A Design Anthropology Critique of Active Aging as Ageism

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Abstract. This paper proposes a design anthropology critique of active aging as ageism in the design of information technologies for seniors. With ageism we refer to narratives coalesced around the label "active aging" in European policies and system design that focus on seniors as a homogeneous group of people in need of help. We discuss the findings of two empirical participatory design projects we have been dealing with: 1) a bottom-up senior organization in a small village in a mountain area and 2) a series of workshops organized with seniors in an urban area. In both cases, the relations between the anthropologist and the people involved, prompted reflexive moments that brought anthropological relocations of the designers' perspective. In conclusion, we stress how such relocations could benefit participatory designs through the concept of design by subtraction and the adoption of a feminist perspective.

Keywords: Design Anthropology, Participatory Design, Reflexivity, Wellness, Active aging, Design by subtraction, Feminism.

1 Introduction

The meaning of Active Aging has been discussed for decades in academia and is generally defined as the ability of older adults to grow old maintaining psychophysical and social activity [24, 50]. This concept was born in Gerontology, as was its predecessor successful aging [38]. Both concepts were promoting later life as an active and positive period, presenting a positive image of aging that has been used when active aging was adopted by public bodies [52]. The EU Commission has decided and defined policies for implementing ICT solutions for "aging well" [19].In 2007 the European Action Plan for Aging Well in the Information Society promoted a "new joint European research program raising over €1bn for research investment on information and communications technologies (ICT) targeted at improving the life of older people at home, in the workplace and in society in general" [18].

In this process Ambient Assisted Living (AAL) technologies are described as playing a fundamental role and are indicated by public agencies as solutions to promote active aging and to "strengthen the industrial base in Europe through the use of ICT" [2,18]. AAL are those technologies that interact with the environment to enhance the quality of life of users, with a particular focus on seniors. AAL

technologies include: smart homes, mobile and wearable sensors and robotics [36] but since the definition is wide and its limits blurred, it is considered, in broader terms, any technology depending on how it is designed and used. The concept of AAL is often related to that of "aging in place", which is the idea that people can have a better later life if they age at home, rather than in a nursing home, and through this decrease the health care costs for older adults while creating new business opportunities.

In this paper we propose a Design Anthropology perspective to active aging, contrasting the institutional and system design narratives with the narratives unfolding from fieldwork.

Therefore the paper is structured as follows: in section 2 we describe the narratives that address active aging, showing how institutional discourses and system design are affected by ageism and how this leads to failures in design assistive technologies; in section 3 we describe the narratives from ethnographic fieldwork conducted with seniors, showing a mismatch between the stereotypical image of the senior and the seniors "in the wild" or daily-life context; in section 4 we discuss what we learnt from our experience and how anthropology can be re-located in respect of Participatory Design (PD); how an anthropological gaze can unearth mismatches between researchers and informants, and foster reflexivity; in section 5 we propose critical future trajectories of research of Design Anthropology *in* and *within* Participatory Design.

2 Narratives of active aging: institutional discourses, ageism and the influence on systems designers. Or active aging as a form of ageism.

In literature on systems design, seniors are commonly described as problematic users of technologies, shaping negative stereotypes coming from popular beliefs. In this paper, we define "ageism" as the practice through which negative stereotypes on aging are performed.

One of us has participated in a systematic meta-review of the papers published in the journal Personal and Ubiquitous Computing, from the inaugural issue of 1997 to 2014 [14]: with few exceptions, the process of designing AAL technologies is affected by negative aging stereotypes. The study also highlighted little use of qualitative methods, such as ethnography. This literature review shows the dominant functional attitude expressing a techno-centric perspective on ICT for seniors. The functionalist approach follows "the technological imperative" [5], according to which people and organizations should fit into the technologies, and not vice versa. For this reason it is not a case that older users are involved primarily in the evaluation, which is the final step of a design process. Here the users, rather than providing useful feedback to improve the technology, are mostly involved in the evaluation stage where they are called to test acceptance and adaptability to the new system. In this context what emerges is the assumption that seniors are seen as problematic users because they are unfamiliar with technologies, such as in [22,23,29]. For example, Hamill [23] argued that seniors are not familiar with the personal computer because "it arrived too late in their working lives". Seniors are represented as disadvantaged

with respect to technologies and their limited technological skills are intrinsic. From the systematic meta-review, other characteristics emerged as attributed to older users, such as: vulnerable, technologically incompetent, mentally or/and physically impaired, childish and asexual. In addition, gender is not considered as a relevant characteristic. Nevertheless, older adults present a specific characteristic: due to life expectancy, the majority of older adults are women [52,44].

These data can be included in a wider framework, considering that designers are a social group significantly different to the social group represented by elderly people. Wilkinson and De Angeli [51] track statistics of the attributes of ICT designers. The percentage shows that the profile emerging from this group is represented by a 40 year old, upper-middle class, white man. According to the psychology of stereotypes, the perception of the "otherness" is as strong as the social group is different from the "other" one [8]. Stereotypes acquire a negative connotation when they become stigmas or discriminatory prejudices. When stereotypes become a design attitude they lead to a problem-solving approach, which of course implies that there is a "problem" and there are "problematic" users [14].

In the narration of the "otherness", the construction of stereotypical views to interpret the world has been addressed by anthropologists within post-structuralism, since Edward Said, [40] critique to the construction of the east exoticism (Orientalism), as an hegemonic and eurocentric lens. We take a narrative strategy similar to the one of Said, defining as "Ageism" the hegemonic, designer-centered, lens on seniors. Doing that, we actually engage in a reflexive stance, following Paul Rabinow [35] in *Reflections of fieldwork in Morocco*. For Rabinow, the construction of the alterity can be read as an hermeneutical cycle of interpretation of meanings, the exploration of the other as an aspect of self knowledge: "the comprehension of the self by the detour of the comprehension of the other" (p.5.). In this paper the construction of ageism as a negative encounter with the "otherness" of the seniors will be critically discussed through empirical findings.

Research focusing on observing the social dynamics between designers and older adults during a design process, shows that older participants do not align to the researchers' negative stereotypical view about themselves and consequently refuse to use the technologies designed for them [32]. When contributing to the design process they react without recognizing themselves as "old" and so as potential final users, rather positioning themselves as "helpful" in designing technologies for the wellbeing of "other" older adults [33]. Older adults openly report to feeling threatened at times as "if because you're retired your brain has gone", suffering patronizing attitudes from the researchers [13, p.22]. In fact, both the Anthropology of Aging [44,39] and Critical Gerontology, also with interdisciplinary encounters [34], have stressed that seniors should be considered as active subjects, and they have already stressed the importance of being "anti-ageism". Leveraging the anthropological gaze to recognize seniors as active subjects situated in a cultural and social context opens up a space for forms of technology design that involve the seniors not only as testers but as full participants in the design process, in the tradition of Participatory Design [42].

The mismatch on the "otherness" between seniors and researchers is part of any prolonged encounter between different subjects, like a design process, and in fact it has also been encountered in the ongoing field studies we conduct (see section 3). A design anthropology perspective on participatory design does not eliminate the

mismatch but move it to the center, as a way of improving relations and practices. For example, in a participatory workshop on the use of IT with seniors, we found that communicating with them is an on-going sense-making process. Every word and expression needs to be chosen carefully and with awareness.

The combination of design anthropology and participatory design processes is not only intellectually stimulating but also pragmatically convenient. In fact, the attitude to ageism becomes problematic when imported into the design and the implementation of new technologies, leading to design failures, both in terms of usability and domestication, and in terms of successful products [51].

Wilkinson and De Angeli [51] describe the process of design failures that involve older users and designers, as reiterative circles of missteps. The mismatch between stereotypes of designers and perception of the self by the seniors suggests that active aging is a form of ageism.

Moreover, there is also research showing that older adults are as digitally capable as other user groups [41,47]. It depends on how the technology is designed. Computer usability is not universally intuitive since computer interfaces are metaphoric: the graphic objects such as the desktop and the folders and files for system storage or the concept of the account or the log in or the password, are culturally situated metaphors. Computer metaphors are not natural, nor neutral, since metaphors are agreements in terms of meaning, negotiated in specific cultural contexts. Metaphors dramatically change from one culture to another [17]. Also for this reason an anthropological approach is needed in order to understand seniors imaginaries and possible "user requirements".

To summarize the discussion on the narratives on active aging, what we argue is that active aging is a form of ageism. From an anthropological perspective, the mismatch emerging between many design interventions and seniors' reactions, suggests that seniors can be approached not as a social group labeled by age, focusing instead on what they do in terms of activities, locating in the complexity of the context, with its own culture, a constellation of references, practices and values that can be unearthed and understood through an anthropological gaze to the field [10].

3 Narratives on aging and wellness: The "native" point of view. Or glimpses of reality thrown off during the design process.

In the two field studies presented we describe episodes where ethnographic methods (field-notes, informal and semi-structured interviews) and participatory design methods (semi-structured interviews, workshops) are applied for exploratory or design purposes. In these episodes, mismatches occur between researchers' and participants' expectations and goals, bringing to the surface the "otherness" for both. These missing correspondences bring moments of presence, and thus of reflexivity that influences future developments.

We consider two places in northern Italy, where research activity oriented towards participatory design projects occur.

The first is a mountain scattered municipality, which is formed by 19 villages and localities. For its geographical position, depopulation and the rate of seniority, the

scattered municipality is considered by EU norms a disadvantaged municipality. Therefore it is privileged in applying for EU and regional funding, mainly for business development and residential building improvements and construction. This Municipality is characterized by several volunteering associations (21 associations counted in 2015, for an average of 1200 citizens). One of the most active associations, together with the Youth organization, is the "Movement of pensioners and seniors". This movement presents a self-organizational structure, a bottom-up approach of social and civic engagement and a very low use of digital technology. It has an average of 30 active members per year.

The second piece of fieldwork is within a weekly workshop, started three years ago in a partnership between a community centre for seniors, the research group we are part of and a Department of Sociology. The intent is to run a participatory workshop on technologies where seniors and researchers can experiment, as a group, with ways of co-learning IT devices and practical situated learning [28]. Due to the well-established relationship between the departments and the community-center through the years of collaboration, the expectations of the participants of the workshop are high. This workshop presents an institutional structure (more institutional partners converged to create this space), a top-down approach of social engagement (the workshop is annually proposed by the community centre which is the direct contact with the seniors), and medium-high use of digital technology.

3.1 The "Movement of pensioners and seniors".

In the first site, participatory observation, informal chats, semi-structured interviews and field-notes are performed to explore the seniors' perspective on active aging. Indeed, disappointing the negative stereotypes implicit in the concept of active aging, taking an appointment with seniors in need of being "activated" has been very challenging. Their lives were indeed very busy. Moreover, one of the authors confronted herself, not just as a "researcher" but also as a situated person: a stranger, young woman, with the "otherness" in contrast to the proactive, unstable and evolving senior community. This encounter challenges the etic view of seniors presented by the institutional narratives and disregards the participatory design basic assumption of a democratic bottom-up will of being authors of their own changes.

3.1.1 Re-thinking the notion of engagement and participation in practice

The following field notes discuss the first encounter with Anna, a woman between 68-70 years old that will become the gatekeeper for accessing the "Movement of pensioners and seniors". She shows reflexive capacity of analysis of the context as well as self-reflexive insights, positioning herself as a stranger at home, and reveals how the use of technology has empowered her and contributed to making her eligible to cover roles of responsibility inside the Movement.

The class finishes [of the "university of the third age"]. Elena [the president of the 'Movement of pensioners and seniors'] is in a hurry, so we agreed to get in touch next wee.

I remain alone with Anna. She tells me much about herself. She is from XXX [the closest town], she moved here few years ago, after her divorce she came back to live with her mum (her father had finished building the house where she currently lives). She tells me that even if she's lived here a long time, she's still considered an outsider. Nevertheless she is the vice-president of the Movement, because she is the only one that is able to "manipulate" with the computer. For many years she worked as secretary of production until her retirement.

Moreover, the gatekeeper put into crisis the use of the PD method as it was being imagined by the researchers, driving them to self-inquiring about what is participation in PD:

She explains to me that here, everything passes through the Municipality of [the village]. If I want to do something, I have to ask the Municipality. I clarify that if there is to be a project, it will start together, from the bottom. I confirm this and it seems a new concept for her and Elena. She said that if I would carry out a project for the territory, I would have priority over outsiders (given by the Municipality) and that with the new Mayor there is a more open-minded attitude, I just need to take an appointment. She continues arguing that the youth must "do" and work hard, but that they need elders to be directed and advised. However, she claims that here "the oldies", the "mentality of the oldie", is narrow-minded, everything must be kept secret, but she thinks that this is wrong.

She tells me that she has been coming to the municipality for 70 years, but she has never seen a hairdresser here. "The girl [the hairdresser] proposed her project, we discussed it here" [pointing the hall where we are talking, where institutional and social meetings occur]. I'm surprised that the local council discussed the opening of a local business. I start to suspect that politics here have a family and communitarian management.
Maybe it's not a wrong idea asking the local council, if they are used to do so (reminding myself the classic advises handbook to access to the field). Nevertheless, what is figured is a participatory design, which aims to come from the bottom... through access from the top?).

From this encounter, participation strongly emerged as a cultural concept. Participation is not only a political concept within a society [11,42] but also, widening the perspective, a cultural concept: there are many forms of participation within the same social context but there are also different practices for the same meaning of participation in different cultural contexts. For example, the participation of an association mediated by the local municipality can be seen as an important achievement from the locals' point of view (emic perspective), but can be seen by an external observer as a form of tokenism and delegation, such as that of the researcher's (etic perspective). Therefore, re-locating participation in context results in a useful strategy in order to achieve a peaceful negotiation of expectations reciprocally recognized in both of the parts: co-designers and participants. Indeed, Anna's delegation to an institutional body (the Municipality, represented in the person of the Head of Heritage and Culture) was subsequently understood on the one hand as

a way to safeguard the security of the association from outsiders while on the other hand as a way to access funding for the proposed collaborative project. If on the one hand, the encounter with Anna and the members of the Movement begins to challenge the picture of "*seniors in need*" painted by active aging, on the other hand, the negotiation for a possible participatory design project frames participation as different from our expectations.

The rich calendar of the activities presented by the Movement evidences a vivid capacity of self-organization, for their own members, such as the university of the third age, the gym, touristic and cultural trips; as well as for the local community: the movement is in charge of organizing the annual theatrical season. The youth association organized a short course with the Movement on teaching the use of the computer together with grandparents and grandchildren however it only took place on a single occasion. The proactivity of the Movement and the scarce use of digital technology attest a general distance from it and the capacity to organize with other available resources, like telephone calls and flyers.

3.1.2 Genderizing aging

Being a young female, "situated self", researcher influences the way of engaging with, and the reaction of, the informants. In the semi-constructed interviews conducted to explore what kind of activities seniors do, used to do or would like to do; what barriers they find in doing those activities; how they perceive themselves and how they feel to be perceived by the "influential others", broader narratives related to the dynamics of post-industrial and patriarchal society are alluded. Among male seniors a common way of talking about themselves emerges. The men tend to identify themselves with the job they used to do and still do so even after the retirement, exalting their skills and hardworking attitude.

As the case of Achille, a man between 72-77 years old, he worked since the age of 16 as a bricklayer, between Belgium and Italy, crossing Europe in wartime:

Achille: *"Usually, I spend the days doing maintenance of the house, our house... because it's never ended, never. (…) I continue to work, here. (…) I... iron, stuff, rust... people bring me things... and then I try to fix them. It's not that there's a profit... (…) They [the people that know him] know I keep everything. And after I clean what they have brought me they don't even know what it is anymore! Maybe it was found in a field, see? (He shows me an old and well oiled clamp). And I make it work (he actions the clamp, that spins on itself with ease, without squeaking). It's all like this... I spend my time in this way, on old stuff... (…) I don't know what to do with it... but the feeling that it gives me to fix a tool like that! (smiling). (…) I'm always alone, here... ehm, I don't have friends. I am housebound. Don't take me away from my house! (chuckling). My wife wants to go somewhere?... "no no, I don't come, go on your own!"*.

In the first encounter with Pietro, a man between 75-80 years old, he welcomes me in his house where he and his wife live. One of the first sentences he says to describe himself is:

"I am retired now, but I still work (smiling). (…) Eh, now that I am retired one hundred per cent, I still work at the family business, but, money, I don't take it anymore (smiling). Heh heh! The pension income is minimal. Minimal..."

The narrative about their past work is predominant in their stories, mostly described as a duty in respect to their original family (when they were children) and the latter family of their spouses and children (where they were patriarch). Most of the interviewees reported difficult family situations during and after World War II. Poverty and migration are common topics that emerge in the biographical stories of the interviewees.

Gender-role distinction is a narrative told by seniors. Work is also described as a form of self-realization and men identified themselves with their jobs even after they retire. They explain in detail what they do even if the interviewer does not ask. In particular, self-realization clashes sometimes with family life, when the attachment to work seems to be more consistent than the attachment to their wives and children.

Reflections on self-realization through work do not strongly emerge in women, although some of them express these feelings. Anna refers to her managerial skills as the reason for her ability to cover a relevant role in a voluntary association. Another one refers to the way she educated her children as related to her work as a teacher. Nevertheless none of them talk extensively about their jobs.

Instead, women often describe themselves as tomboys, referring to their attitude during childhood of breaking the rules, confronting parental authority, finding strategies of rebellion within the dictation of family and societal pressure – of getting married, of the choice of specific school, education or job. Some of them report to protracting this attitude for their entire life, becoming finally free of choice with the retirement and with their children becoming adults:

Elena: *"My name is *** (her name) but indeed it would be (same name but in the male form). I was a male, I, yes yes yes, terrible I was. I used to run away from my mum when I could, instead of helping her working in the field, and I ran to ***, because there were always children playing. They didn't have homework to do, apparently"*.

Similarly:

Anna: *"So, I am a tomboy. I started then. I did little school because, anyway, I didn't need it. I am ignorant now, I was ignorant then, I will be ignorant in twenty years if I'll still be around, or until tomorrow, it doesn't matter. Little school. But lots of work. I started to work in the ***. I was 18 years old (…) I used the forklift... I was also an office employee. I loaded and unloaded pieces in a foundry. I don't tell you about the place, it was a cave! (…) It was so noisy that I became a bit deaf (…) And then I got married (…) but still, this is my character"*.

Also men refer to being "wild" and "savage" in relation to their preference to stay alone or still in their childhood to play outside, neglected by parental authority.

Overall, if aging is considered by women as a time liberated from working, as their jobs remain in the background of their stories, for men aging appears to be as a prosecution of their jobs, as far as their physical conditions permit it.

This gendered aging is not well represented in design technologies for "active aging", since seniors seem to be considered as a homogenous "user group", drawing from negative stereotype of seeing seniors as asexual. Our fieldwork suggests the need for a gender perspective in system design.

3.2 The on-going participatory workshop on digital technologies

The second site is represented by a workshop for seniors (age: 60-80) on the use of software and digital devices for communication (text editing, social networking, video editing, digital photography and video shooting).

The workshop is one of the activities offered by a senior community centre in the city of Trento, the only activity in partnership with the University. In order to satisfy their expectations and to experiment how we can articulate participation, we organize a general syllabus of the year together with the seniors, negotiating and adjusting the program as we go. Practicing participation has been challenging, since the workshop development relied on the participants' will as well as the researchers', thus not having a fixed syllabus gave the group an impression of chaos and disorganization, which, it must be acknowledged, there sometimes was. We attributed this feedback to the analogy made by some seniors between the workshop and the school, and the computer room where we met as the school class. Actually, the arrangement of desks and computers was not helpful to elicit a participatory atmosphere, since the impression was to be in a school class, with the students' desks disposed in lines and facing the main "teacher's" desk. For logistical reasons we were not able to rearrange the desks.

This workshop is usually attended by a group of seniors that strongly feel the necessity of mastering IT devices or are curious about technology. During the workshop we aimed to unearth the imaginaries that seniors have about the potential of the Personal Computer and of the Internet, since we noticed that their interest in learning about certain software was often not justified by concrete necessities. We fostered these imaginaries organizing a collage session on the perception of the personal computer, with the intention of creatively emerging fantasies, desires and expectations and frustrations.

This session lead to a reflexive circle on different levels. It was useful in order to relocate in a self-reflexive manner the individual senior that approaches IT; it fostered collective group discussions, making participants aware of each other's point of view; it provided us, as facilitators, a reflexive feedback on our positioning as researchers in respect to ourselves and our perspectives on seniors.

3.2.1 The collage session

The collage session during the workshop was exemplar of the reflexive feedback we got. From this reflexive outcome we argue in section 5 in favor of a design "by subtraction", a form of design that is not necessarily adding artifacts to the existing.

The collage session has been welcomed in different ways from the participants. Surprise and curiosity were, above all, the most common reactions. Indeed they did not expect a meeting to take place without touching a keyboard. As an experimental workshop we decided not to inform them. Exclamations relating the collage to a psychological and therapeutic activity followed. Those who wanted to kept their own collage, a woman claimed "I'm going to show it to my psychologist!" laughing with her peers.

One of the few male-participants referred to the collage, slightly uneasily, as a game for children. This comment hurt me because it wasn't of course my intention to make them feel childish, and the collage as far as I used it with adults, has been welcomed as a creative activity of amusement from the daily routine or a relaxation from work.

The man that felt treated childishly is recognized by his peers at the community centre as an expert in digital technologies and indeed he taught a digital photography course there and provides weekly IT assistance at the centre. His reaction was interpreted by us as an implicit protest to having threatened his expertise, unearthing already existing power dynamics among the senior participants through challenging them.

We acknowledged from the literature that one of the negative stereotypes about seniors is considering them as "children", and this is also seen in IT design. Furthermore ageism is a phenomenon that influences seniors not only from external judgment but also from a self-judgment. This self-ageism has been documented as negative stereotypes developed by people when they are considered in youth or adult age and then remained when they arrive at an age socially considered to be "old":

A woman in particular came to me and openly complained, saying that if she would have known that we would not have used the computers that day she would have stayed at home, taking care of her husband, because in order to join the workshop she pays a caregiver to carry out this task. I felt guilty and expressed my regret, but at the same time I felt a bit upset because her reaction was meant to perceive the workshop as a service and we researchers as providers, she as a client. I had to remind myself that I carefully prepared for this session, and that in previous workshops it gave thoughtful outcomes. I deeply breathed and calmly explained to her that this is an experimental workshop about technologies and that we are not just volunteers but also researchers. I don't know if this repositioning of myself by words was helpful, but during the session she changed mood and engaged in the collage with enthusiasm, giving important feedback on her own point of view of the competency in using the computer. We asked each of the participants to give a title to their collages. She titled hers: "Using computer is a matter of style". Asking her "why?" she explained: "I'm the only one in the choir group that is able to send e-mail. At the church group it's me that send news and meeting announcements". At the end of the session she came to me and thanked me for the morning spent together, saying that we young facilitators were "good guys".

These episodes emerged through a practical and participative activity that brought up aspects of interest to investigate deeper in the following individual interviews.

The resolution of the initial "conflict" with the woman initially complaining but at the end satisfied, brings new learnings about the efficacy of reflexivity. The clash between different interests in the participants and the researchers, elicits reflection in both, through mutual learning and small shifts of perspectives.

Echoing Light and Akama [30], "we must accept a high degree of arbitrariness in this kind of work. A chance word may bring in or redirect an uncertain participant, changing the group, the interaction and the outcome in unpremeditated ways" [30, p. 69].

Comparing Light's and Akama's experience with ours on organizing this participatory workshop, we experienced how communicating with seniors is an on-going process of negotiation. Every word and expression needs to be chosen carefully and with awareness. For example, during the participatory workshop we acknowledged that to understand the metaphor of the cloud, imaging that an online file storage service contains data that are virtually accessible everywhere but the server is physically located in Sweden, is a challenging act of abstraction. As well as perceiving the difference between information located in the personal computer and information located on the Internet. Regarding usability, an example is that on the "desktop dimension" two left-clicks of the mouse are needed for selecting an item, whereas on the "Internet dimension" only one. All these details, taken for granted by daily IT users, are part of a foreign culture for seniors that needs to be approached and familiarized with, as well as daily IT users (like us) who need to approach and familiarize with the otherness of a system of meanings and values that the participants gradually reveal themselves to be part of.

The production of an artifact as a final outcome has been requested from the participants as the final goal of each annual edition of the workshop. Nevertheless, from the feedback of the participants and from their choices, we noticed that the relational aspect is the prominent outcome. Sociality is oriented to community building among seniors and with the researchers, sharing experiences and competencies, without excluding the production of a digital artifact, such as a video.

3.2.2 The Polaroid effect

The last episode presented revealed a deeper reason to engage with technology: to stay together and create sociality.

Today was the last meeting at the workshop. We've seen the videos of those who wanted to display them. The attention on these videos was lower than the last meeting of the fall-winter session. Indeed, the video wasn't a novelty anymore. (…) While we were waiting for a completed video to be copied to the PC connected to the projector, I anticipated the surprise of the Polaroid cameras. Unexpectedly I grasped the interest of all the participants and Livia (a quite proud woman), the author of the video that was being copied, said to skip it and pass to the photos. So, we had two Polaroid cameras and we invited each of the participants to take one, only one, shot, of whatever they would like to bring home from this workshop series. I expected they

would have taken photos of the computers or other digital devices, or stills of their videos they made through the year. Instead, everybody, without exception, wanted to take a photo with us facilitators or a photo group with everybody. This collective choice seems to confirm what I previously annotated: many of their comments are not about their interest in participating to learn new technologies, but for staying together, with us, with their colleagues and friends, staying in a different environment. In this way the last meeting ended, everybody was happy and asking if would continue next year, leaving with their photos in their pockets.

The reactions of the seniors to the "Polaroid game" elicit reflections in the researchers about seniors' interest in digital technology. Their interest indeed seems closer to an informative journey. They arrive curious about what digital technology can do though their curiosity appears more like an interest in the "exotic" imaginary they have about digital technology and that we embodied in their opinion. They hardly remember how to use the software or the camera. This often causes frustration but they still come year after year. Staying together and contributing to community building seems to be more important than using digital technology. The technology is the medium. This episode fosters our inquiry about a design by subtraction, reflecting whether the artifactual outcome of the design process is always the central outcome (see section 5).

In this interplay of exchanging and hermeneutic reflexivity, as last instance, we became aware to be the "exotic" in the seniors' point of view. We are watched with curiosity, distance and expectancy, with a good dose of patience for our mistakes gained from decades of experience.

4 What we learnt from the field. Anthropological re-locations in participatory design and axis of reflection.

The use of ethnography in IT design has been mainly instrumental to prosecute what Dourish [16] critically calls "design implications", although pioneering research in PD have explored different declinations of ethnography and design, that Bloomberg and Karasti [9] categorized as: *Ethnography and Participatory Design in reflexive relation; Ethnography as a component of Participatory Design methodology; Ethnography to inform design.*

These intentional differences have been transferred to the discussion about Design Anthropology, yet translating them in practice still remains challenging: "Doing anthropology *of* and *for* design gives focus to the present world of the user, or what designers need for design. Doing Design Anthropology *with*, in contrast, requires that we engage *with* (and build relations between) peoples and the designer. Doing anthropology *with* requires practitioners to give consideration to ongoing continuity between past, present and future temporalities" [15, p.9].

The core of ethnography is building trustful relationships with the informants and is the first step to accessing their points of view and thus, their needs. Ethnography focuses not on losing these minor local details in favor of larger generalizations, in this way it focuses on restoring scientific status to subjectivity. Then it draws general

theories without losing their original background, in an ongoing process of developing meaning and interpretation [21].

This process lets the informants become active participants in the reconfiguration of their requirements and in the design process. Participatory design follows and integrates ethnography, enabling the user to actively take part in the design process. This method of user empowerment is essential to realize technologies that address the user's needs. As for ethnography, in participatory design the research is conducted not *on* the user, but *with* the (potential) user.

Therefore, what can anthropology add to ethnography in participatory design? Through the '80s anthropologists and ethnographers such as Suchman [46] and Bloomberg and Karasti [9] advocated the adoption of a more reflexive approach of ethnography in conjunction with actor-network theory, reflecting on the process of design and the corporate system within which they worked. This research direction called for the need to go beyond ethnography as a simple tool of knowledge of the world. An insightful ethnography cannot be realized without relocating its anthropological framework, focusing the attention on those "crumbs" that fall apart during the research. Yet also combining those small crumbs, the anthropological research generates general meanings and interpretations. Relocating ethnography in its anthropological roots seems a matter of negotiation of temporality and duty to the institutions researchers collaborate with, and are employed, by.

For this reason, design anthropology "is not and cannot be ethnography" [25], since it enacts a deep hermeneutical process of reflexivity on and through the multi facets of research and design, the boundaries of which are blurred. The capacity of anthropology to make the familiar unfamiliar, and the unfamiliar familiar, is a mimetic and yet a skill of taking the distance from the "otherness" that permits anthropology to look at participatory design and take action at different levels of engagement, making the PD familiar and unfamiliar: an anthropology *within* participatory design, an anthropology *of* participatory design. Embodying an anthropological lens is an invitation to participatory design to re-consider itself critically as a cultural process or performance. Anthropology *within* PD triggers negotiations on what "participation" means and how it is performed. This suggests possible changes in the final goal: from a product design for active aging to a critical IT design, considered as a cultural phenomenon. The plus of "participatory" in design is that this critical design is proposed as a participatory and reflective (because anthropological) conversation. Anthropology *of* PD follows the path traced by Suchman [46] and Bloomberg and Karasti [9], eliciting PD as a cultural process and triggering reflections on its applicability in contexts culturally different from the Scandinavian one. In this way reflexivity becomes a practice performed by researchers and informants, explicitly participative, *within* and *of* participatory design.

In a critical participatory design approach, reflexivity becomes the style of participatory design: involving the participants (or letting the participants involve the design anthropologists) in negotiations aware of personal and cultural meanings, imaginaries and expectations. The design process and the context are made visible, achieving a more authentic point of view from the participants' perspective. In this context a critical anthropology *of* design acquires meaning. As Lucy Suchman argues: "I believe that we need (…) a critical anthropology *of* design (…) [it] requires, among other things, ethnographic projects that articulate the cultural imaginaries and

micropolitics that delineate design's promises and practices" [46, p.3]. The necessity for a design anthropology that looks at an anthropology of design as its way of creating, is to relocate the design micropolitics in context, this means that participatory design presents dynamics of power that depend on the context in which the process happens.

Situating participatory design in context allows us to go beyond the political imprinting of a practice of general democracy, making it intimate and personal, relocating practitioners and participants in their living context, recognizing that a political process begins, at the first instance, on a personal level. If the personal is neglected and excluded from the design process, for the sake of an impersonal and artificial objectivity of the research, micropolitical dynamics still remain underneath, emerging as incomprehensible and unsolvable design problems such as issues of power, decision-making, expectations.

An anthropological approach unearths the dynamics in a certain context as well as the context itself. The passage from anthropological descriptions to design prescriptions is not obvious and neither always necessary. What anthropology brings to attention in the design process is the process itself, including the dynamics of power between the actors involved (designers, co-designers, stakeholders, the university institution, etc.) and their decision-making [11]. These reflections occur on the way to achieving a final design result, but do not take part actively nor are critically examined by the participants in the design process.

This shifting of viewpoint opens up a post-colonial horizon of participatory design, considered as a culturally-located practice. Pelle Ehn, representing a Scandinavian approach to Participatory Design, describes design as a 'democratic and participatory process', since then considered by scholars "the" Participatory Design method, is in crisis when it is applied to contexts significantly distant from the one of the original culture of PD [26,49]. In this way, participatory design adapts itself to the context, furthermore opens a window to the micropolitics of the situated social environment where the design intervention is aimed at being. Participatory design as design anthropology becomes a lens through which it is possible to understand the context by interacting with the participants. It also allows understanding that the designers are part of the context and that they reflexively bring their own micropolitics – or for instance from the academia they are part of, [48] – into the design process, but that are influenced as well by the dynamics enacted by the participants.

We follow Kjærsgaard's and Boer's [27] and Smith's and Kjærsgaard's [43] suggestions for considering Design Anthropology as cultural critique and advocating for a critical design not just for the sake of an academic discourse but with a broader perspective, to be done with who would be the potential users/informants. Aging is a very self-reflective phenomenon. Research inquiry is constantly confronted with researchers' biographical experiences, their relationships with grandparents, relatives and loved ones, how researchers deal with the death, etc. Behind a scientific achievement there are always personal biographies. Being aware of this does not mean diminishing scientific rigor, yet allows the diminishment of the distance between scientific findings and real-life contexts, re-locating the former in the latter, and making them, thus, more applicable in every-day life.

Moving from the particular to the general, examining institutional and "native" narratives with an anthropological lens, we agree with Cristhine L. Fry [20] when she

argues that: "Old age itself can be seen as a new cultural space and a byproduct of the forces of globalization" [20, p.194]. Consequently, also active aging is a product of capitalism in which being "active" alludes to being "productive" and that this activity can be measurable by technologies for wellbeing, such as AAL technologies. It is still an individual concept of aging, built on the idea of quantification of human life. What the micro narratives unearth is an invitation to shift the attention to a more social and collective dimension, more complex than a singular person, thus more difficult to measure quantitatively.

As we propose in the last section, another strategy of re-locating participatory design and aging is feminism. Feminism shares with post-colonialism the critique to the pre-existing power structures, historically and cross-culturally patriarchal.

Finally, we could argue that active aging and participatory design share the commitment to 'empowering'. This implies that participants are supposedly affected by a lack of agency and power. In addition, both active aging and participatory design are finalized to produce an outcome in terms of artifact, service or product.

5 Critical future research trajectories on a Participatory Design Anthropology for aging

5.1 The design impulse. Towards a critical design by subtraction?

The moments of reflection and confrontation with the "otherness" represented by Anna about how to manage PD projects provoked a crack in researcher's plans, forcing a re-think on the concept of participation in practice. The mismatch is articulated, uncomfortable and embarrassing, through the encounter between the researcher's expectations of doing a PD project from the very bottom and Anna's misunderstanding and diffidence of this proposal. This alludes to other declinations of participation, differently from the community centre, where a PD workshop proposal is welcomed but where the concept of participation is highly structured.

Comparing the PD workshop at the community centre and relating the different approaches of seniors to digital technologies, other questions arise: to what extent are we responsible in influencing our informants, creating inducted needs? How can we be in "control" of this, if we can?

These encounters underline the need for a reflection on whether it is always the case to make design intervention, or if through PD design speculation we can argue that the design imperative is not always necessary, neither desired by the informants/co-designer/potential users.

This impasse unfolds another crack, between the anthropologist's ethical responsibility to not harm the community, as the ethical guidelines of the American Anthropologist Association [3] and the Association of Social Anthropologists of the UK and the Commonwealth [4] state, and the frequent institutional goal – university or company – to "produce" an artifact, a tangible outcome, hopefully marketable on an industrial scale.

This crack invites new imaginaries about design. What if the design intervention would be a de-constructivist one? A shared journey with the "studied" community to

discover real-life situations together. The awareness that technology, in certain contexts, can be an inducted need. This leads to another turning-point: toward a design of artifacts by "subtraction"? Thinking of the participatory workshop on digital technologies, to what extent are we researchers responsible to make technologies appealing and, thus, felt as needed? To what extent do we contribute to nourishing the imaginary of seniors about technologies, making it desirable?

Our inquiry is articulated as: "What comes after? What will remain when the project is done and the researchers will have left the field?" If for the anthropologist the main goal is not to harm the community, for the designer it is leaving it with a design intervention that ameliorates it somehow. Long-term fieldworks and PD projects face the problem of maintaining the collaboration with their informants. Indeed participants can leave the projects if they do not feel them appealing anymore. A design by subtraction would pose the attention to the design process and to its long term consequences on the context, rather than focusing mainly on the final outcome in terms of artifact, product, service, or even just improvement. In this way, the final result might be even a step back from the design intervention, as shown by the "Polaroid effect".

5.2 Gender, aging and feminist perspectives

In the study of aging, after the heterogeneity of aging, the second characteristic emerging is gender: according to the studies on life expectancy the majority of older adults are women. A design that focuses on gender diversity in aged users is still missing, as older adults are considered as a uniform group of users. A feminist approach is particularly suitable to addressing a reconfiguration of users for active aging [7,45], since its focus on the theory of the difference [31]. For instance, feminism shares elements in common with technology design. Even if "feminism" is contemporarily misunderstood, considered as a singular perspective and "labeled extremist, unpalatably political, and anti-male" [7, p.iii], feminist principles are embodied in IT design, though they are not explicit. For example, Shaowen Bardzell [6], also keynote speaker at the PDC'14, lists six feminist "qualities" of interaction design: pluralism, participation, advocacy, ecology, embodiment and self-disclosure. We suggest bringing Bardzell's perspective on feminism to participatory design with seniors. Gender, as a cultural and social product, is an "ax of inquiry" [1] useful to be considered to investigate users' diversity in design models and in the acceptance of ICTs [12].

There are affinities between feminist gerontology and post-colonial inspired design anthropology of active aging. Both, as inspired by critical theories (feminist and post-colonial theory) challenge stereotypical views of aging. A feminist approach has the value of focusing on the gender context of aging. Quoting Ruth E. Ray "the study of aging (…) is a woman's issue, referring to demographics: "currently, women make up 63% of the people over 65 in the United Stated and close to 75% of the elderly poor"[37, p.674]. Furthermore, Ray points out that the primary caregivers are and will remain predominantly female (including professionals and informal caregivers, such as wives, daughters, etc.).

Although there are many "feminisms", a common pattern in feminist theory is to deconstruct the category of "woman" (as well as that of "man"), analyzing it as a

cultural product that is performed through norms, practices and narratives. Therefore attributes and power structures, such as age, ethnicity, class and race are unearthed in the feminist inquiry, including in the analysis on the variety of genders.

A Feminist post-colonial approach is a powerful combination to challenge active aging (a design anthropology *of* and *with* seniors) and participatory design (a design anthropology *of* and *with* the designers). Indeed this approach aims to boost agency [45] among seniors and thus enhancing their proactive and critical participation in designing with and for them, and finally, this approach helps the designers to relocate themselves reflexively, as subjects in a complex world.

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