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Published in:
Design revolutions

Published: 01/09/2019

Document Version
Publisher's PDF, also known as Version of record

Published under the following license:
Other

Please cite the original version:
Hakio, K., Mattelmäki, T., & Veselova, E. (2019). Lenses of Care – revisiting interconnectedness in service design. In M. Evans, A. Shaw, & J. Hoo Na (Eds.), *Design revolutions: IASDR 2019 Conference Proceedings. Volume 4: Learning, Technology, Thinking* (Vol. 4, pp. 144-155). Manchester Metropolitan University.

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Lenses of Care – revisiting interconnectedness in service design

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This paper focuses on the connections and resonances between an ethical and philosophical concept of care and service design. The paper contributes, on one hand, to discussions on service design seen as a dynamic discipline that addresses relations and responsibilities when shaping our futures. On the other, it highlights the concept of care in our everyday choices, and how it matters in learning context. We first frame our take on service design and our motivation to recalibrate the focus on human-centred design by enhancing, with the concept of care, the understanding of interconnectedness. Then, we introduce, based on literature, three lenses to view the everyday manifestations of care through different perspectives and horizontal depths. We also introduce an experiment within a university course on service design where we included an additional, value-based layer, on 'care'. The three lenses are then used in discussing and students' learning reflections and design outcomes, as well as the potential and challenges of the experiment as a transformative experience. Based on our observations, we propose that care as a concept can support in bringing deeper understanding on interrelatedness to service design education.

Keywords: *service design; care; education; relations*

1 Introduction

Service design is dynamically emerging field (Sangiorgi and Prendeville, 2017). It seeks to understand and coordinate what is meaningful for people and organisations, and a skilled practice to deliver and co-create valuable outcomes. The focus and competence development in service design have shifted from mainly working for outputs (e.g. interfaces and interaction), to increasingly considering three interconnected elements: a) a change-oriented, people-centred, creative and systematic process; b) a transformational, people-centred, collaborative, exploratory mindset; and c) an approach that fosters learning and, through that, change (ibid, p.28). Rachel Cooper (2011, xii) has stated that as services focus "in interactions, relations and activities rather than on objects" they deal with sustainability and human-centred approaches. Service design thus could increasingly be a vehicle for small scale and wider societal transformations.

To address sustainability and long-term societal change, the conceptions on human-centred design and empathy, the two crucial building blocks in service design, need to be revisited. Manzini (2011, p. 4) suggests that the "most common approach is to see the user as an individual, bringing needs, desires and knowledge to be listened to and integrated into the

design stage and the assessment of proposals and end results.” In this scenario, a user is active in stating needs, but passive in action (Ibid). The concept of ‘designing for services’ however, widens perspectives on the role of individuals and communities. Manzini, by following the thinking of Nussbaum and Sen (1993), proposes that assigning value to users’ abilities and competencies these users can become more active participants, blurring “the roles of the service provider and receiver” (Ibid).

To follow this line of thinking we, the authors of this paper, set up a course named Designing for Services (hereinafter referred to as DfS-course). For seven years we have strived to educate design students to explore, collaborate and facilitate learning of the participating stakeholders, while taking into account human competences and responsibilities. This pursuit was supported through selection of course partners. We have extensively worked with public sector, with City of Espoo as a returning partner for the past three years. In the latest edition of the course, the teaching team wanted to underline the relational nature of designing for services by introducing an overarching theme ‘Fostering Care’.

The introduction of the theme served three purposes. First, it was an attempt to emphasize the shift from a narrow way of seeing human-centred and empathic design, as requirements of fulfilling individual ‘needs’, to a more comprehensive and relational view. As designing for services, fundamentally, is about orchestration of elements that together create holistic service experience (Ostrom et al., 2010), it extensively engages with relationships. *“To care about something, or for somebody is inevitably to create a relation”* (Puig de la Bellacasa, 2012, p. 198). The ‘Fostering Care’ theme was envisioned as a way to foster service culture that can be understood as acting for the benefit of others, taking responsibility, participation and co-creation of sustainable ways of co-existing.

Second, it sought to trigger students to reflect on designer’s responsibility when considering wider social and environmental impacts. We introduced caring as a mindset and practice for training designers as custodians of care, who *“create spaces for others to reflect, make mistakes, learn and debate”* and *“support people in caring and changing their environment as they might wish”* (Light and Akama, 2014, p. 160). The theme aimed at shining an additional light on the philosophical choices, for example varied dimensions of participation in inclusion, that designers have when encountering others, co-creating and making.

Third, the theme served as a lens for reflecting on potential pedagogical questions. In Donna Haraway’s words: *“It matters what matters we use to think other matters with, it matters what stories we tell to tell other stories with... it matters what thoughts think thoughts... It matters what stories make worlds, what worlds make stories”* (Haraway, 2016, p.12). In line with Haraway, Puig de la Bellacasa (2012, p.199) points out that *“creating knowledge is a relational practice with important consequences in the shaping of possible worlds”*. We used these metaphors to reflect upon the impact and responsibility of an educational setting. Thus, we assigned highlighted importance to whose ‘stories’, and in what ways, are told to the students, as these affect not only the students but also their project outcomes, the client and, ultimately the society. The DfS-course with the theme “Fostering Care” served as an experimental setting to learn about potential of introducing the lenses of care in a design project with a partner. This paper presents the insights which surfaced during and after this experiment.

2 Care is visible in our daily choices

In order to understand what care could mean in the context of DfS-course and its themes, broader definitions of care are introduced. Moving beyond the common associations of care being a nurturing, caregiving, person-to-person event, we aim to explore the more complex meanings and occurrences of care.

2.1 The myth of the autonomous individual

Joan Tronto (2013) emphasizes that care is not a theory but a concept. This concept becomes vividly embodied and visible through daily behaviour, choices, activities and encounters with others. When we, humans, care for something, we create relations that are highly personal and individual, but also easily unnoticeable and sometimes automatic. Yeandle et al. (2017, p.8) argue that care might be ubiquitous as it is typically mundane and taken for granted; therefore, it often remains forgotten, marginalized or excluded. The well-established, broad concept of care by Joan Tronto defines the essentiality of care quite comprehensively. *“On the most general level, we suggest that caring be viewed as a species activity that includes everything that we do to maintain, continue, and repair our ‘world’ so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, all of which we seek to interweave in a complex, life-sustaining web”* (Tronto, 1993, p. 103). Care stems from the premise that everything exists in relation to other things; it is, thus, relational and assumes that people, other beings and the environment are interdependent (Tronto, 2017, p.32).

In the modern Western societies, we conceive the world as centred around humans, thus not perceiving or, perhaps, forgetting that we are all parts of a large life system. As Annemarie Mol (2008) points out, in the Western culture, people often think they are autonomous, independent individuals. However, many Westerners no longer cultivate their own food, sew their own clothes nor bury their own dead (Mol 2008, p.4). Thus, we are always, inherently connected to other humans. Moreover, we cannot generate substances needed for our physiological survival, e.g. fresh water and oxygen, and all materials without natural systems and the elements they are comprised of. Currently, our societies and lifestyles are built in a way that masks the interconnectedness and dependency on nonhumans. These perspectives have developed over centuries due to many, interrelated reasons (Zylstra et al., 2014). Puig de la Bellacasa (2012, p.197) argues that a changing perspective about nonhumans is a vital requisite of collective thinking in interdependent worlds and demands thick vision of caring. It requires de-centering the human, acknowledging that nonhumans are not servants of humankind; they are here to live with (Puig de la Bellacasa, 2010, p.161). A species, including humans is not going to survive alone, and care should be extended to nonhumans. Thus, it is important to realize that humans are extensively dependent on and connected to other humans and to the supporting structure of different relationships, communities and ecosystems.

Additionally, there seems to be an underlying, hidden division how personal lives and public lives are seen in the society, in relation to care and human dependency on others. According to Hankivsky (2004), a liberal model of citizenship too, assumes that people are autonomous, independent individuals who are able to take care of their own basic needs. This is a “narrow and incorrect view of the human condition” and the “reliance on family and friends in the private sphere is acceptable, but individuals are expected to transcend dependency once they enter the public realm” (Ibid., p.6). It seems that care and dependency are accepted as being a natural part of human life in the private, close family relations, but dependency on

society or the state is seen as an exception for only the weak and underprivileged, not as a norm (Ibid., p.6). This further strengthens a distorted myth of an autonomous individual which is deeply rooted in the structures and ways we have built our society.

It is fundamental to understand that, in essence, we all are givers of care and also receivers of care. It is easy to picture this when people are infants, infirm, and frail in old age, but as Tronto (2013, p.146) points out, all people have needs, all of the time. When people recognize their own needs, they more likely recognize the needs of others as well. This recognition of care and its relations as well as the amount of the time devoted to caring others as for themselves (Ibid., p.146), helps to highlight the, sometimes, silent meanings and value care has in our daily lives. *“Until we recognize that we are care receivers, all, there can be no change in the ways that we think about care or in the fact that it is undervalued”* (Ibid., p.150). In this paper, we see that this is in line, and further elaborates on how Manzini, Cooper and others above frame service design, and turn our attention to the interconnected nature of service, and highlight the potential of care in service design education. In the following, we will further elaborate caring as a transformative theme.

2.2 Transformation of values with the new ethos of caring

According to Tronto's (1993, 2013) well established work on care ethics, care has always been embedded in all types of communities and societies, regardless of how these communities were organized. Every society, based on democracy or not, has had to resolve the question of responsibility of care and how the responsibilities should be distributed (Tronto 2013, 148-149). Several authors (e.g. Yeandle et al., 2017; Hankivsky, 2004; Tronto, 1993, 2013; Puig de la Bellacasa, 2017; Tsing et al., 2017; Haraway, 2016) have emphasized that, drawing from the feminist thought of equality, such as equal rights, equal voice, the ethics of care have sought to bring care (in its broadest environmental, life-sustaining meaning) into the light of public debate. They have aimed at highlighting the equal importance of care related to societal, political and environmental issues, as care can be treated as a distraction from the 'really important' issues.

However, care should not be ignored or demoted out of the way for the 'really important' societal and political matters. Care simply exists, as Puig de la Bellacasa (2012, p.198) notes “care holds the peculiar significance of being a ‘non-normative obligation’: it is concomitant to life – not something forced upon living beings by a moral order; yet it obliges in that for life to be liveable it needs being fostered. This means that care is somehow unavoidable”. Inevitably this points to the question of dominant cultural values, around which societies are centred. Tronto (2014, 2018) contributes to this question by arguing for transformational turn to what we have emphasized and what has been considered important cornerstones and values in our Western society.

Such radical changes require collective mental transformation, intent and skills, a new way of perceiving and relating oneself amongst the others as an interconnected state of being. As our current ways of thinking reflect what matters the most to us, we need to focus on our underlying moral and ethical values. In a five-phase process of care, with corresponding ethical qualities, Tronto (2013, p. 34-35) brings forth the aspect of solidarity called caring with. She notes that the ethos of caring with is not the same as judging one's self-interest, instead it has to do with both, the collective and self-interests in the long run. *“To do so requires a change in the values of citizens. It requires that citizens care enough about caring—both in their own lives and in the lives of their fellow citizens”* (Ibid., p.34-35). Thus, from a city or a state perspective, caring democratically requires a democratic process by

which citizens are able to care with their fellow citizens (Ibid., p. 13), meaning supporting and enabling structure in line with the ethos of caring.

Mol (2008) reflects through the context of diabetes the logic of care in our society and the role of a collective, e.g. a City, when it comes to responsibilities and enabling or hindering factors of care. According to her, it is central to think whether a public administration should ask individuals to change their ways of living, or should we focus on changing the conditions and environment around them instead (Ibid.). This is a question of caring - taking the responsibility and the burden of change on collective shoulders instead of making recommendations, guidelines and campaigns about the ideal life styles.

Sharing responsibility is a collective action, not an abstract, scientific or legal endeavour (Tronto 2017, p.32). The ethos of caring is not regulated or limited by the markets, economy or money per se, instead, it is our value system and what is commonly held meaningful in life that restrict care and its full potential occurring in our world. As Tronto (Ibid.) sums up, caring with occurs when a group of people is able to rely on an ongoing cycle of care to continue to meet their caring needs. When such patterns become established and reliable, they produce the virtues of trust and solidarity (Ibid.) thus fostering the ethos of caring becoming mainstream in the society.

2.3 Three lenses of care

The review on care surfaced different perspectives on how care can be interpreted and perceived. The everyday manifestations of the concept of care can be seen through different perspectives and horizontal depths. They can be summarized into three lenses:

- Lens 1: Care as an act - to care for, to care about. Care is an object or an act - I'm going to give my care to someone. This lens could be seen as a rather 'superficial' lens of care.
- Lens 2: Care rooted in the mindset of interconnectedness. An individual acknowledges that they are part of a system and are in relationship with and dependent upon others, both humans and nonhumans, in this system. They view themselves both as a giver and receiver of care and have a mindset paying it forward.
- Lens 3: Care is omnipresent, care simply exists. Care is present everywhere where there is life: in every action, in every breath, in every interaction; the planet wouldn't exist without care. This could be viewed as a strongly philosophical lens and, potentially, as a paradigm of future.

These lenses are not mutually exclusive and overlap in some aspect and differ in other. Collectively, they highlight that the same event and appearance of care can be seen through different lenses simultaneously. However, we argue that the thick understanding of care requires ability to be present, listen and sense the ongoing, constant everyday unfolding of care.

3 An Experiment – everyday unfolding of care

To explore the concept of care in everyday context of learning environment, and see how, and if, it's influence can be tracked, the authors set up an open-ended experiment. A university course, Designing for services (DfS), gave a frame to our experiment and data collection; in other words, this university course had its set of learning objectives dealing with service design that were only partly overlapping with the concept of care.

DfS-course is a Master's level, intensive, 6-week-long teaching module at during which approximately 25 students, the majority having background in design, and a few in engineering or in business, learn about designing for services. The course includes readings, lectures and in-class workshops. The students read fundamental and latest literature on designing for services, co-creation, and design tools; through in-class workshops, they also apply this knowing to their project work. The course also includes project work with a real partner on a commissioned brief. Each year a partner, lately a local municipality, proposes one or several briefs that address current needs of the city and its citizens. Teams of approximately five students work with these briefs: together with the partner and stakeholders they build an understanding of the problem arena, co-design potential solutions and, finally, outline a solution proposal. As explained above, the course focuses on not only building students' skills and capacities of making sense of complex service structures, participation and application of service design approaches, but also aims to educate responsible, empathic, reflective designers. Adding the care theme created an opportunity (and necessity) to include additional, care-related content to the course.

Hence, rather than carefully planning every instance of the course through the perspective of care, we focused on a few key interventions, and allowed the theme to evolve naturally and reflexively following the flow of the course. This learning by doing approach included four key types of data collection. Throughout the course, we collected literature, written instructions, announcements and lecture slides given to the students. We followed the lectures and workshops given and organised by the teaching team and guest lecturers, and the presentations given by the students, and documented whenever possible, the instances when care was addressed. We followed students' weekly learning diaries, a mandatory course assignment, to gather insights about their individual reflections on care. Finally, we analysed student teams' final written reports and presentation. In addition, before, during and after the course, we deepened our own understanding of care through literature. This literature review and its key insights - the three lenses of care introduced above - lead to the development of an analytical framework through which we retrospectively and iteratively analysed the effect of the "Fostering Care" theme on the DfS-course. Findings of this analysis are presented in the next sections.

Retrospectively, we, the teaching team studied the course contents through the three lenses of care. We mapped the content of the student briefs, weekly readings, lectures, announcements and our input during the mid-term presentations and the dress rehearsals of the final presentation. We concluded that notions, stories, examples about care were related to the students through at least eight instances: (1) project briefs; (2) week one and five readings; (3) an introductory lecture on care and a following care-related discussion; (4) feedback on the first team presentations; (5) a fostering care workshop; (6) a lecture and workshop on interconnectedness, systems thinking and sustainability; (7) a more-than-human care workshop; and, finally, (8) an introduction of a 'Care Statement' assignment for the teams. Twice we also nudged the teams to address care in their teamwork presentations - before the midterm and the final presentations. This overview, however, presents only the perspectives and the 'stories' about care that we delivered to the students through the official course materials and events. It does not review all the interactions that the students might have had with the topic. Nevertheless, it provides an opportunity to extract examples of learning by getting a glimpse into students' insights on care and the course overall.

4 Care as transformative theme for individuals

During and after the course, we were able to track explicit signs of transformational insights. The theme and the course overall urged several of the students to recalibrate their perspectives about their own design work, projects and role in the society. Care surfaced as a transformative topic that urged the students to reflect on their previous work and projects, and their overall approach to design. For example, a student reflected *“somehow this topic [of care] made me reflect my previous designs, did I offer the care to the users through the new launch function? Would users feel the care from the services?”* Another student wrote that the interaction between the designing for services approach and topic of care transformed her designer identity. Moreover, this interrelation fostered students to reflect on their responsibilities. For example, a student revealed that during the course she began to pay more attention to problems related to society and surroundings affecting life equality and the whole ecosystem. Another student wrote that the course opened up the topic of responsibility of a designer without providing definite answers, guidelines of rules and how she attempts to be more conscious of these issues in the future.

The topic of care in the context of the DfS-course seems to have been a transformative experience to a few students. However, the majority of the students did not explicitly reflect on care not responsibility in their learning diaries, but focused more on the more fundamental components of the course. Based on our observations and analysis, we are able to distract elements that potentially impacted these students' abilities.

The placement of this additional experimental component and its interrelation to course's main content. In the first week, about a third of the students reflected on the concept of care by referring to the weekly reading: Light and Akama (2014) paper, and only a few students reflected on the introductory lecture on care. One student's outburst in his learning diary well describes the situation: *“Even though the discussion on design was interesting, I just don't have the capacity to take it all in and start poking around my existing conceptions of design, designers and service design. It feels like just when I think I'm starting to do quite good in understanding what this service-oriented design culture means in the first place, Manzini comes in and says it's not sufficient anymore – we're already moving to the next evolution. Then Light and Akama throw in the concept of care and now I can honestly say I'm not completely sure what's going on anymore.”*

The engagement with the topic seems to have decreased during the weeks that did not include specific care-related content and increased when the topic was explicitly address in the workshops, readings and lectures of the week. The instances of care-related content might have triggered more reflections as a whole rather than on their own. Later during the course, after the workshops on systems thinking and on more-than-human care, about one third of the students brought up 'the concept interconnectedness' and how humans and their actions affect the systems, other humans and non-humans. It seems that the systems thinking element was needed to tangibly demonstrate how people's decisions and actions affect the overall system.

The ambitious objectives and the intensity of the course seems to have affected the engagement with the topic, too. By the end of the course, a student revealed that the fast pace of the course hindered their ability to engage with the topic, as they were immersed into learning service design and working on the team project. The dynamic, active setting of the classroom dynamics boosted the ability of some of the students to engage with care. For

example, a student proposed that the dynamic workshops throughout the course helped him to better engage with themes like care and empathy on design. He referred them as “*things that I thought about but never got to really put on or apply on my actual thinking.*”

Finally, students' backgrounds, previous skills and knowledge seemed to affect the extent of interaction with the topic of care. Those who had more previous experience with the design tools were more able to add this additional layer of care to their learning outcomes. For example, during the two specifically care related workshops, it seems that those who already were able to reflect on the notions of interconnectedness, had more experience of designing or were more used to reflexivity and expressing feelings, were more able to adopt and digest the care topic.

5 Manifestations of care in the design outcomes

“Fostering care” care theme was included in the project briefs yet it was more explicit in three of the project briefs. In the final concepts, the teams both included and excluded care. Three out of five teams implemented notions of ‘interconnected care’ in the core principles of their solutions. For example, one team created an overall concept and guiding principles for development of a mindset of care within the City. Another team focused on caring for one stakeholder group of their project to boost their ability to provide care and foster care within the system. A third team proposed that the city officials should foster care for the immigrant population by increasing focus on citizen participation in their structural processes, e.g., decision-making. However, while some were able to reach more strategic level, along their care-centred concepts these teams proposed rather traditional designing for services elements and tools, such as a workshop concept, a design game to facilitate collaboration, or a website (see figures 1 and 2). Meanwhile, one of the teams used certain notions care for - care about (lens 1.) as an element in their solution, yet did not seem to incorporate the “interconnected care” into their concept. Finally, in one team’s project care was addressed with a small remark stating that the concept aims to care for a stakeholder group which was not directly involved in the process or addressed with the solutions.

This way the team will
“boost collaboration
between learning labs
and advance the sharing
of education resources.”

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2018, Xueqin Gu, Antti Käkälä,
Janne Roels, Misael Rojas,
Joel Wolff, Minyang Zhang

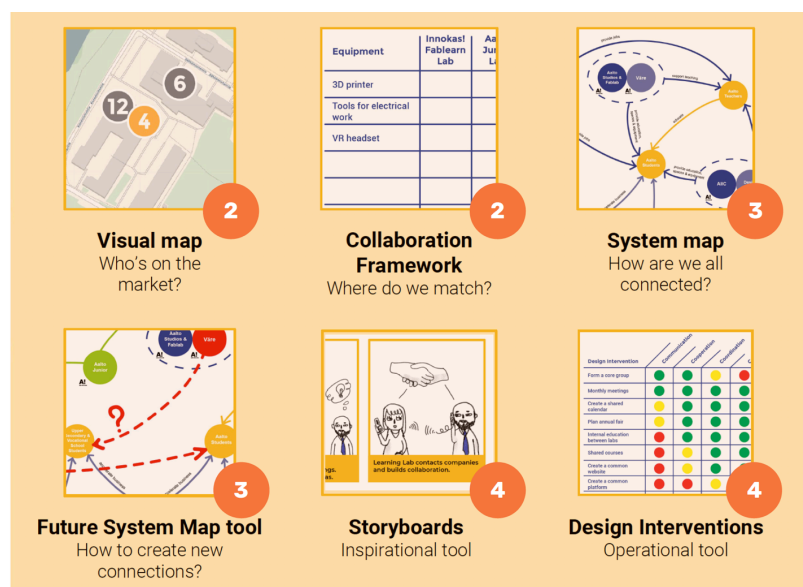


Figure 1 A team that focused on finding ways to support collaboration for sharing resources between university and municipality proposed several tools that help in mapping out how different people and units are connected, and how to create new connections on personal and more systemic level.

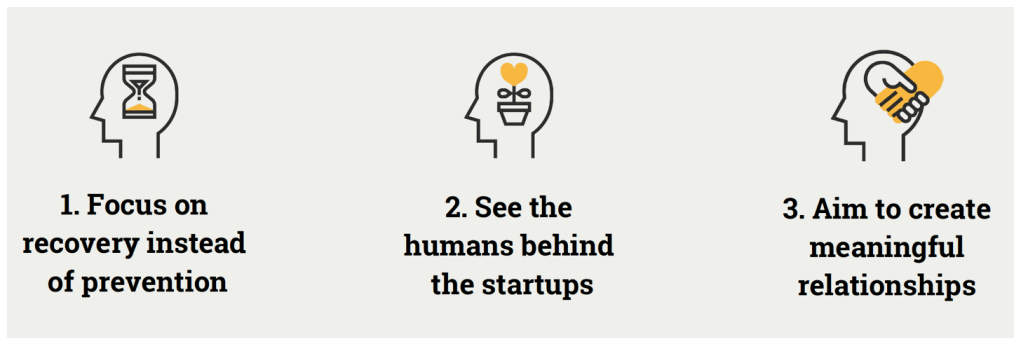


Figure 2. A team that focused on supporting start-ups at the city proposed three guiding principles to their concept titled 'Total care'. The guidelines reflect their findings on individual, processes and connections levels.

Reflective analysis of team communication about the projects yielded two insights. First, the reports did not necessarily reflect the extent to which teams engaged with the topic, thus establishing relationship between the concept and “Fostering Care” theme require a focused, reflective analysis of the project outcomes through the lenses of care. This was especially visible when contrasting two teams. While one team successfully conveyed care in their report through the soft, caring language they used and the stories they told; the presence of care in this project was indisputable from the first glance. Meanwhile, another team was not as sharp in communicating their findings and core elements of their solution in their final presentation and report. At an initial glance, the project did not seem to reflect on care; however, after a more thorough reading, the team had actually engaged deeply with the topic and embedded it into the solution extensively by focusing on communities and responsibilities. Second, the stories about care from the care-related course content, shaped the content of the project reports. In these reports, almost all teams used the quotes about care presented in the first lecture and course reading material. Teams were repeating stories they had heard – the terms, argumentation and the definitions of care. Therefore, the stories told by the teaching team had shaped the students' stories, and we hope, further have the potential to shape the stories of, and the reality within the municipality and society.

6 Discussion

Service design education focuses on how to make sense of and propose solutions for change. Literature on care acknowledges and embraces the necessity for societal change, however, yet very little is proposed on how to tackle the issues. With the spirit of Tronto's (2013, 2014, 2018) argument on transforming what is held meaningful in our society, we experimented with what happens when philosophical and ethical concept of care is bridged with educational setting and laid over an existing service design course structure. Thus, this experiment is a contribution to discussion of connecting care and service design (e.g. Light and Akama, 2014). More precisely, we were interested in how the values of care, responsibility and mutual respect can be addressed, cultivated and fostered in design student education, within a context of a municipality by applying the skills and capabilities of service design.

There seems to be more profound relations between service design and care, than what it seems at first glance. The three lenses of care presented here give both structure and frame to explore and analyse these connections. Interestingly, there is a resonance how the mindset of systemic thinking within service design links to features of care as a mindset of

interconnectedness, the lens 2. in our frame. Both approaches carry similar essence and mentality of paying it forward. More precisely, both emphasize seeing a whole as a sum of its parts, where the parts are in relation, sharing connections, dependencies and purpose, and where an individual understands herself as both the giver and the receiver.

Puig de la Bellacasa (2010, p.162) reflects that working with ethical issues of care changes the person. Naturally, educational context has always short-term and long-term impacts, some of which only surface months or years later and some might never be explicitly voiced. We became aware how the concept of care as an additional layer in a service design course, was able influence the way the some of the students view and understand designers' role within these contexts and society in general. In this paper, we can only share the insights of those students that recognized and documented the implications in the learning diaries. As only few students directly reported their transformative learning experiences and change of mindset as result of working with care, the implications of the experiment might (or might not) only surface in the future, while the students continuing the stories of care they learned in working life. Thus, we can only assume some the long-term implication.

Design for service has gained attention as one of the vehicles to foster and support societal change (e.g. Meroni & Sangiorgi, 2011, Sangiorgi & Prendeville, 2017). In such context, the building blocks of service design - human-centred design and empathy - need to be revisited and expanded with other relevant notions. One of such notions is care and caring as part of everyday design choices. Design education admittedly serves as a one of the 'nudge agents' in our society, contributing to shaping societal futures. However, further research is needed to trace the potential implications of these studies on their partners.

7 Conclusions

In service design education, we need thinking tools to recalibrate the focus of service design from customer needs as a driving force to a more relational and responsible world view. This paper contributes to service design by studying the concept of care as a potential frame for emphasising interconnectedness. We have introduced three lenses on care as tools to investigate learning in a service design course. We looked at how the concept of care can be addressed, cultivated and fostered within an educational context by applying the skills and capabilities of service design. The paper also seeks potential connections between design for service and the concept of care. In addition, to study this connection in a learning context, we have extracted how the concept of care represented itself in student project design outcomes and individual students' reflections.

The open-ended experiment yielded three sets of results. First, through a literature we were able to articulate three lenses of care: care as an act, care rooted in interconnectedness and omnipresent care. These lenses have served as a reflective and analytical tool for analysing course content, student learning and outcomes of the course project course. Second, the addition of care and the interplay of this theme with other course content urged several DfS-course students to recalibrate their perspectives on care and role of the designers in society as well as in relation to care. We also uncovered that the impact on students, that the theme might have had, was influenced by placement of the care-related content; its interrelation with other course content; high intensity of the course; active, workshop-like setting of the classroom and backgrounds of each student.

Moreover, analysis of the solutions proposed by students showcased that the care-related content and workshops introduced by the teaching team resurfaced in student solutions, presentations and final report. These results highlight the potential of incorporating care as an extension of the current designing for services approach as a vehicle for sustainable societal change and lay foundations for the necessary further research on the topic.

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Acknowledgement: We warmly thank our talented students at Aalto ARTS and City of Espoo as an enthusiastic forward-looking partner.