See the unseen: a co-creation design process for children with incarcerated parents

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Abstract

Children are the future, but we often ignore their opinions and ideas with the excuse that they are too young to understand the world. Especially in the process of caretaking, adults often disregard the importance of the child's agency. This is even more the case for children with an incarcerated parent, who innocently carry the consequences of their parent's crime. As a result, children of incarcerated parents feel powerless; they are stuck in a situation created by adults and have no control over their future perspectives.

If designers successfully want to design for children with incarcerated parents, they need to collaborate with them. This paper describes the importance of and the methods for involving vulnerable children in the design process. As part of an 8-month lasting master thesis project, methods are explored for co-creation with children. During this process, children took on the role of design partners, they were the experts of their experiences while the designer was the facilitator. Co-creation with children was essential for a successful design process, yet this came with a variety of challenges and risks. Co-creation removed the powerlessness of children of prisoners by giving them control over the design process through consultation and participation. By providing information, input, artifacts, methods, and tools the involved children were able to understand and place questions and assignments better, it took away their uncertainty, misunderstanding, and confusion. Further, as a designer, it was necessary to call on the expertise of child therapists and caregivers, who can prepare designers for dialogue with vulnerable children.

Author keywords

co-creation, children, personal agency, participatory design, design methods

Introduction

The context of the issue

Since 2012, children of prisoners have been included under the definition of vulnerable children used by both UNICEF and the European Commission (COPE, 2014). Children in general are very dependent on adults, but this is even more true for children of incarcerated parents (Druin, 2002; M. A. Gielen, 2008). These children feel powerless and unheard in a world controlled by adults; they languish in the shadow of their incarcerated parents. They are three times more likely than other children to develop mental health problems later in life, in addition, they are five times more likely to become incarcerated themselves (COPE, 2014). The world of children with a detained parent is turned upside down after the detention of the parent. A variety of adults make decisions that directly and indirectly impact the child. However, rarely do the children receive an explanation, nor are they given guidance and support afterward to deal with the consequences of these decisions. Co-designing with children challenges this unbalanced relationship. This method chooses to view children as social actors and skilled communicators, able to express themselves in many ways. They influence and actively contribute to the surrounding world. It is crucial to involve children in decisions about their own way of life, they are the experts of their experiences (Hansen, n.d.). The purpose of this co-creation is not only to include children but also to give them control over the end result and the entire process leading up to this result. By delegating control during the process, we empower the participating children to create self-esteem and develop new skills (Druin, 2002; Gielen, 2008; Visser et al., 2005). Besides, the goal of the end result is to give children more personal agency over their home situation and provide them with the tools and abilities to shape their future.

The importance of co-creation

Parental imprisonment is a complex problem in a delicate context. Since the designer is not familiar with this context, a close collaboration with the different stakeholders is essential to gain an understanding of the different perspectives and the issue at hand (Bijl-Brouwer & Malcolm, 2020). Therefore co-creation is approached as a way to let all relevant parties work together to understand the root of a problem and use their various resources and expertise to find a solution together. This process empowers participants to take initiative and participate in finding solutions and generating new knowledge. When co-creation involves children, it requires viewing children as equal co-creators, rather than simply recipients of adult guidance. This challenges the traditional roles between children and adults, which stimulates communication, learning, creativity, and critical thinking (CoC. Playful Minds, 2019; Iivari & Kinnula, 2018; Kouprie & Visser, 2009).

In 2002, Druin described four roles that children can play in the design process: user, tester, informant, and design partner. Later, Iversen et al. (2017) added a fifth role, the child as the protagonist. Although Druin mainly focuses on the role of children in the development of new technologies, this model

is also applicable to the design process in general (Hansen, n.d.). During this case study, children take on the role of design partner, where they attain a voice in all steps of the design process. The researcher and the child are partners who design together with a common goal (Druin, 2002). The decision to become design partners was based on literature research, observations, and interviews within the context of children of prisoners. As mentioned before, these children suffer from powerlessness and incomprehension as a result of parental incarceration. These feelings arise from a lack of information and involvement towards children, which can be overcome by introducing these children as design partners (COPE, 2014; Gielen, 2008). By giving vulnerable children control over the design process they start to feel empowered and dare to give full input, but this learning journey applies only to the children participating in the co-creation process and not the entire target group.

Adults are used to being in charge while children are accustomed to taking orders. When children become design partners those traditional roles do not apply anymore. Finding a new power dynamic between the child and the designer is therefore a challenge that the designer needs to be willing to engage in (Druin, 2002). Designers should be aware of their own and children's competencies and limits. One of the shortcomings is that adults might see children as vulnerable and incompetent and therefore differentiate children from themselves, which results in a limited contribution of children to the project due to a lack of confidence (Hansen, n.d.; Morrow & Richards, 1996). Morrow (2008) describes four ways how adults understand children: a developing child, a tribal child, an adult child and, a social child. During this case study, the children are seen as the social child, which means that the designer acknowledges and encourages children and adults to have different ways of expressing themselves, with the belief that this is beneficial for the design process (Hansen, n.d.).

By giving the children complete insight into the design process, an equal partner relationship can occur. After all, these children know best what it means to be a child of an inmate. Children take on the role of the expert, while designers get a better idea of the world they have to design for and guide the innovation process. The designer's challenge is to empathize and see the problem from the child's perspective, while also staying focused on the bigger context and the ultimate design goal (Hansen, n.d.; Spiel et al., 2018). Children can help by teaching adults their way of perceiving the world, which is through their hands rather than just their eyes. This concept is known as "the epistemology of the hand" and it reminds adults to use more tactile ways of exploring objects and methods through interacting with children (CoC. Playful Minds, 2019).

Even though the right of children to contribute is the focus of co-creation, children still have the right to remain silent (COPE, 2014, 2018; Council of Europe, 2018; School of Rights, 2019). Managing the ethics of working with children is another critical part that can have a significant impact on the outcome of the project. The designer should ensure that the process is beneficial for all parties involved. Besides the research material and tangible solutions for designers, the children should be empowered to acquire new knowledge and skills (Frauenberger et al., 2015; CoC Playful Minds, 2019; Hansen, n.d.).

Framing

This paper describes the co-creative approach of a case study involving children with an incarcerated parent. The case study was conducted as part of a master thesis project on supporting children with an incarcerated parent. This project led to a product-service system, named KiDO, that strengthens the relationship between the child and the incarcerated parent, builds the child's resilience, and processes the child's trauma. Children and their incarcerated parents are more often separated than together. KiDO captures these moments of loss by connecting children and detained parents up close and from a distance. To successfully reach this outcome a close collaboration with many stakeholders was necessary, such as parents, guardians, family members, the prison warden, correctional officers, judicial welfare workers, and psychologists. However, this paper limits itself to describing the most significant collaboration, between the children and the designer. The remainder of the paper will cover the different methods used and the factors, challenges, risks, and opportunities that co-creation with vulnerable children presents.

Method

The case study expands on the research of children with incarcerated parents within the prison of Hasselt in Belgium. An estimated 30 children were involved during the total research period of 8 months. Further, 8 children between the ages of 6 to 12 collaborated closely with the designer, and 2 of them took on the most significant role of design partner. Through weekly visits and the ability to work together frequently, the decision-making process became efficient, agile, and inclusive. The co-creation methods with children are discussed below. The intended purpose of the methods was dependent on the project phase. The understanding of the system happens through participant observer and context mapping, the brainstorming session explores the solution space, and the user test verifies the result.

Participant observer

Participant observation was used to integrate into the environment. In doing so, the designer experiences what it means to be part of this environment (Fine, 2001). Over a period of eight months, the designer participates weekly in the children's visit at Hasselt prison. This visit is adapted to children and the designer integrates as an intern into this setting by interacting with the families. This creates mutual trust and respect, leading to insights into the needs and wishes of children with incarcerated parents (Johnson et al., 2016). In addition, as an intern, the designer has a unique role of neutrality between the various stakeholders, such as the children, the detainees, the remaining parent or caregiver, health care providers, penitentiary custodial assistants, and gatekeepers. Through immersion in the environment, the observer becomes a personal witness. This approach provides a deeper understanding of the situation in which the children and their parents find themselves. In addition, the participating role removes the limitations of the researcher versus the respondent. This method is conducted over a long period with a total average of 30 children to reduce first impressions, biases, and time sensitivities (Fine, 2001).

Context mapping

With context mapping, participants' thoughts and perspectives were visualized. The research question for this specific study reads as follows: "How does it feel to be a child with a parent in prison and what concerns, feelings and attitudes do they have in daily life?". The method consisted of two parts and six participants, part one was a cultural probes package that the child is allowed to keep for two weeks to complete. Part two was a group session where the children discuss their package and envision the future. For this case study, context mapping was applied to children of prisoners, which causes several challenges. These children often do not have the opportunity to talk openly about their home situation and may be withdrawn as a result. In addition, there are often feelings of insecurity and mistrust that hinder conversation (COPE, 2014). Another aspect to take into account is the short attention span of children (M. A. Gielen, 2008). Gielen's guidelines (2013) are used for successful collaboration with children. Visser et al.'s manual (2007) forms the structure of the research method. The composition of the sensitizing package emerged from the literature on children with an incarcerated parent (COPE, 2014; Jones et al., 2012), Visser et al.'s manual (2007), and Thoring et al.'s (2013) critical approach to cultural probes.

Brainstorm session

The design phase was introduced by a brainstorming session with the two child design partners (Figure 2). As this session was conducted with only two participants, it is important to frame this as an idea-generation method and not a method to obtain hard insights. Children are not skilled designers, so certain tools and techniques were used to approach the brainstorming session. A word - and photo brainstorming tool, LEGO serious play and role play with objects were utilized (LEGO, 2010; Rubino SC et al., 2011; StudioLab, n.d.).

Figure 1. Co-creation session.

User test

A user test is a qualitative research method to verify a concept. The purpose of this user testing is to verify interactions with KiDO on both a psychological and technological level. A user test approaches reality as closely as possible and is therefore accomplished in prison itself over the course of one day. However, the actual user cycle lasts at least one week, depending on the frequency of the visits. Two children, aged 8 years, participated in the test together with their incarcerated parents. A scenario of three test phases was created to guide the facilitator through the user test. In addition, a justice welfare worker was present as an observer to analyze the participants' emotions and actions.

Figure 2. User test in Hasselt prison.

Findings

Influencing factors

By taking on the role of participant observer the designer becomes part of the research context. There are many factors influencing the integration of an outsider, in this case the designer was still a student, this led to both advantages and disadvantages (Johnson et al., 2016). On a positive note, the observer was still a young adult, which created a more natural and relatable relationship with children. Being seen as an intern or student also enabled the observer to ask questions to all the different stakeholders from the perspective of curiosity and studiousness. On the other hand, a student often lacks credibility, and this complicated scheduling and executing meetings with people in certain positions. Other disadvantages of submerging in the research context were subjectivity and bias (Druin, 2002; Johnson et al., 2016; Kouprie & Visser, 2009). Every designer has their own identity and unique experiences and even though we try to stay objective during research our own personality will have an indirect or direct impact on the design process. In this case study, the student differed significantly from the majority of imprisoned fathers and their children on a sociocultural level. Therefore, the designer had to acknowledge the limited knowledge about cultural differences, discriminatory practices, and privileges. It was crucial to approach the design process with an open mind and a willingness to learn and grow.

Challenges

An unexpected challenge was encouraging the children of prisoners to think creatively and express their imagination. During the beginning of the co-creative process, the children held themselves back, not daring to say silly and unrealistic ideas out loud, scared of being judged. There are various reasons for this behavior. One explanation may be the influence of the education system. Schools are both Cartesian and goal-oriented, which respectively means breaking down problems into smaller solvable particles and achieving a goal by providing tasks (CoC. Playful Minds, 2019). These models put pressure on children to achieve, causing creative thinking to subside. Another explanation is the power dynamic between children and adults, which often leaves no room for children's opinions (CoC. Playful Minds, 2019; Druin, 2002; Hansen, n.d.; Spiel et al., 2018). This neglect often turns to oppression for the children of prisoners: they live in the shadow of their parents' crime, they are denied information and they are not allowed to talk openly about their home situation. Usually, this results in reclusive, withdrawn, and distrustful behavior (COPE, 2014). Therefore, a reliable connection between the design

partners within a safe environment is of high importance. Together with child psychologists and based on literature (CoC. Playful Minds, 2019; M. A. Gielen, 2008; Hansen, n.d.; Visser et al., 2005), the following guidelines were identified to create this connection: explain who you are and why you are there, explain why the children are there, talk directly to the children not their parents, be transparent and complete with information, clarify that there are no wrong answers because it is not a test, give the children options, check their body language, provide confidentiality, … These expert insights are necessary for designers since they are not trained to interact with children. Without the expert perspective dialogues between designers and children will not only be ineffective and useless but also harmful to the children.

Risks

Co-creation means treading uncharted territory. Stepping out of one's comfort zone is often necessary for personal and professional growth, and co-creation can be a particularly effective way to do this. However, the decision to co-create has to be thought through before starting a co-creative process (Kouprie & Visser, 2009). Through this approach, you will explore different contexts, perspectives, and realities which broaden your view, but may also challenge it. Hence, as a designer, your neutrality must withhold, even though you might personally disagree. This neutrality is further compromised when an inevitable relationship develops between the child and the designer. A child may exhibit inappropriate behavior that leaves the researcher unsure of how to handle the situation. Or the child and researcher may become attached which compromises the objectivity of the study (Spiel et al., 2018). Further, this relationship may be harmful to the child, since it is always temporary and the designer will eventually leave the context. Especially for vulnerable children that already struggle with trust issues, a sudden detachment can be traumatic for them. It is important not only to consider the potential for attachment and detachment but also the possibility of disappointment due to a lack of implementation. As designers often work on projects for organizations or companies, they may have no control over whether their design will be implemented. This can lead to disappointment for children who have invested in the process and may have put their trust in the designer, only to be left with the status quo. A separate risk is that engaging children is a time-consuming endeavor since they both must adapt to their new roles, build trust, discuss their approach every step of the way, and get together. In practice, we saw that the child's role often changed between partner, informant, user, and tester, depending on the stage of the project or the availability of resources (Hansen, n.d.; Iivari & Kinnula, 2018). Since the co-creation was part of a master's thesis project executed by a single student with a firm schedule, there were not always opportunities to allow the children to have a say in the project planning and methods or tools used. A more innovative approach in which children not only participate in the design process but also assist in the planning and management of the project would allow children to gain agency and potentially lead to more successful and meaningful outcomes.

Opportunities

If done right, co-creation is a mutual learning journey for both the designer and the child (Druin, 2002). The designer has the opportunity to fully integrate into a context to relate and unravel the underlying causes and explanations for a complex problem. A definite ability to empathize with stakeholders is therefore of high importance (CoC. Playful Minds, 2019; Gielen, 2008; Hansen, n.d.; Iivari & Kinnula, 2018; Johnson et al., 2016; Kouprie & Visser, 2009; Spiel et al., 2018; Walsh et al., 2010). The children obtain agency and a say in the design process, which fosters their personal development and growth (CoC. Playful Minds, 2019; Iivari & Kinnula, 2018; Druin, 2002).

Conclusion

Designers are people with their own unique experiences, which enables us to empathize with our research context. However, we all have an empathic horizon, the limit on a designer's ability to empathize beyond certain characteristics of their group (McDonagh-Philp & Denton, 1999; Ryan, 2014). As designers, we should establish our personal empathic horizon through positionality at the beginning of a project to acknowledge the potential impact of personal experiences and background and strive for a more inclusive, equitable, and successful process (Noel & Paiva, 2021). This process should be approached with sensitivity and care, ensuring that the rights and well-being of the children are protected and that any power imbalances are addressed. This is not a task every designer is willing and able to do. Therefore, designers ought to look before they leap by researching and consulting with sociologists and experts.

Further, designers must recognize responsibility for the temporary entry into the world of vulnerable children. They should plan an exit strategy early on and with a focus on the child to minimize the potential negative impact of detachment (Kouprie & Visser, 2009; Spiel et al., 2018). In this case study, the designer ensured transparent communication and a parting moment. Despite these efforts, the designer still experienced feelings of guilt. Therefore, the temporary but intense relationship between designers and children in co-creative processes and how to navigate this relationship in a way that is sensitive and beneficial to all parties involved should be investigated more. In future projects, it would be beneficial to establish the roles and corresponding boundaries of the children and the designer at the outset of the co-creative process, ensuring that both parties have a shared understanding of the expectations for the process.

Children of incarcerated parents are part of a complex and isolated context that is impossible to grasp from the outside. By involving children in the analysis phase, we learn to understand their world. In the design phase, children add value by including us in their thinking process. We, designers, make decisions according to design-related logic, but children do so from their experiences and desires. It is precisely this close collaboration that is essential for the success of the project because it ensures that the outcome is meaningful and beneficial to the intended audience. Overall, co-creation with vulnerable children is a challenging but valuable and rewarding approach to addressing and affecting complex social issues.

References

Bijl-Brouwer, M. van der, & Malcolm, B. (2020). Systemic Design Principles in Social Innovation: A Study of Expert Practices and Design Rationales. *She Ji*, 6(3), 386–407. https://doi.org/10.1016/J.SHEJI.2020.06.001

CoC. Playful Minds. (2019). *Co-create : co-creation - focusing on children*. CoC Playful Minds.

COPE. (2014). *Children of Imprisoned Parents: European Perspectives on Good Practice - Children of prisoners* (K. Philbrick, L. Ayre, & H. Lynn, Eds.; 2nd ed.). Children of Prisoners Europe. https://childrenofprisoners.eu/children-of-imprisoned-parents-european-perspectives-on-good-practice/

COPE. (2018). *It's Time to Act - CoE Recommendation CM/Rec(2018)5 - Children of prisoners* (B. Smith & K. Philbrick, Eds.). European Union. https://childrenofprisoners.eu/its-time-to-act-cm-rec20185/

Council of Europe. (2018). *Recommendation CM/Rec(2018)5 of the Committee of Ministers to member States concerning children with imprisoned parents*. https://edoc.coe.int/en/children-s-rights/7802-recommendation-cmrec20185-of-the-committee-of-ministers-to-member-states-concerning-children-with-imprisoned-parents.html

Druin, A. (2002). The role of children in the design of new technology. *Behaviour and Information Technology*, 21(1), 1–25. https://doi.org/10.1080/01449290110108659

Fine, G. A. (2001). Participant Observation. *International Encyclopedia of the Social & Behavioral Sciences*, 11073–11078. https://doi.org/10.1016/B0-08-043076-7/00771-3

Frauenberger, C., Good, J., Fitzpatrick, G., & Iversen, O. S. (2015). In pursuit of rigour and accountability in participatory design. I*nternational Journal of Human Computer Studies*, 74, 93–106. https://doi.org/10.1016/J.IJHCS.2014.09.004

Gielen, M. A. (2008). Exploring the child's mind – contextmapping research with children. *Https://Doi.Org/10.1080/14626260802312640*, 19(3), 174–184. https://doi.org/10.1080/14626260802312640

Gielen, M., & Nl, M. A. G. (2013). Mapping children's experiences: Adapting contextmapping tools to child participants. *Nordes 2013: Proceedings of the 5th Nordic Design Research Conference "Experiments in Design Research", Copenhagen, Denmark, 9-12 June 2013*. https://repository.tudelft.nl/islandora/object/uuid%3A16f9f00e-efe8-42b2-a91f-aa6c599a2bec

Hansen, A. S. (n.d.). Co-Design with Children *Co-Design with Children How to best communicate with and encourage children during a design process*.

Iivari, N., & Kinnula, M. (2018). *Empowering children through design and making*. 1–12. https://doi.org/10.1145/3210586.3210600

Iversen, O. S., Smith, R. C., & Dindler, C. (2017). Child as protagonist: Expanding the role of children in participatory design. *IDC 2017 - Proceedings of the 2017 ACM Conference on Interaction Design and Children*, 27–37. https://doi.org/10.1145/3078072.3079725

Johnson, J. C., Avenarius, C., & Weatherford, J. (2016). The Active Participant-Observer: Applying Social Role Analysis to Participant Observation. *Http://Dx.Doi.Org/10.1177/1525822X05285928*, 18(2), 111–134. https://doi.org/10.1177/1525822X05285928

Jones, A., Gallagher, B., Manby, M., Robertson, O., Schützwhol, M., Berman, A., Hirschfield, A., Ayre, L., Urban, M., & Sharrat, K. (2012). *children of prisoners: interventions and mitigations to strengthen mental health* (Vol. 38, Issue S 01). Georg Thieme Verlag KG. https://www.researchgate.net/publication/275305890_The_COPING_Project_-_children_of_prisoners_interventions_and_mitigations_to_strengthen_mental_health

Kouprie, M., & Visser, F. S. (2009). A framework for empathy in design: stepping into and out of the user's life. *Https://Doi.Org/10.1080/09544820902875033*, 20(5), 437–448. https://doi.org/10.1080/09544820902875033

LEGO. (2010). *Introduction to LEGO ® SERIOUS PLAY ® Open-source*. http://creativecommons.

McDonagh-Philp, D., & Denton, H. (2015). Using Focus Groups to Support the Designer in the Evaluation of Existing Products: A Case Study. *Http://Dx.Doi.Org/10.2752/146069299790303570*, 2(2), 20–31. https://doi.org/10.2752/146069299790303570

Morrow, V. (2008). Ethical dilemmas in research with children and young people about their social environments. *Https://Doi.Org/10.1080/14733280701791918*, 6(1), 49–61. https://doi.org/10.1080/14733280701791918

Morrow, V., & Richards, M. (1996). The ethics of social research with children: An overview. *Children and Society,* 10(2), 90–105. https://doi.org/10.1111/J.1099-0860.1996.TB00461.X

Noel, L.-A., & Paiva, M. (2021). Learning to Recognize Exclusion Ministry of Design View project LearnxDesign2021 View project. *Journal of Usability Studies*, 16(2), 63–72. http://uxpajournal.org.

Rubino SC, Hazenberg W, & Huisman M. (2011, October 15). *75 Tools for Creative Thinking*. BIS Publishers NV. https://www.bispublishers.com/75-tools-for-creative-thinking.html

Ryan, A. (2014). A Framework for Systemic Design. *FormAkademisk - Forskningstidsskrift for Design Og Designdidaktikk, 7*(4). https://doi.org/10.7577/FORMAKADEMISK.787

School of Rights. (2019). *Officiële Tekst Kinderrechtenverdrag (vereenvoudigde versie)*.

Spiel, K., Brulé, E., Frauenberger, C., Bailly, G., & Fitzpatrick, G. (2018). Micro-ethics for participatory design with marginalised children. *Hasselt and Genk*, 1, 1–12. https://doi.org/10.1145/3210586.3210603

StudioLab. (n.d.). *Co-design with kids – a toolkit for designers*. Retrieved December 19, 2022, from https://studiolab.ide.tudelft.nl/studiolab/codesignwithkids/tools/

Thoring, K., Luippold, C., & Mueller, R. M. (n.d.). *Opening the Cultural Probes Box: A Critical Reflection and Analysis of the Cultural Probes Method.*

Visser, F. S., Stappers, P. J., Lugt, R. van der, & Sanders, E. B.-N. (2007). Contextmapping: experiences from practice. *Http://Dx.Doi.Org/10.1080/15710880500135987, 1*(2), 119–149. https://doi.org/10.1080/15710880500135987

Visser, F. S., Stappers, P. J., van der Lugt, R., & Sanders, E. B.-N. (2005). Contextmapping: experiences from practice. *CoDesign, 1*(2), 119–149. https://doi.org/10.1080/15710880500135987

Walsh, G., Druin, A., Guha, M. L., Foss, E., Golub, E., Hatley, L., Bonsignore, E., & Franckel, S. (2010). Layered elaboration: A new technique for co-design with children. *Conference on Human Factors in Computing Systems - Proceedings, 2*, 1237–1240. https://doi.org/10.1145/1753326.1753512Johnson J and Finn K (2017) Designing User Interfaces for an Aging Population: Towards Unversal Design. San Francisco, CA: Morgan Kaufmann.