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# Design for society: Ageing communities as co-designers in processes of social innovation

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33. ## ABSTRACT

*This article addresses the role of social innovation in ageing communities. Two cases are considered, namely the Life 2.0 project that focuses on generating information and communication technology services for ageing individuals and groups across Europe, while the second case is a project that was conducted with the BoAi aged care facility in China in which food services were (re)designed through insights stemming from the community. A comparative analysis will investigate how ageing communities collaboratively work with stakeholders, including designers and other professionals, to develop new services with the elderly. The comparative analysis presents insights into the role of ageing communities in service design processes and their roles as co-creators in new futures.*

## KEYWORDS

## 1. INTRODUCTION

The role of ageing communities in determining needs, and collaborating with service designers in the translation of the identified needs through collaborative processes into new or desirable services, has been foregrounded (Pan and Sarantou 2019; Pan et al. 2019). Through participatory service design processes,

the Life 2.0 and BoAi projects shed light on the value of such collaborative processes. The intention of this article is to focus on how ageing communities should situate themselves in social innovation contexts.

The first project, titled Life 2.0 (www.life2project.edu), was based in the European Union (EU) with the aim to create an information and communication technology (ICT) platform that could provide socialising opportunities for those elderly who wished to be better connected socially (Kälviäinen and Morelli 2013; Cantù et al. 2011). Life 2.0 aimed to create a new digital service platform, while BoAi looked to improve services for seniors. Life 2.0 focuses on supporting independent living and social interactions in ageing communities. The project was funded by the European Commission from 2010 to 2013, and it studied and tested geographic positioning services as a platform for elderly individuals aged over 65 in several EU countries. The aim was to improve social relationships and promote exchanges and meeting opportunities between the elderly (Cantù et al. 2011).

The second project, titled BoAi, was based in China. The aim of BoAi was to explore possibilities for drawing on the memories and stories of the elderly to transfer their remembered and lived experiences into senior care services (Pan and Sarantou 2019; Pan et al. 2019). In comparison, the BoAi project was conducted and led by the second author of this article in September 2017 in Zhuhai, China. BoAi is a senior care home that hosts approximately 120 senior residents, whose average age is 71. The first goal of the BoAi project was to reintroduce values and experiences of 'the good old days' (Havlena and Holak 1991) into the care services of BoAi, as the senior residents appealed to the managers of the home to consider their past experiences when tailoring their care services. The second goal of the BoAi project was to explore new approaches to senior care in China.

This article asks from the perspective of social innovation, and based on the two cases: 'What roles can ageing communities play in processes of social innovation?' and 'What are the responsibilities of designers and design researchers in processes of social innovation with and by the elderly?' The article posits that social innovation can be realized by ageing communities.

Both projects adopted the concepts of service design and co-design to discover and enhance important elements that are valued by the ageing communities. Service design is perceived as a potential enabler of 'society driven innovation' (European Commission 2009), while co-creation is becoming a strategic concept in design for services (Sangiorgi 2013). While Life 2.0 introduced new technological approaches for ageing communities, BoAi instead engaged in design ethnography to enhance meal services and promote communication and connections between the elderly.

To explore how and why ageing communities can act as co-designers in social innovation, the article adopts a methodological approach that is based on comparative study (Agranoff and Radin 1991; Dion 2003; Lijphart 1975) and comparative analysis. As Bukhari (2011) states, a comparative analysis is composed of answering questions about how and why a system will respond to challenges and limitations of its parameters. The purpose of the comparative analysis is to explore how the elderly can be engaged in and stimulated to act as co-designers in social innovation within senior care creation.

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## 2. THEORETICAL FRAMEWORK

### 2.1. Design and co-design

Design, as both a social and material practice, has shifted from design styling to design processes and systems (Crouch and Pearce 2013), thus evolving into many new forms, including social and service design. Services are the primary goal of design (Nelson and Stolterman 2003), while it also mitigates complexities and stimulates the creation of new solution (Miettinen and Sarantou 2019; Norman 2011). This is leading to deeper reflections into who designs and who uses design. Associated with and understood as design participation, co-creation, collaborator design, participatory design and service (Yin 2008), the concept of co-design proposes alternatives between how, what and who designs (Sanders and Stapper 2008). The drive in participatory approaches for creation *by* and *with*, instead of *for* communities (Morelli 2015), is supported by collaborative community arts approaches (Badham 2010), which are transferrable to co-design contexts. Various roles for designers have been identified in co-design, including facilitative, generative and developmental roles that are important for putting users and communities at the heart of design (Yin 2008). Co-design, by definition, includes all the stakeholders that are involved in the design process, from users, designers and researchers to those who will implement the design (Szebeko and Tan 2010). Co-design welcomes all stakeholders to be as co-designers. In the concept of co-design, the person who will be served through the design process is given the position of expert of their experience; thus, they play a significant role in knowledge and concept development, as well as idea generation (Sanders and Stappers 2008). The focus has shifted to the distribution and use of resources collaboratively instead of being owned and delivered only by professionals (Cottam and Leadbeater 2004). This is different to the concept of user-centred design in which the user is perceived only as a passive object of study in the design process (Cottam and Leadbeater 2004).

### 2.2. Ageing and the role of designers

Ageing traditionally represents the accumulation of changes in a human being over time (Bowen and Atwood 2004). Biologically, it is the process during which structural and functional changes occur, while socially, ageing is sometimes viewed as a burden, because it increases public expenditure (Fenton and Draper 2014). Ageing encompasses not only physical, biological, psychological challenges, but changes in family relationship, economic sustainability and social contexts should also be considered. In the design field, the aspects of ageing such as beliefs, values and knowledge about the lived experience of ageing individuals needs consideration. Cyarto et al. state that healthy 'ageing is more than just maintaining physical or functional health' as one gets older (2013: 15). Fenton and Draper (2014) also claim that ageing well is a complicated concept with a multitude of understandings that need to be generated about issues such as culture, preferences and identities (Fenton and Draper 2014). Ageing communities are very diverse with their arrays of different capabilities (Kälviäinen and Morelli 2013). Although ageing is an inevitable and irreversible process, solutions can be generated to enable positive experiences through design as an enabler in processes of translation, configuration and transferral of content and processes (Baule and Caratti 2016). Designers are thus acting to realize 'a continuous process of mediation, transfer and

re-transcription between the systems of departure and arrival' (2016: 1), which means that design can enable the mediation of a process from beginning to end. Designers and researchers are social experts (Press 2016) due to their resourcefulness. The role of designers as mediators, translators and co-designers presents desirable opportunities for the future of ageing communities when acting with the elderly.

### 2.3. Social innovation

Social innovation can be understood as a new idea that aims at meeting social goals (Mulgan et al. 2007). Manzini (2014) provides a detailed definition for social innovation as a process of change that emerges from the creative re-combination of existing assets (from social capital to historical heritage, from traditional craftsmanship to accessible advanced technology), with the aim to meet socially known goals in alternative ways. Social innovation seeks to answer to the multiple and growing challenges of various global crises and much-needed transitions towards sustainability (Manzini 2014). The drivers in the processes of social innovation besides experts, decision makers, political activists and communities are designers (Manzini 2014). However, in social innovation, processes are driven by different actors, participants, temporalities, behaviours and traditions (Manzini 2012). Social innovation and design are dynamic and unforeseeable as different groups of citizens serve as leaders in the conception and implementation of new solutions (Manzini 2014), which means that improvisatory attitudes enable the participation of a variety of stakeholders, including the elderly, in contributing their insights, experiences and values to social change.

### 3. METHODOLOGY

The methodological approach of this article is comparative study and analysis comparing and contrasting various aspects of the phenomena in question. The comparison aims to identify the similarities between the phenomena, while the contrast describes their differences (Glaser 1965). The goal of comparative study and analysis is to illuminate, critique or challenge the stability of the matter of inquiry (Walk 1998) in order to produce a comprehensive understanding of a particular context.

Existing materials in the form of conference and journal papers that discussed the Life 2.0 and BoAi projects, published between 2011 and 2019, were selected and analysed (Pan and Sarantou 2019; Pan et al. 2019; Morelli 2015, 2014; Kälviäinen and Morelli 2013; Cantù et al. 2011; Blat et al. 2011). From the existing materials, dominant and forthcoming themes were identified that were used in steering the comparative analysis, findings and discussion.

The methodological strategies that were used in the comparative analysis and a selection of existing materials from both projects were ethnography and design ethnography. These approaches were selected due to the specific focus on ageing communities and their cultures, habits and needs. In depth interviews, focus group discussions, participant observation and workshop were additional methods selected for the research (Pan et al. 2019; Morelli 2015, 2014). The Life 2.0 workshops involved stakeholders such as designers, third sector organisations, municipalities, business consultants, technicians and ICT experts from partner countries (Cantù et al. 2011), while the workshops at BoAi involved the elderly, service providers, care facility management and designers (Pan et al. 2019).

1. The motivation for selecting design ethnography was to understand and
2. interpret every day lived experiences of the participants and to enable the
3. design teams to identify with the ageing communities and to build empathic
4. understandings of their practices and routines. Co-design processes can reveal
5. what the ageing communities care about (Brandt et al. 2010), and design
6. ethnography can be used to understand the needs of the future users of a
7. design, which is possible by using the ethnographic principles of learning
8. from cultures and communities (Van Dijk 2010).

## 4. THE DIFFERENT APPROACHES OF THE PROJECTS

With the background and theoretical concepts in mind, the authors will
describe two research projects that illustrate how ageing communities contrib-
uted value as co-facilitators in alleviating the challenge posed by the phenom-
enon of ageing. It is expected that between 2010 and 2060, the proportion of
the population aged 65 or over of the CEB (Council of Europe Development
Bank) member countries will nearly double. This increase is calculated to raise
from 16 per cent to 29 per cent of the total CEB population. This percent-
age will represent about 160 million individuals (CEB Report 2014). Societies
and governments, including the European Commission, need to consider new
strategies to support elderly communities with independent and quality life-
styles within their own homes.

Life 2.0 was concerned with the development of geographic position-
ing services to support independent living and social interaction of elderly
communities. The aim of the project is to study and test digital services for
over 65-year-old community members to improve their social relationships
and promote exchange and meeting opportunities (Cantù et al. 2011). The
project partners, who were working on the pilots in their own countries, were
universities, third sector organisations, municipalities and IT firms located in
Alborg, Joensuu, Milan and Barcelona between 2007 and 2013. The project
departed from the assumption that ageing communities are a resource rather
than a burden. The project adopted design ethnography (Salvador et al. 1999)
as a research approach to unmask the hidden needs of the individuals while
generating understanding of the contexts, user needs and challenges. The
project perceived a social networking service as a way to increase opportunities
for ageing individuals to engage in social and physical activities (Kälviäinen
and Morelli 2013). The proposed social networking service was an online plat-
form which individuals and communities used to build social networks or
relations with others who had similar needs, interests and activities.

The Life 2.0 project approached the research through defined design
orienting scenarios (Manzini and Jegou 2004), by co-designing and testing
digital service prototypes. The 3-year project consisted of four main phases of
ethnographic research and analysis to: (1) identify the needs and desires of the
potential users of the services to be developed; (2) collating the contributions
from the involved regions and defining the project scenarios through partici-
patory approaches; (3) design the prototype of the digital service, moving from
the requirements that emerged from the scenario-building phase to the archi-
tecture and design of platform; (4) testing the platform customisation based
on the feedback received from the users and the emerging opportunities that
were identified for the involvement of stakeholders (Cantù et al. 2011).

One of the main tasks of the project was to define scenarios for design.
The many different stakeholders of the project, including designers, the ageing

communities, businesses, universities, organisations, municipalities and IT firms, led to defining the gap between customer expectations and perceptions. These scenarios were carefully analysed to provide information for the design of future actions. The three scenarios addressed: firstly the *care for someone* as ageing communities very often take up the responsibilities of care ranging from partners, grandchildren, friends and other individuals. Elderly are family resources for the care of their grandchildren and spouses. They want to be aware of their family members' location, and taking care of someone provides a meaningful way to spend free time. The second scenario addressed *social networking and relationships* that include possible situations in which the ageing communities build, maintain or develop social relationships. Social events support elderly to have fun, be more independent, and cultivate their friendships and other relationships. They also attempt to overcome insecure feelings and depression that are often connected to loneliness. Finally, the third scenario addressed *information exchange, planning activities or events and rendering help* as these activities provided the elderly with opportunities for self-fulfilment and improvement in life quality for themselves and others.

In China, the number of elderly people is expected to reach 400 million by 2030, which is equivalent to the total population of fifteen EU countries (Sun et al. 2015). The demand for services in aged care is a significant challenge globally, which motivates societies, authorities and entrepreneurs to have better solutions and preparations in place. At BoAi, the culture of filial piety is one of the cultural values that the elderly longed for being reintroduced in their services (Pan and Sarantou 2019; Pan et al. 2019). The study used participant observations and workshop methods to gain understanding in the current service system and the expectations of the ageing community. During the workshop, the identified problems were solved through prototyping and testing with the elderly and values of 'the good old days' were successfully reintroduced, while the proactive role of the ageing community in designing their own services and futures was illustrated (Pan and Sarantou 2019; Pan 2019).

The methods of prototyping and experimenting firstly addressed the *inappropriate dining environment* at BoAi as the interior arrangements and food services did not encourage the sharing of dining spaces or dining tables. The interior layout and furniture hampered communication between residents, which had an isolating effect on the three to five members in each living unit. Secondly, the *lack of community atmosphere* was addressed by using dinnertimes to engage in interpersonal communication or conversation. The food service providers had more time for delivering the food, furniture was rearranged, while watching television during mealtimes was eliminated for the elderly. Thirdly, '*good old days' experiences were reintroduced* in the meal services at BoAi. For example, metal bowls and cutlery were replaced by porcelain bowls and wooden chopsticks, which add cultural meaning and memories of 'home' to their food experiences. The service providers were required to perform culturally specific body gestures while serving the meals.

## 5. DISCUSSION

The aim of the comparison between the two cases is to establish deeper insights into the role of ageing communities in co-design processes and how they initiate and contribute to their own social innovations. Both projects drew on the values and competencies of the ageing communities by collectively

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working with stakeholders to respond to solutions with the elderly. Based on the identified problems, the ageing communities participated in design processes as the users of the services and as a resource in finding solutions for their problems. As Kälviäinen and Morelli (2013) claim, the elderly are the experts of their everyday lives, problems, expectations and hopes, and therefore they hold the knowledge to their own solutions. In both projects, the ageing communities played important roles that contributed to the betterment of their situations. The elderly have the best knowledge about their needs and how they can contribute to successful social design outcomes.

However, the distinction of these two cases was the obvious cultural and environmental differences in aged care that may exist between Asia and Europe. The cultural and environmental differences that exist between Southern and Northern Europe were highlighted before. Cultural piety is an important cultural norm in China, but in Europe, different approaches to paying respect to the elderly may exist. In terms of the outcomes of the design processes, the roles that designers and senior communities played were different due to the contexts and aims of the projects. Another difference between the two projects was that the participants in Life 2.0 were living mostly independently, while the participants of BoAi were living in an elderly care facility. The participants in Life 2.0 were also concerned with their independence, wanting to remain independent. One way of achieving their independence was connected to the purposeful use of technology.

### 5.1. Life 2.0

The project entailed the co-creation of a common vision for a desirable future for the elderly participants; thus, the design of scenarios was important to direct the on-going project development instead of building concrete products and services from the onset. Positive outcomes were achieved through the use of scenarios. The implementation of the scenarios enabled the designers, researchers, elderly participants and other stakeholders into new insights of the European-based communities (Kälviäinen and Morelli 2013). Through the digital service system, the activities, movements and location of community members could be traced; thus, the physical needs of the elderly, such as the distance to home or a place of interest, were details that could be tracked, established or documented. The facilitation of access to E-health information sources, remote care services, peer-to-peer help and communication and exchange with relevant stakeholders, such as the public health care system, public associations or private services, was also possible.

Life 2.0 also provided user-friendly tools that could address different ways of creating social interaction between ageing communities. In the South of Europe, there are a variety of rich social lifestyles. The tool was used to organize free time for having fun and entertainment together with friends and inform them of activities and events. In the case of ageing individuals wanting to attend events, the service helped in reaching places, exchanging content, and communicating rapidly. In Scandinavian countries, the remoteness of some elderly individuals and communities, as well as weather conditions, made it more difficult for the elderly to establish social, face-to-face interactions and outdoor social events. Services in these locations should find solutions to better support the elderly to build new friendships, stay connected, and be included in public and private associations so that they can participate in social events and cultural activities within a reachable distance.

The Life 2.0 digital platform supported spontaneous forms of mutual help and time-sharing, especially in everyday activities such as cooking, shopping, going to the doctor or sharing transport or vehicles. For these kinds of services, a community should have reliable digital correspondence tools at their disposal as a supporting structure in facilitating different levels of social interaction. This means that information exchange and community building could occur at the level of family and friends, as well as within the community. This will encourage design for new services that are based on collaboration among peers to enable mutual help and support, as well as e-participation.

The reflection on three years of work, research and testing of the services and prototypes that were developed collectively with all stakeholder and the ageing communities illustrates the success of the Life 2.0 project in developing new opportunities for ageing communities through social and physical activities. The most important component of this case study is to perceive the ageing communities as resources and co-designers for their own needs or activities.

### 5.2. BoAi

A new service prototype was co-designed and initiated at BoAi. The focus of the workshop was on all aspects of serving food, which allowed the researchers a good opportunity to co-design with the elderly to reintroduce 'the good old days' experiences. The aim of this new service was to eliminate the disconnection and marginalisation that the senior residents experienced in comparison to their previous traditional lifestyles.

The designers, ageing community members and other stakeholders cooperatively re-designed the food offering space at BoAi by rearranging living and dining spaces to avoid exclusion and disconnection between residents in the space. The residents of the apartment were encouraged to participate and comment, offer suggestions and changes within the space, thus bringing their understanding and prior experiences to the activity while gaining ownership of the changes (Pan and Sarantou 2019; Pan et al. 2019). A co-managed community atmosphere was created by introducing more traditional Chinese food serving culture, while the spatial aesthetics were in accordance with traditional Chinese culture. The seniors were observed to experience improved interactions, such as laughter and physical communication, which demonstrably increased during the dining events (Pan and Sarantou 2019; Pan et al. 2019). The service providers adopted new roles as hosts to all seniors. All physical interactions were conducted by using both hands and proper gestures during serving, thus expressing care and respect to the elderly, with the result that the cultural expectations that are connected to filial piety were reintroduced and practised.

## 6. FINDINGS

The comparative analysis of Life 2.0 and BoAi are presented in this section. Four dominant themes came forth from the comparative analysis of the seven peer-reviewed journal and conference papers. The dominant themes also serve as framework that can offer direction for new design perspectives and service design processes with and by elderly communities.

### 6.1. Socialisation

Social cohesion is an important element in combatting isolation (Morelli 2014). In the BoAi project, social isolation was experienced despite the grouping of three to five elderly residents in one living unit as the interior arrangements and meal services were inconducive to enhancing social cohesion between the residents. Socialisation in Life 2.0 was enabled by a digital platform. It was rather used collectively than individually for planning, scheduling, searching or mapping activities (Blat et al. 2011). Such ICT platforms can also enhance peer-to-peer communication and support, but this is dependent on the cultural context of the participants and should be considered (2011: 10).

### 6.2. Personalisation

The focus on co-design for identifying and addressing personal needs (Morelli 2015) offers avenues for design to translate knowledge into, and facilitate, processes of personalisation. Experiences that are enriched with elements that derive from contextual cultural meanings can enhance the personalisation of services for ageing communities. The BoAi project demonstrated a significant appeal for combining prior cultural experiences into the current services. Service design with and by the ageing communities needs to focus on disclosing and capturing personal needs of the elderly to shape desired services around them (Morelli 2014). Without the consideration for cultural values, backgrounds, experiences and knowledge, such as the 'good old days', personalisation within specific cultural contexts can be an efficient approach to integrate desired values into services.

### 6.3. Value

Social change and innovation by ageing communities through co-design create value for beneficiaries (Morelli 2015). Cultural values, such as filial piety in the Chinese BoAi project, could be embedded in new food services for the elderly due to the co-design workshops. In the European project Life 2.0, co-design revealed that participants valued their independence and wanted to sustain it. Elena Pacenti (1998) interprets the concept of value constellations (Normann and Ramirez 1993) by suggesting that designers could develop interactions between users and service providers with the aim to realize and improve value propositions for services (Skålén et al. 2015; Vargo et al. 2008). Seniors should participate in the value co-production of services by investing their competencies, resources and efforts in co-design processes.

### 6.4. Engagement

In a contemporary view of value creation, ageing communities could be perceived as resourceful social experts or social designers in matters of ageing as they are able to share rich lived experiences of ageing, participate in data collection and analysis and participate in decision-making about the implementation of actions and initiatives. However, to lower barriers to engagement, such as the high costs of ICT equipment, distractions caused by continuous television broadcasting and physical disabilities that result from ageing (Blat et al. 2011), design can be harnessed in overcoming these barriers. Engagement is not only an antidote to social isolation, but a gateway to active participation that can enable social innovation by the ageing communities.

### 6.5. Scalability

The question of scalability has been introduced by Morelli (2015, 2014) and Winhall (2011). Scalability offers some challenges to service designers to create transferable models and approaches that will enable services to be implemented nationally or regionally. Scalability poses questions as to how new solutions can mature from an experimental or prototyping phase into sustainable services. The term scalability refers to increased numbers in production that can answer to the needs of users, but this concept is not yet widely used in practice related to 'public services or social innovation' (Morelli 2015: 2), but the question remains how service designers can work with ageing communities to address the scalability of services to the growing and global problem of ageing.

## 7. CONCLUSION

A Chinese proverb 危机 (wei-ji) means that the concept of risk has two dimensions: it raises challenges, while it simultaneously conceals potential opportunities for finding new solutions. Through an increasing global ageing population, new social challenges are emerging in contemporary societies in many countries, which calls for innovative solutions. Design for ageing communities offers a direction for new design perspectives. By using the identified themes forthcoming from the comparative analysis, a framework has been established for directing these new design perspectives.

The article seeks to answer how ageing communities could be more efficiently involved in their societies through change making and innovation. In the context of service development for the ageing, the article explored how ageing communities contribute to processes of co-creation with the aim to reinvent and increase the value of services. The ageing communities have worked with all stakeholders in establishing the design scenarios for the potential digital services in Life 2.0, and in BoAi, the elderly have cooperated with designers to translate experiences into current service design and delivery by enhancing their dining ambience and interpersonal connections within the aged care facility. In both case studies, the ageing communities co-designed with stakeholders. The ageing communities demonstrated the ability for fulfilling the roles of resourceful social designers and facilitators in the needs they want answered for their own futures.

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