quality of life, to provide each family with a house and a piece of garden, to accommodate people of different social classes and to provide working opportunities at different levels all through building a well-planned city. Some of the concerned are to be found also in the definition of sustainable communities: high quality of life, opportunity and services for all and well-planned communities.

The Garden City movement originated in the UK but was soon translated and interpreted in other countries. Germany was one of the pioneers to adopt the idea of the Garden City and to initiate realizing the concept by planning and building Garden Cities. Among the German Garden Cities Karlsruhe was the first one to be founded and is considered as an important example in Germany. The flexibility in designing the Garden City makes the concept adoptable and transferable to different contexts and its principles applicable to new settlements as well as the existing ones (Unwin 2014). Considering that the characteristics of the neighborhood play an essential role in residents' decisions to

leave (or stay in) the neighborhood (Feijten and van Ham, 2009), it is necessary to analyze how the characteristics of a settlement, like the Garden City, influence the residents' behavior, including residential mobility. Therefore, the current paper takes one of the most important German Garden Cities as the case study and analyses the perception of the residents, of living today in the Garden City.

3. Case Study

The Garden City Cooperative in Karlsruhe was founded in 1907 with the aim of building the first German Garden City. However, the construction started first in 1911 and Karlsruhe Garden City was built, as the second German example, in an area called Rüppurr, located in the south part of Karlsruhe in southwestern Germany. According to an agreement between the Garden City Cooperative and the city of Karlsruhe, a large part of the Garden City was registered as historical monument and therefore under conservation (Figure 1). Its architectural and socio-historical significance, the artistic elements and exemplary values were the reasons for this decision (DSchG BW, 1983).

Figure 1: Houses considered as historical monuments in the Garden City of Karlsruhe (source: City of Karlsruhe)

The area under conservation includes 641 single family houses (single buildings, row houses and double houses) and 70 apartment buildings; out of which 646 are classified as historical monument and considered in this paper. All single family houses in the Garden City are provided with a garden and have a similar spatial division which follows the clear zoning; the kitchen and the living room on the ground floor; bedrooms on the upper floor and service area in the basement. They are categorized into different types according to their characteristics including the entrance (side or central), position of the staircase, number of the rooms as well as their arrangement and position (street side vs. garden side). The Garden City is run by community ownership and the inhabitants are the members of the cooperative. The Garden City Cooperative is in charge of the administrations and renting out the houses, meaning that the inhabitants of the Garden City do now own the properties.

4. Methodology and Data Collection

Data for this research was gathered through a survey carried out by the author. The survey was meant not to be anonymous as the end goal was to merge the data from the survey with the database of the Garden City Cooperative. To this aim the participants were requested to provide the address of their house. The survey covered questions regarding the building (architectural design, material, elements), inhabitants (demographic data, motivation for living in the Garden City, satisfaction with the neighborhood) and neighborhood (activities and facilities). These questions were in different forms; rating scale (5-point) questions where the respondent could choose a rate between 1 (lowest) and 5 (highest), "yes" or "no" questions, closed-ended questions, usually followed by a field where the respondents could add their answer if it was not one of the possible options, open-ended questions, multiple choice questions where the respondents could choose one or more answers.

In the first round the questionnaires were distributed (dropped in the mailbox) among all the houses in the Garden City which are considered as monuments. Two months later a reminder was sent to the households who had not participated in the survey or had not provided the full address. One month after the first reminder, 100 addresses were picked using the random function of Excel, and the chosen addresses were contacted in person and were requested to fill in the questionnaire. After consultation with the Garden City Cooperative, respondents were asked to return the filled-in questionnaires to one of the former representatives of the Cooperatives who lives in the area. In order to potentially increase the response rate, and before carrying out the survey, the inhabitants of the Garden City became aware of the ongoing research with the help of the Garden City Cooperative and through an announcement in the regular magazine (*Freude am Wohnen,* 2017) published by the Cooperative.

Out of 646 households, 138 questionnaires were filled in and returned which gives us a response rate of 21.4%, with a confidence level of 95% and a 7% error margin based on the Cochran's formula (Cochran 1963). After receiving the surveys, the data was inserted into an Excel database, it was then analyzed and when possible compared with the overall trend in Germany (using the data from SOEP and Eurostat). The survey was carried out in 2017 and therefore the results were compared with the available data from 2017.

5. Results

The relevant results of the survey are discussed here in two different categories, inhabitants and their relationships and interactions in the Garden City. In each part the respective question from the questionnaire is mentioned:

5.1 Demographic data

On average 2.2 people live in each household in the Garden City, higher than the average household size in Germany (2.0). The highest share corresponds the households with two people (47.9%) and 24.8% accommodate only one person. These values are respectively 33.8% and 41.4% for Germany. The responding households

include inhabitants between the age of 1 and 96 years old, with a mean and median value of 49.5 and 54 years, respectively. The mean age in Germany is 45.9 years (Eurostat 2020b). Figure 1 and Figure 2 compare the values in the Garden City and Germany. At least 28.6% of the participants in the survey have a university degree, 22.6% have done a vocational training and 17.3% have a high school diploma. The rest have either a secondary education or no certificates. More than half of the participants in the survey must travel to work and the average distance from home to the place of work is around 23.3 km.

5.2 What was the initial reason for you to live in the Garden City?

The inhabitants were asked about the motivation for living in the Garden City. 61.0% of the inhabitants made their own decision to live in the Garden City, out of which 5.6% have inherited the house where they live in. It is to be noted that in the Garden City of Karlsruhe the rental contract can be inherited to the tenants' children. After own-decision, birth (20.6%) is the second common reason for living there, followed by marriage (11.8%) and moved in with the parents (6.6%).
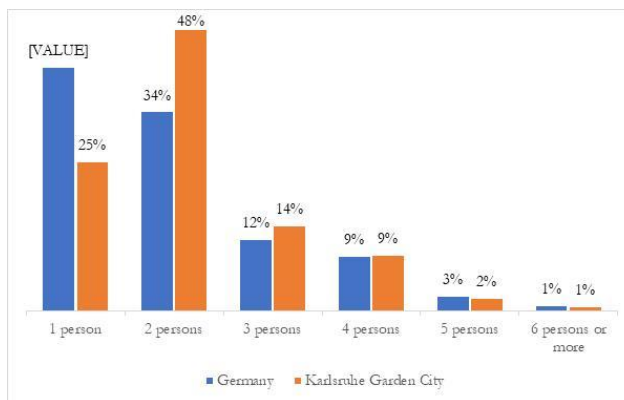

Figure 2: Household size Germany vs. Karlsruhe Garden City (source: own illustration based on collected data and Eurostat 2020a)
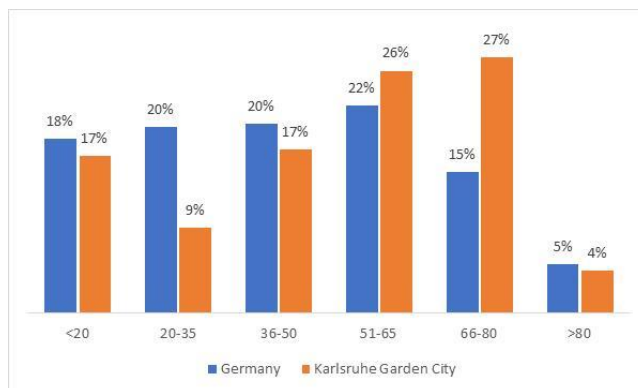

Figure 3: Age of the inhabitants Germany vs. Karlsruhe Garden City (source: own illustration based on collected data and Eurostat 2020c)

5.3 How long have you lived in the Garden City?

A comparison between the collected data from the Garden City and the available data for Germany (SOEP) shows a noticeable difference between the ongoing trends (Figure 4). The participants in the study have lived in their houses in the Garden City on average for 33.8 years. This figure is almost half (18.5 years) for Germany. In both cases the share of the inhabitants gradually decreases by increasing the period of living in the current home. However, in case of the Garden City the share is constantly higher up to the point of 70 years. Moreover, the trend shows more consistency between the years 13 and 26. The graph clearly shows a positive and increasing ratio between the values for the Garden City and the overall trend in Germany, indicating a more sustainable trend in the Garden City. In total 50% of the participants have resided in the Garden City for more than 35 years and 25% have lived there for almost 50 years or more. These figures are respectively 14 and 28 years for Germany (Table 1).
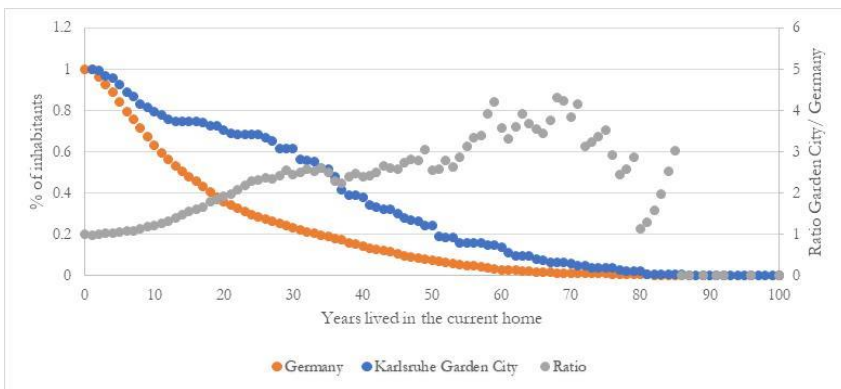

Figure 4: Duration of living in the current home- Germany vs. Karlsruhe Garden City (source: own illustration based on collected data and SOEP)

Table 1: Mean relative duration of living in the current home (source: own calculation based on collected data and SOEP)

	Quartile 1	Median	Quartile 3
Germany	7	14	28
Karlsruhe Garden City	11	35	49.5

5.4 Would you recommend others to live in the Garden City?

A 5-point Likert scale was used to define the extent to which the inhabitants of the Garden City recommend living in this area. More than half of the residents absolutely recommend it to other people to live in the Garden City. One fifth of the inhabitants would still recommend it however with a lower certainty. This means 75% of the inhabitants highly recommend moving to the Garden City. Only 7.5% of the participants do not make such a recommendation.

5.5 Are there any interesting activities organized in the Garden City?

The Garden City Cooperative offers some activities in the neighborhood and residents were asked about their impression of those activities. Moreover, they were

requested to name the interesting offers by the Garden City. Among all 138 participants, 47 have provided a valid answer to this question. Neighborhood Breakfast was the most mentioned activity with 64%. After that offered excursions are the second most interesting, mentioned by 34% of the participants. 15% of the inhabitants had mentioned that they do not participate in the events and 6% were not aware of the available options.

5.6 How is your relationship with the neighbors?

A 5-point Likert scale was also used for this question. Roughly two thirds of the residents have a (very) close relationship with their neighbors (scales 4 and 5); among those 42.1% are in very close contacts with the neighbors. The data for Germany shows a much lower figure; only 8.4% have a very close relationship with their neighbors (Figure 5). Around half of the people in Germany have a moderate contact with the neighbors, in contrast to 18% in the Garden City. On the other hand, only around 15% of the residents do not have a lot of interactions with the neighbors (scales 1 and 2).
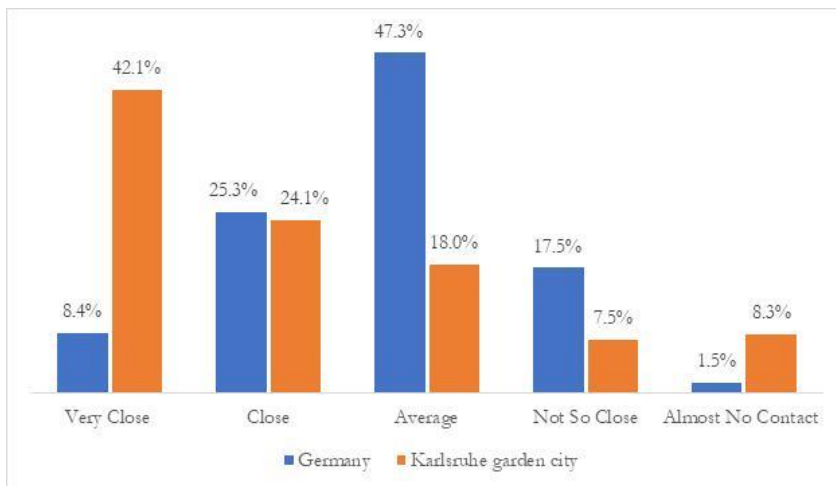

Figure 5: Relationship with the neighbors- Germany vs. Karlsruhe Garden City (source: own illustration based on collected data and SOEP)

5.7 What do you like in the Garden City?

This was an open question and the participants could write what they liked in the Garden City. In total 126 participant have provided an answer to this question. As expected, the highest share relates to the greenery in the Garden City (54.8%). Among those, 36.2% of the inhabitants have specifically mentioned "living in green" as one of their favorite characteristics. It is however not usual that only 54.8% of the participants have considered the green areas as a favorable element of the Garden City. The next favored characteristics are the central location (34.9%) and having a peaceful and quiet environment (23.8%). Having own share of the garden is what 19.8% of the residents like about living in the Garden City. Other interesting figures in this list are reasonable rent (13.5%), social mixture (7.9%), village feeling (7.1%), dismissal protection (7.1%) and community living (5.6%).

5.8 What do you not like in the Garden City?

The parking situation in the Garden City (too many cars and narrow streets) is what bothers the inhabitants the most; mentioned by almost half of the 98 participants who have answered this question. 15% are unhappy with the way the problems are dealt with by the Cooperative. In addition to that 10% of the residents consider their current rent expensive and they complain about increases of the rent the reason for which is not always clear and traceable. Some of the older tenants have expressed their willingness to move into a smaller flat as their family size has shrunk and their current dwelling has more living space than their needs. What they mention as the obstacle on the way is the higher rent that they will pay if they start a new contract even if they will be living in a smaller flat.

6. Discussion

Bramley and Morgan (2003) believe that the sense of belonging to the surroundings is stronger in the homeowners compared to the renters. Similarly, research on geographic mobility in the EU (European Union, 2015) shows that there is a lower likelihood for the homeowners to move home than the renters. The same study reveals that people living in the cities are more likely to change places than the ones in rural areas. Kemper (2008) analyzes the type of destination dwellings to which the inhabitants move. The results show that the highest share in West Germany corresponds the residential buildings with 5-8 apartments and the least favorable is the terraced house. According to the results of this study, the most observed destination quarters are the ones with mostly new buildings; with a slight difference comes the quarter with mostly old buildings (built prior to the second world war) in the second place. The points mentioned here do not match the characteristics of the case study of this paper, as the Garden City of Karlsruhe is run by community ownership in which none of the inhabitants of the settlement owns their property. It consists of mostly old buildings and terraced houses.

Sustainable communities are defined as the places where existing and future generations would like to live and work. This paper analyzed the Garden City which was developed following the idea of sustainable living long before the idea of sustainability became prominent in order to find out if it is still able to keep up with these promises. The presented survey provides strong support for this assumption. First of all, it has shown the willingness of the residents to not only live for a long time in the Garden City but also recommend living in the Garden City to others. About two-thirds of all 138 participants in the survey have lived in the Garden City for more than 25 years. Among all the participants 60.1% have freely decided to live or to continue living in the Garden City. Several factors could be the possible reasons behind these observations, e.g. community ownership, architectural and urban features, the history behind the Garden City. It could be argued that although the inhabitants do not own the properties, they have the feeling of homeowners due to the special circumstances in the Garden City, namely membership in the Cooperative and the long waiting times for receiving a house. On the other hand, the street structure and the design of the houses might encourage the residents to have a closer relationship with the neighbors, what was referred to as the

"village feeling" by some of the respondents.

Like all empirical work, the study design also has some limitations. The most important one is probably that it is likely that the survey sample is biased towards more engaged renters as participation in surveys in voluntary. Second as participants were asked to provide their names this may have increased social desirability as well as the fact that the survey was handed in via a former representative of the cooperative. However, this design was chosen after weighing different alternatives. The aim of this paper was then to share those observations and to raise the interest for further research about the underlying reasons. Socially enhancing the situation in the communities and settlements like Garden Cities would count as a crucial step toward social sustainability and it is hence essential to identify the relevant indicators of social sustainability in the Garden Cities. The results of this study will be used as the first dataset to develop a framework specifically suitable for the Garden Cities.

Although the Cooperative publishes the news and updates about the Garden City regularly, it seems that some of the problems and dislikes mentioned by the inhabitants are indeed due to the lack of communication about the ongoing projects and policies within the Garden City Cooperative. Hence it would be essential to communicate the observations of this survey with the Garden City Cooperative and to tackle these issues from the Cooperative's point of view. Although the satisfaction rate is already high in the Garden City, it is assumed that making people more involved and improving the ways of communication, would improve their satisfaction level even more. Therefore, this paper has tried to investigate the ongoing concerns and impressions of the inhabitants and will communicate them with the Garden City Cooperative.

Conclusion

This paper focuses on sustainable communities as one of the indicators of urban social sustainability. Considering the similarities between the definition of a sustainable community and the objectives of the Garden City movement, e.g. the concerns about higher quality of life and providing opportunities and services for all , the study tries to find the traces of social sustainability in one of the first examples of the Garden City in Germany. Building on the results of this paper, the next step would be to study other indicators of the social sustainability in this type of settlement. The results of the survey will then serve as the initial dataset for developing a framework for studying social sustainability in the Garden Cities. The findings of this study will be made available to the Garden City Cooperative.

Acknowledgment

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