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Designing a value object for perpetrators of domestic violence

Inge Andrew

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Inge Andrew[a]

[a]School of Design, Otago Polytechnic, Dunedin, New Zealand. Inge.Andrew@op.ac.nz

Abstract

This article focuses on a group of people who do not have a voice in everyday discourse – perpetrators of domestic violence. By engaging with qualitative design methods, including the Double Diamond design process, and looking at the system of interactions and experiences at Stopping Violence Dunedin (SVD), this research identified a series of themes and milestones for men who are perpetrators of domestic violence, leading to the development of a value object. A value object can refer to that which creates value for the user. In this case, the object is a key that created a value proposition, working to celebrate the milestones that these men reach in their journey of change, supporting the possibility of an alternative future for them – a future without violence.

Keywords: Human-centred design, User journey mapping, Double Diamond, Value object, Perpetrators of domestic violence

Introduction

The author's Master of Design Research started in 2019 and continued through to 2021 while the world experienced the coronavirus pandemic. During the pandemic, there was evidence of increased domestic violence in our communities. The New Zealand Family Violence Clearinghouse found that 9% of New Zealanders who completed an online survey reported that they had experienced some form of family harm during lockdown (New Zealand Family Violence Clearinghouse, 2020). The United Nations described the worldwide increase in domestic violence as a 'shadow pandemic' alongside Covid-19 (Mohan, 2020).

The statistics for domestic violence are high in New Zealand. According to the New Zealand Family Violence Clearinghouse's 2017 statistics, 35% of New Zealand women have experienced physical and/or sexual intimate partner violence (IPV) in their lifetime. This statistic reaches 55% when psychological abuse is included. Research indicates that domestic violence affects every ethnicity in New Zealand, although some groups are at higher risk than others. A survey of women found that the lifetime prevalence of physical and/or IPV was 1 in 2 for Māori (indigenous people of New Zealand) women (58%) and 1 in 3 for European/other women (34%) and Pacific women (32%) (New Zealand Family Violence Clearinghouse, n.d.). From 2009 to 2017, 230 family violence deaths were recorded in New Zealand, of which 48% were a result of IPV (Family Violence Death Review Committee, 2020).

Family violence and perpetration of domestic violence are complicated issues. Research on perpetrators of domestic violence indicates that primary preventative measures, long-term investment and the need to develop a holistic approach that incorporates support from more than just the justice system are considered critical for reducing the incidence of domestic violence (Polaschek, 2016). It is also well known that perpetrators of domestic violence are often victims themselves, having experienced domestic and/or sexual abuse or other types of traumas in their own lives (Baker, 2013; Campbell, 2012; Roguski & Gregory, 2014; Snegirev, 2017).

Stopping Violence Dunedin (SVD) is a not-for-profit community group that works with men by offering individual and group therapy that offers positive change. SVD works with about 800 men per year who have a history of violence and supports them by listening to personal narratives and building trust and connections within group sessions. The SVD manager explained that the support developed in these sessions is a vital component in the men's journey as well as the opportunity for change and hope for a life without violence. The manager was concerned about the drop-off rates of the men and expressed an interest in seeing if this support could be extended to them in some way during the week when they are away from SVD. This support, and the skills they learn at SVD, are critical while the men deal with the everyday stresses of life.

Methodology

Human-centred design (HCD) and qualitative design methods underpinned by the Double Diamond design process were used to determine whether design could support the transformation of violent male offenders within SVD. The Double Diamond process is a non-linear design method which explores needs, ideas and opportunities by using a discover, define, develop and deliver approach. The two-diamond approach works through a process of deep discovery using divergent thinking, followed by focused action (IDEO, n.d.). The four cores of the Double Diamond principles are research, insight, ideation and prototyping.

The very nature of HCD is to generate an understanding of a user group or community and reach a variety of solutions for an issue using specific qualitative design methodologies. According to Crouch and Pearce (2012), the key intention of qualitative research is to provide a vehicle through which participants' voices can be heard. As a generative process, it keeps the user firmly in scope, seeking to arrive at solutions to a particular issue that are both feasible and desirable, with a bias towards action (Clarkson, 2015). It is only by engaging in a thorough process of HCD that a researcher can fully understand the community within which they are working and strive to create an innovative solution which is specific and contextual. In this research, HCD methods which originated from sociological practice (expert interviews and focus groups) were used alongside design methods such as user journey mapping, sketching and reflection to develop a design intervention point and prototype ideas.

Semi-structured interviews and thematic analysis

The 14 interview questions for the four SVD facilitators were based on a face-to-face, open-ended, semi-structured method, which worked as a framing device to open up new possibilities during the conversations with the interviewees (Crouch and Pearce, 2012). The interview questions in this study covered both how the facilitators see their role in the SVD group sessions and what they think is important for the men as they begin to face the process of change. This method was employed by Roguski and Gregory (2014), who completed semi-structured interviews with former violent perpetrators to ensure that their voices and stories were the central focus of the study. The data from the interview transcripts were analysed using thematic analysis, which can highlight similarities and differences resulting in unanticipated insights (Nowell et al., 2017). Metzger and Woodley (2010), in their report about family violence and seeking help, also used iterative data analysis, which allowed themes and patterns to emerge.

User Journey Mapping

User journey mapping is a common practice in design, allowing the creation of a visual timeline of the user's thoughts and emotions when using a new object or design and creating a visualisation of the process that a person goes through (Gibbons, 2018). Journey mapping can also isolate any moments of destabilization in the process and lead to a design intervention point that can introduce an improvement

or a new design idea. In this research, the journey of change for the men at SVD was visualised using the monomyth of the hero's journey (Campbell, 1949). This draws from Joseph Campbell's extensive analysis of human mythology, identifying a series of archetypal stages that are common across cultures in myths, fairy tales, dreams, books and films (Yuille, 2017). Campbell's narrative structure can be applied to design to ensure that the user has an experience (or a journey), if not an actual hero's experience. In this instance, the themes identified as part of the interviews and thematic analysis and information from a literature review were mapped onto Campbell's hero's journey to visualise a design intervention point.

Focus Groups

Two sets of focus groups were completed. The first with the SVD facilitators was undertaken to gain feedback about the identified themes, milestones and the prototype idea. The focus group with two SVD group members was conducted to gain insight into the milestones and the design prototype.

Results

Double Diamond design process - Discover phase
The open-ended, semi-structured interview questions allowed the SVD facilitators (#1 to #4) to reflect on their experience with men who may be initially reticent to the idea of a life without violence but who, over time, develop new skills and an understanding that allow them to make positive choices. In this co-construction of knowledge between interviewer and interviewee, a shared understanding was developed throughout the interactions (Hollingsworth and Dybdahl, 2007).

The constructed narratives gained from the interview transcripts were analysed by comparing each interviewee's answers to establish themes and patterns through iterative thematic content analysis. These themes were added to a table under the interviewee's name, and if a common theme surfaced, this was considered relevant and given a number. These themes were then compared with other academic research (including research by the SVD facilitators themselves) and details of these were also added to the tables. When the data from the themes were tallied, any theme that had a total of 10 or more references was considered relevant to this study (Table 1). Overall, seven common themes were identified by the facilitators and from research on men who undertake the journey towards a life of non-violence.

Table 1: Seven common themes for perpetrators of domestic violence.

	Themes
1.	Men share, listen and tell stories
2.	The group process helps to develop authentic relationships and connections
3.	Mentors offer model behaviour and hope for the new men
4.	The men develop self-awareness, which in turn raises consciousness
5.	Children are an important motivation for change
6.	Cultural connectiveness is important to support positive transformation
7.	There is an overall journey of transformation that occurs for men at SVD

Men share, listen and tell stories
Telling personal stories during group sessions is an essential element in the journey of change for perpetrators of domestic violence. This can be an emotionally painful experience but ultimately leads to an awareness that other men share the same or related stories. Facilitator #1 acknowledged the pain that the

men bring to SVD but also the bravery. She sees this in the men when they tell their stories but also in the courage of other men who can be present with that emotional pain in the room. Facilitator #3 also referred to stories told during group sessions. He said:

> "They learn from each other. They will hear each other's stories. They will get a better hearing in general. They'll get a better understanding of the world. Their horizons will broaden. Their sense of who they are in the world will change, and, as a consequence, their behaviour and their approach to many situations will change".

This sharing of stories is only possible by relationship building which led to the second theme.

The group process helps to develop authentic relationships and connections
In the interview with Facilitator #3, he remarked that the group works to challenge several ideas, including those that support violence as well as a hopeless view of the world. The group works by connecting and developing hope that change is possible. The facilitators reported that men who tell the group that they had failed in some way during the week (e.g. shouted at a partner, child or workmate) usually speak with some relief, rather than a sense of fear. This is due in part to the empathy that is modelled in the group situation and the new ability to think outside just yourself. Facilitator #4 also highlighted the men's need to be seen. The facilitators make sure that everyone is seen for who they are in the group, even if that is initially uncomfortable. Peers or mentors, men who have been through similar experiences, are crucial to this process which led to the third theme.

Mentors offer model behaviour and hope for the new men
Facilitator #1 spoke about the importance of mentors and their presence in the group. These are men who have attended SVD for several months and are familiar with the process. Their presence indicates that the process at SVD works if you stick to it. Facilitator #1 said:

> "So, I think the mentor's role is to offer hope. Change is possible. Just by existing and being there and being able to say, 'I used to be this and now I'm this'. And that this works".

Facilitator #3 said that he believes that the men who have been going to SVD for some time model good behaviour in terms of dealing with the many situations that the world throws at them. This model behaviour is eventually enfolded by the new men, helping to shape a new identity. He said,

> "What changes is the identity of the people we're talking with. People change who they believe themselves to be".

This change of identity can also occur with self-awareness and the fourth theme in this research.

The men develop self-awareness, which in turn raises consciousness
Facilitator #4 mentioned that men can undergo change and let go of their current violent identity, which she referred to as a raising of consciousness. The men notice their feelings in a situation but also notice other peoples' reactions. Facilitator #2 also talked about group members who are constantly disappointed by their behaviour, which can send them into a cycle of old unpleasant habits. The facilitators constantly tend to those behaviours during the group and work on developing new, positive ones. She said:

> *"They are disappointed with themselves, and they can sit with the discomfort of that because that then becomes the new motivator to try harder, while at the same time not beat themselves up about it because that just goes back to the old punitive model".*

Making changes to one's personality is complicated, but there can be many motivators for change, including children, which led to theme five.

Children are an important motivation for change
Facilitator #3 pointed out that the men who come to SVD essentially just want peaceful lives. They want to be able to work, save some money, get some assets and look after their children. Their motives for change are ordinary, but believing that change is an option can be challenging. Facilitator #4 pointed out in her interview that although children were a good motivator for change, change for the individual first was more important. She said:

> *"Often there comes a shift somewhere along the line and it becomes something they realise – actually it's not about anybody else. 'It's nice that I'm doing this for my kid but I have to do it for me first'. But that's a process".*

A way of supporting positive transformation can also be guided by cultural connectiveness.

Cultural connectiveness is important to support positive transformation
All the facilitators spoke of the importance of connections (*whakawhanaungatanga*) in the group. Whakawhanaungatanga is a Māori word that loosely translates as relationship building and family connections. Facilitator #1 said that it is continually about connecting and treating everyone who comes through the door like a long-lost family member. In response to a question about this connectiveness, Facilitator #2 also said:

> *"We value those differences instead of insisting that we have the same understanding or the same set of values or whatever. We show a willingness to understand, be open to, be curious and have an openness to the cultural values and the cultural norms that other people have grown up with. That's important".*

It may be that connection to one's own culture is a new experience, and this is part of a journey of change that leads to the last theme identified in this research.

There is an overall journey of transformation that occurs for men at SVDFacilitators #1, 2 and 4 all reiterated the idea in the groups that "we are all in this together" and "we are all a work in progress", highlighting to the men that change is possible with support. There is a lot of vulnerability and pain in the group that is so important for the process. Facilitator #1 remarked that some of the men have experienced unbelievable trauma in their lives, and in many ways they are only duplicating what they have learnt growing up. The transformation that the men undergo was also a reason that Facilitator #2 came to work every day. She said:

> *"I think it is the magic of transformation. When you see changes happening […]. You know when someone turns up and they've been hiding under a hoody for months and the hoody comes down. What might look like a surface change […] represents something much bigger. There is something very persuasive about that level of change".*

Double Diamond – Define phase

User Journey Mapping

With the identification of themes, it was then possible to complete a journey map for the SVD men, specifically using the monomyth of the hero's journey (Campbell, 1949). Lupton (2017) in her book *Design is Storytelling* discusses Campbell's ubiquitous concept of the circular journey where the hero gets a call to adventure, initially refuses the call, but, with the help of a sidekick, embarks on a journey of tests and rewards, resulting in returning home with a hero's story. Although the hero's journey is not typically found in HCD, it made sense here to relate the hero to men at SVD and the sidekick to their potential mentor. The importance of the relationship between mentors and new men at SVD has already been identified in the themes above. As Lupton (2017) also identified, the circular pattern of the hero's journey is useful in design, as the user goes through a series of highs and lows and their relationship with an object changes over time.

The mapping of experiences of new clients at SVD identified a point of design intervention where the men go through trials and failures in their journey of change (Figure 1). Through trials and failures, this part of the journey prompts personal growth by developing new skills and raising consciousness and self-awareness, and the hero can accept help from their mentor along the way. In the seven themes identified above, the mentor at SVD proved to be fundamental to the journey of change, as they display a 'been there done that' narrative and are visible proof that the SVD group process works if you stick to it. The hero in this instance can cross the threshold with the mentor's help and move through the rest of the journey towards change. This can include revelation (reviewing old behaviours that do not work anymore), change (being more compassionate with oneself), atonement and return with a changed identity.
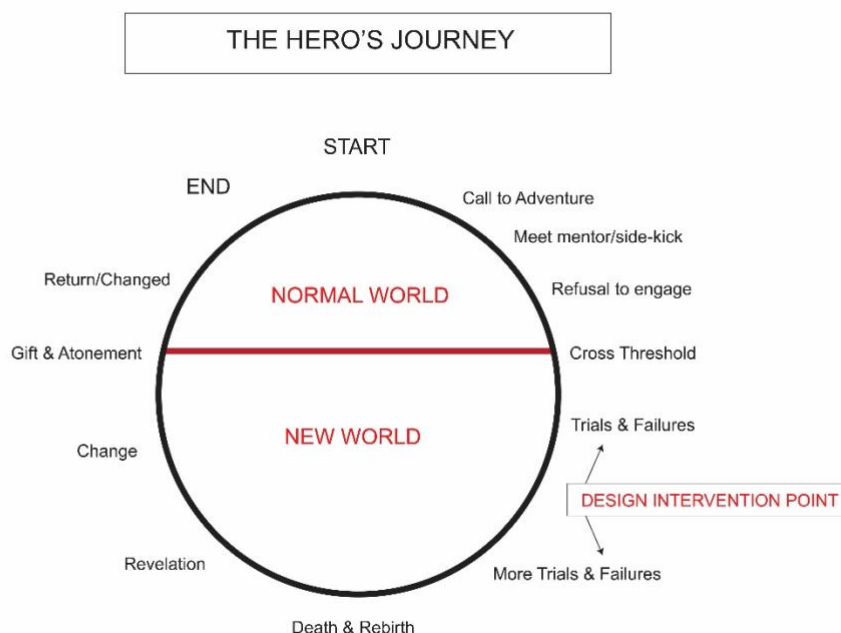

Figure 1: The hero's journey for perpetrators of domestic violence (adapted from Campbell, 2008).

Milestones

Upon further reflection and consideration of the journey metaphor, as well as the idea of transformation, seven milestones were identified, which were later approved by the SVD facilitators during the focus group

session (Figure 2). Milestones can form an essential element of the journey mapping process, in which a series of actions drives the customer on a particular journey. "Action drives stories and it also drives the design process" (Lupton, 2017, p. 21). What Lupton means by this is that good design creates an unfolding story which works to create connections and memories for the user.

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├── 1. ENTER (enter the SVD door)

├── 2. RETURN (return to SVD)

├── 3. SPEAK (tell your story)

├── 4. CONNECT (make connections with peers)

├── 5. SEE (see your story from others' perspectives)

├── 6. TAKE (take threads of others' stories that apply to you)

├── 7. ACCEPT (accept hope and transformation)
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Figure 2: Milestones for Stopping Violence Dunedin (SVD) men.

Storytelling continues to be a strong focus from the research, the interview data andthe stories that come from the men at SVD. Authentic storytelling was also important in the analysis of responses to New Zealand It's Not OK Campaign, a recent multi-year campaign to raise awareness about domestic violence. Point Research Ltd. (2010) found that the use of 'real people telling real stories of domestic violence' reverberated more with viewers than using actors in advertising. In this instance, the story of the new client at SVD, now that it is translated into actions (or milestones), could be further explored towards an engaging and accessible design solution.

Double Diamond – Develop phase
Prototype development
The design of an object that the men could carry with them could act as a reminder of their journey of transformation towards non-violence as well as a particular milestone that they might have overcome. Initially thinking about what men carry in their pockets – a wallet, cell phone and keys, the key as an object is a useful metaphor for a journey but also carries many other meanings. For example, a key:

- Opens and closes doors (both physical and metaphorical)
- Is often lost and found again
- Initiates new beginnings
- Opens hearts
- Solves mysteries
- Unlocks potential

Keys are familiar items that protect safe spaces but can also metaphorically offer new experiences and hope. The familiarity aspect opens possibilities for the user and its potential to introduce a new and better future. In this case, the key could remind the men of the journey they were on, as well as their support network at SVD. Therefore, a further concept was to make a pattern on the key (relating to a particular milestone) that was tactile in some way. This idea fitted with the concept of the value object but required feedback from the facilitators at SVD.

Focus Group (SVD Facilitators)

A focus group with three facilitators was held to gain feedback about the design process to date - the themes, milestones and key idea as a value object. During the discussion with the facilitators, the idea of the key was attractive. However, in their opinion, not every group member should be given a gift of this kind, as some attended SVD merely to fulfil a court order. It was common for some men to attend the group sessions, not engage in the process and leave when the 26 weeks were completed. They also thought that seven milestone keys were too many and that it would be difficult to pinpoint when those turning points might be reached. Facilitator #1 felt that a key would be better presented when the facilitators see a 'shift' in a group member. This engagement (shift), where an understanding develops of the consequences of their violent actions, usually happens around the 4–6-week mark. It was also suggested that a second key could be presented to any of the men who become mentors. This is currently a casual process at SVD, but it is a considerable achievement when men in the groups start to show leadership and help new men to find their way.

Key design

Once the value object was determined, the process began with the design of the key and its associated pattern. The pattern on the key was important as both a memory enabler and a reminder of the milestones that the user had achieved, as well as the support of the group. Humans rely on both sight and touch to evoke memory, but this rumination can also work to develop new understandings of past mistakes. Designed objects, although seemingly inauthentic, can work to change behaviour in the holder, or at least induce a cognitive process. The men could reach for the key in their pocket during times of stress.
The idea for the pattern of the first key came specifically from the word 'shift', which Facilitator #1 had identified in the focus group. The car shift diagram was a natural fit in terms of the metaphoric value of journeys as well as its connection with a 'shift' in behaviour. The shift diagram also indicates a succession of stages, going from first to second to third, etc. The second mentor key was based around the adjectives for the word 'key' (main, major, crucial etc) and the word 'mentor', which led to 'protector', in turn leading to 'manhole cover'. The idea of the manhole cover is that it protects without being visible and is both strong and secure, as well as being inconspicuous (much like a mentor).

There were a series of designs for creating the key, but the final prototype was created by developing a medium density fibreboard (MDF) mould, which was cast in brass by a local casting foundry. The mould was created by designing a key shape and the patterns in Adobe Illustrator and cutting these out using a LaserJet. The 'shift' and 'manhole cover' patterns on the mould were also raised by rasterising (removing) the surface of the pattern, ensuring a 3D-like tactile effect. Image 1 shows the MDF mould of the Mentor key with its associated 'manhole cover' pattern, and Image 2 shows the final prototype of the Shift key, cast in brass.

Image 1: MDF prototype manhole cover key.

Image 2: Final prototype Shift key, cast from brass.

Double Diamond – Deliver phase

Focus Group (SVD Group Members)

The purpose of the focus group with two SVD members (#A and #B) was to gain their perspective on the seven milestones identified from the research, as well as feedback on the key concept as incentives for men at SVD. This session was based on the premise that these men were familiar with each other, as they had been in a group for several months. This level of comfort was important for the results of the focus group, which the researcher saw as a simulation of a social occasion rather than a formal interview (Lunt, 1996). The plan for this focus group was to keep it as open-ended as possible for the participants to feel comfortable interjecting as much as they wanted. The following is a summary of the conversation, including some key statements from the two participants.

The two group members generally agreed with the milestones that had been developed but had differing views about the order in which they occurred. They also acknowledged that the milestones could come at different times and in different orders depending on the person. It also became clear during the conversation that people might revisit the milestones at different points of the journey. They were not necessarily a 'one-time' thing.

There were many layers to the Speak (Tell your story) milestone. #A said that he heard his own story told by someone else at the first group session he attended, which affected him deeply. It was not his story, but he realised then that other people had similar stories to him. It had, however, taken him longer to learn to listen to other peoples' stories. For him, the 'Return to SVD' milestone was determined by that initial experience, and he returned the next week without question. #B, however, said that it took years before he was able to return to SVD, as he was emotionally triggered by other group members in the first session he attended and did not go back. He also acknowledged that 'Telling your Story' is one thing but taking responsibility for it is another process altogether. When we discussed the milestone 'Accepting Hope', they both agreed that it takes varying amounts of time depending on the person, and it can be triggered with

certain realisations. These could be, for example, recognizing that you have the power to change, becoming self-aware and identifying what your issues are.

Another theme, 'Playing the Long Game', came up during the conversation, which is important to raise here. As mentioned previously, certain men attend SVD for the court-ordered 26 weeks and do not return (having not engaged in the process). Both participants had been attending SVD group sessions for more than two years and were adamant that the journey of change was lifelong. #B explained that many of the guys are very impatient, want instant gratification and find it hard to see the big picture. He echoed later that coming to SVD "is a lifelong thing and it's a lifestyle change. It's not a change of behaviour as such". #A also said about the group sessions, "That's what I do on a Wednesday. These are my guys. I'm a lifer".

The concept of the key was initiated by talking about what people have in their pockets. What do they carry with them that is part of their identity? When #A and #B were asked about what a key could represent for them, the discussion focused on opportunities, keeping and unlocking secrets, as well as safety. Losing your key can also create a source of anxiety. When they saw the Shift key with the gearshift pattern, the overall response was positive, with #B even comparing it to Alcoholics Anonymous sobriety chips. He also commented that the 'reverse' of the gearshift pattern was realistic, since the journey towards non-violence frequently consisted of 'two steps forward, one step back'. He also commented that there was a lot of 'neutral' or procrastinating in the process. They both agreed that a good time to give out the key was when a group member started to show a shift in attitude. #B mentioned that this can be a huge turning point when someone takes ownership of their violent behaviour.

The Manhole Cover key was also well received, with the concept of this key being for a mentor who had moved into a space where he could start to show leadership to the other, newer members of the group. #A agreed that you do not notice manhole covers until they're missing. They also concurred with the supposition that the key was suitable in the way that it is not obvious to anyone but the owner (#B mentioned early in the conversation that there is a lot of stigma and shame around attending SVD). #B also said that the manhole cover was like safety, and by the time you received, it you knew that there were a few people who definitely "had your back". He reiterated that at SVD, it is about pain management, not anger management, alluding to the support that is built within the group.

Discussion

Frascara (2006) believes that we must stop thinking about design as the construction of graphics, products or services but as a means for people to act. In this research, a design solution was sought to remind men of the process and the support they receive at SVD. Qualitative design methods and the Double Diamond design process were applied to investigate processes at SVD and explore concepts and opportunities which resulted in ideas about journeys and change. This translated to the development of a value object, the Key. A value object is that which can influence possible or definite change, and a design artefact can create a shared language and understanding as well as imagine a new future (Zino et al., 2021). Through the development of themes and milestones at SVD, the value object displayed a message, defined by either the Shift or the Manhole Cover patterns. The idea of the value object was to ensure that the user experiences something and ultimately, has an emotion induced that might evoke a change (in this case, a response to a situation with something other than violence). This builds on Fuad-Luke's (2009) definition of design exploration where we can explore possibilities outside current paradigms. A value object can present a proposition and reveal a positive alternative.

We all navigate our world according to our context and our identity (which changes over time), and we keep, carry and wear objects with us that either represent our identity or someone we might hope to be. According to Lupton (2002), we rely on the world of things, using objects to survive and conquer, merging our identities with the objects we carry. Most of us, for example, carry a mobile phone with us, which helps us to access and share information (which evokes certain emotions), and we can feel lost without it.

Objects that we keep at home either have a functional or emotive value (or both), and we are affected in some way if they are lost or broken. These objects sometimes tell a story and can communicate to us in certain ways. The keys, in this case, are a recognition of the work that has been put in but also a reminder of the support that has grown around the men at SVD. Just as a key is a metaphor for opening new doors, these keys are a start to a transformation – an alternative future where men can be in charge of their destiny.

Acknowledgements

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Toward societal transformation through design storytelling: A case study of brand design in the mineral water industry in Finland

Yasuyuki Hayama, Francesco Zurlo

Toward societal transformation through design storytelling: A case study of brand design in the mineral water industry in Finland

Yasuyuki Hayama[a], Francesco Zurlo[b]

[a]Politecnico di Milano, Milan, Italy. yasuyuki.hayama@polimi.it
[b]Politecnico di Milano, Milan, Italy. francesco.zurlo@polimi.it

Abstract

The world today is facing the urgent need for fundamental transformation in the 'Anthropocene' era. However, even if consensus has been formed around the need for transformation, what constitutes fundamental changes and how these changes occur are researched and debated across multiple disciplines, including design studies. Recently, in the design field, transition design has been proposed as a new area of design practice, study and research. Transition design is based on long-term visioning and recognition of the need for solutions rooted in new, more sustainable socioeconomic and political paradigms. This study explores the role of design storytelling in steering and navigating a societal transformation. Using a critical single case study method, this study analyses the fundamental elements of transformation that emerge from each component of design storytelling. A mineral water company in Finland was selected as the purposive single case. It is a specific type of private organization that intends to bring about a societal transition through optimum use of design storytelling. The findings illustrate that the components of design storytelling, which use societal change as their innovative business proposal, distinctively match the components of societal transformation. Design practices that leverage visual and verbal elements edit and weave a new relationship between the sociotechnical landscape, regime and innovation proposed by the company. We believe that this paper makes two main contributions. First, the authors emphasize the potential role of design as a deliberate change process for societal transformation. Second, through the cross lens of societal transformation and design storytelling, the storytelling and narrative approach of societal transformation by design is underlined.

Keywords: Societal transformation, Transition design, Anthropocene, Design storytelling, Narratives of change, Designs for the pluriverse

Introduction

In the 'Anthropocene' era, the world is increasingly faced with the urgent need for fundamental changes (Steffen et al., 2007). Contemporary environmental problems, such as climate change, loss of biodiversity and resource depletion (clean water, oil, forests, fish stocks, etc.), are human-driven issues that raise concerns about the future of Earth's environment and its ability to provide the services required to maintain a viable human civilization. The global change phenomenon represents a profound shift in the relationship between humans and nature. While a variety of terms have been applied to describe this fundamental shift, the term "transformation" is becoming institutionalized in the vocabulary of the scientific and policy communities (Feola, 2015).

Recent contributions by large studies regarding societal transformation have emphasized the deliberate change process, which encompasses the possibility of steering or navigating, if not fully managing, the process of change (Feola, 2015). In this context, several concepts of the change process have been emphasized, such as consensus-building through visioning (Beddoe et al., 2009), transition management (Grin et al., 2010) and social learning (Park et al., 2012). Owing to the essential need to evoke imagination

and pose alternative worldviews, the power of narratives has been considered to be at the crossroads of future studies and narrative studies regarding societal transformation and narratives of change (NoC) (Wittmayer et al., 2019). Like the concept of sociotechnical imaginaries (Jasanoff & Kim, 2013), NoC can generate a shared sense of belonging and community identity that leads to actions and creates meaning based on a common outlook on social reality and the desired future (Pfotenhauer & Jasanoff, 2017).

Meanwhile, aligned with this argument, research has been proposed in the design discipline on transition design or design for transitions as a new area of design practice (Irwin, 2015). Transition design is based on long-term visioning and recognition of the need for solutions rooted in new, more sustainable socioeconomic and political paradigms. Furthermore, as a more radical and complete overhaul of design processes is needed, Escobar (2018) insists on the need for an ontological reorientation of design. Fry and Nocek (2021) echo this perspective by arguing that design practice needs to become unrecognizable to itself in order to imagine a successful solution to climate change.

While consensus has been reached on the need for fundamental changes to address these issues, what these specific changes should be and how they should be implemented remain a subject of intense debate across the academic spectrum (e.g. Feola, 2015). This study explores the potential role of design storytelling in steering and navigating a societal transformation. Specifically, the authors believe that design can play a fundamental role in societal transformation by narrating an alternative story. Design storytelling and proposing new worldviews involving social, symbolic, physical and material changes have the potential to lead to fundamental societal changes, which will create a new relationship between the sociotechnical landscape and the value propositions that social innovation initiatives pose to society. Hence, this study set out to answer two research questions: 1. How can design form the elemental factors of societal transformation? 2. How can design storytelling play a role in societal transformation?

Mineral water consumption and environmental and sociopolitical impacts
To tackle the research topics, this paper focuses on the issue of mineral water consumption. Water constitutes one of the most crucial natural resources on earth for all creatures, including humans and other species. The issue of mineral water consumption is rife with ethical considerations – who owns and can sell water and who gets to consume it – which may become even more critical in light of increased water shortages. With the major shift in interest from human-centred design to design that seeks harmony with more-than-humans (e.g. Forlano, 2017), including with nature itself, it would be extremely significant to consider the role of design with regard to water consumption, in particular by reconsidering the most primordial and fundamental act of life, water consumption. From the larger perspective of the discussion of transitional design and the ontological reorientation of design, this paper intends to be a catalyst for broader rethinking of our daily consumption activities and their environmental, social and political implications.

Methodology
A single case study serves as the foundation of our paper (Yin, 2009). This critical single case study was guided by the purposive single case selection approach (Edmonds & Kennedy, 2016) to collect the most relevant data regarding the roles of design in prompting elemental factors of societal transformation and the roles of design storytelling in transformative change. The case study was developed and defined through the following sub-steps: deciding the unit of analysis and selecting the case, collecting the data, analysing the data and synthesizing and interpreting the findings.

First, the unit of analysis was set. The methodology consisted of analyses of changes in the fundamental patterns, elements and interrelations of value systems for current dominant brands in a specific market, the transition to a new brand and the roles of design storytelling in leading to that change. Therefore, the unit of analysis (Yin, 2009) consisted of fundamental elements of societal transformation, which involves societal, symbolic, physical and material changes (Feola, 2015); thus, a focus on those key elements by a new brand entering a specific market leads to a societal transformation among dominant brands in that market. Based on this unit of analysis, a mineral water brand, LAHQUA, from Finland was selected as the critical single case; the brand intended to inspire a societal change in consumption through the power of design storytelling.

Second, the data gathering involved adopting multiple sources of information/evidence for data triangulation. Face-to-face semi-structured interviews and documentation provided by the design agency, Hangar Design Group, which supported the mineral water brand, represented the primary sources of information. The selection of interviewees aimed to gather information regarding the various perspectives on the project for societal transformation by design. The design director who led the design project and the PR manager knew that the mineral water brand was aiming to make a societal transformative change in water consumption. The data were combined with the researcher's observations from a site visit to the design agency, as well as external documents to ensure data triangulation.

Third, after the data were collected, the data were analysed and synthesized to construct a discussion of the findings. The steps were as follows: summarize the data collected, analyse the interviews and documentation, triangulate the data and interpret the findings. This process consisted of content analysis to identify elements of societal transformation and the roles of design storytelling from a theoretical perspective, as described in the following paragraphs.

To analyse and synthesize the findings from the case study, conceptual frameworks were set, namely, elements of societal transformation for pursuing sustainability (Feola, 2015) and the role of stories and narratives in social change processes (Wittmayer et al., 2019).

Through a literature review covering a wide range of arguments regarding societal transformation, Feola (2015) depicted transformation as a process of structural change, that is, a change in the fundamental patterns, elements and interrelations in a system. Feola emphasized that pursuing sustainability requires the involvement of social, symbolic, physical and material changes. Hence, the focus of this case study is a company pursuing a sustainable alternative worldview, so that the theoretical focus can be applied through the elemental factors of the social, symbolic, physical and material changes that the company proposes to the market.

Meanwhile, in the context of a story's role in societal transformation or NoC, Wittmayer et al. (2019) insisted on three roles of narratives: changing frames, identity-forming and meaning-making, and guiding practice. The new frames that social innovation initiatives put forth in their NoC have the power to encourage actors in the relevant sphere to reconsider their behavioural practices and influence personal and collective identity formation, which would lead to practical actions toward change. Hence, this study applied NoC as a theoretical lens to analyse the case and find out how design can lead to storytelling for the sake of societal transformation.

Results

The collected qualitative data show the potential power of design to guide a brand in formulating new elemental factors for sustainable social transitional purposes, by deconstructing the existing elemental factors and reconstructing them into an integrated whole. Our analysis also showed that design storytelling can potentially lead to a sort of societal transformation through offering an alternative framing, providing meaning and guiding the actions of targeted people.

Design decomposes elements and reconstructs an integrated whole for societal transformation

The first component resulting from the case analysis is relevant to the use of design. In conceiving new products and services, designers are required to "reframe" the problem (Dorst, 2011), change the meaning of the product and the reason for buying it (Verganti, 2011) and put new cultural messages and symbolic value into products and services (Ravasi & Rindova, 2008). As the brand aimed for a transformative behavioural shift in water consumption, the case analysis indicated that the brand and the design firm had a strong intention to "reframe" the problem. The design director said the following:

> *"We started reasoning, giving ourselves the mission to transform or create this brand, which is a brand that does not exist. It is a startup; treat it as a love brand, as something very close to people. So, it's a design/packaging project, but actually, we did a strategic project on how this brand can be perceived by people. Therefore, we defined a little bit the fact of being a game changer as a core element, a game changer from a philosophical point of view but also a visual point of view".*

Starting from the gap analysis between the market and the target users, the design firm and the brand concluded that they should aim to become a "game changer" in the market and not just design new packages, like the usual branding projects aiming for better commercial success do. The current natural mineral water market is dominated by global players who historically focused on polyethylene terephthalate (PET) bottles. On the other hand, there is an emerging ethical type of consumer who aspires to live a healthy lifestyle but is also conscious about the welfare of the planet. To bridge the gap between the current state of the market and the unsatisfied desires of "conscious citizens", the design teams reframed the project's objective from a design/packaging project to a game changer. The aim was clearly reframed to change people's mindset and behaviour toward natural water consumption, by providing them with a new option that matches their desire for a more sustainable way to live and consume, allowing them to be sensible and care not only for their own health but also for the planet. Hence, the design teams first concentrated on story construction works, that is, the decomposition and reconstruction of story elements from the philosophical and visual perspectives.

The design director said the following in the interview:

> *"The aurora, for example, is not there in any other country compared to the competitors. Therefore, we took that as a building block [...]. We enucleate the various elements".*

In this way, leveraging on "building blocks" that the brand can potentially speak and wear, the design team deconstructed the elemental factors and reconstructed them in several dimensions. Through the theoretical view above, the elemental factors were analysed, as shown in Table 1.

First, as for the social aspects of transformation, the social mission that the brand pursues is a sustainability challenge, specifically, reducing the environmental impact of plastic packaging. Most extant mineral water

brands rely on using plastic packaging. As a result, the daily consumption of natural water has a major social and environmental impact globally. The brand intentionally focused on this issue and tried to change the social elements of the packaging to have less environmental impact.

In keeping with the change of social mission that the brand focused on, the other three elements, namely the symbolic, physical and material aspects, were also organized to align with the social mission. For the symbolic aspect, the brand tried to compose a symbolic logo with several keywords, such as source, water, nature and recycle. These keywords, placed alongside iconic images, were dedicated to inspiring change in consumption behaviour and were expressed as symbols of a "purpose-driven brand". The symbolic logo was developed as a core storytelling element.

The physical aspect of the brand has focused on the origin of the water produced by the brand. In this aspect, the source was stressed as being "from the planet not from the laboratory". Indeed, the source of the water carefully selected by the brand is Lahti, the location of Finnish Lakeland and the country's leading environmental city. The water source has remained untouched since the ice age and is surrounded by green forests and fresh air, which are ranked among the purest in the world by UNICEF (Green Lahti, 2021). Leveraging on purity, the cultural background of water consumption in Finland involves people valuing healthy hydration and physical well-being. The core value of the product is the pure water source.

Finally, the packaging materials were strategically selected to symbolize the social mission of the brand, namely an innovative, sustainable, recyclable, biodegradable, forest-based and paper-based material derived from certified sources. The brand selected the best available technologies aiming for maximum product quality and sustainability. LAHQUA spring water is packaged at the source in a newly purpose-built sustainable factory equipped with modern state-of-the-art machinery. The factory packages the water with certified renewable raw material which is 94.9 % forest-based, fulfilling global food safety initiative benchmarking (i.e. Global Food Safety Initiative-benchmarked FSSC 22000).The production is carbon neutral and "naturally circular" with the cartons and forest-based plastic caps sourced from responsibly managed forests. Its high-quality packaging ensures natural water conservation using vacuum pressure technology and aseptic materials. The packaging is mostly made of biodegradable, forest-based renewable materials from certified sources. When it came to designing the packages, the design team took advantage of these facts in order to communicate these brand values and to make clear the priority mission to develop the manner of production and consumption in a naturally circular way.

As these different elemental factors were decomposed, the design teams reconstructed the story as an integrated whole. The director emphasized this as follows:

> "You see, this is a creative branding hypothesis. This is a symbolism that is also in the logo storytelling, so all the values here I find in the design of the logo. But you see, also in the way of writing, in the way of representing, for example, the graphics. Here there are already combinations of elements that start from the idea, start from the strategy and transform it into something visual and creative".

> "You see that even here the whole thing, the packaging, the bottle, the logo, the way of writing; everything contributes to give this storytelling narrative that we are talking about".

This integration was analysed as a proposal for a holistic website (Image 1). All the elemental factors, such as the societal, symbolic, physical and material components, were integrated into one holistic website.

This is a way to awaken potential customers' thoughts on ethical consumption using visual and verbal design languages as a consistent storytelling format.

> *"This, for example, is the website. This is a complete project. We start from a concept, we dissect it, we define the values, the mission, and then we transform it into a series of creative touchpoints that all come together—so it also means different people because there is the photographer, there is the creative, there is the video maker—contribute to give an identity and then to build storytelling [...] The strategic part, the definition of the 'strategic hat' is important because then everything becomes coordinated and coherent".*

Here, it is worth noting that the director underlined the importance of storytelling and the strategic part of the design project. This implies that the role of storytelling and the strategic view of coordinating the story as a coherent whole were essential parts of the design activities that aimed for a societal transformation.

Table 1: Analysis of the elements of change.

| Elements of change	Facts of the case	Implications
Social	- Sustainability challenge: reducing the environmental impact of plastic packaging - Long-term sustainable growth - To raise awareness and concern about our planet and the future related to the emotional and higher benefits of the brand	- Social awareness and concern transformative agent - Emotional attraction
Symbolic	- Key graphic logo with keywords and images: e.g., source, water, nature, recycle	- Graphical and verbal symbolic integration - Simplicity and ease of understanding by the average target consumer
Physical	- Origin: coming from a specific natural water source - From the planet, not from the laboratory	- Core product content differentiated from other brands - Sustainability and well-being
Material	- Innovative packaging: sustainable packaging made of biodegradable, forest-based renewable materials from certified sources -Paper-based packaging for general consumers and glass bottles for the hotels, restaurants and catering (HORECA) channel	- Alternative worldview as a physical material itself - Variable material solutions for different potential customers
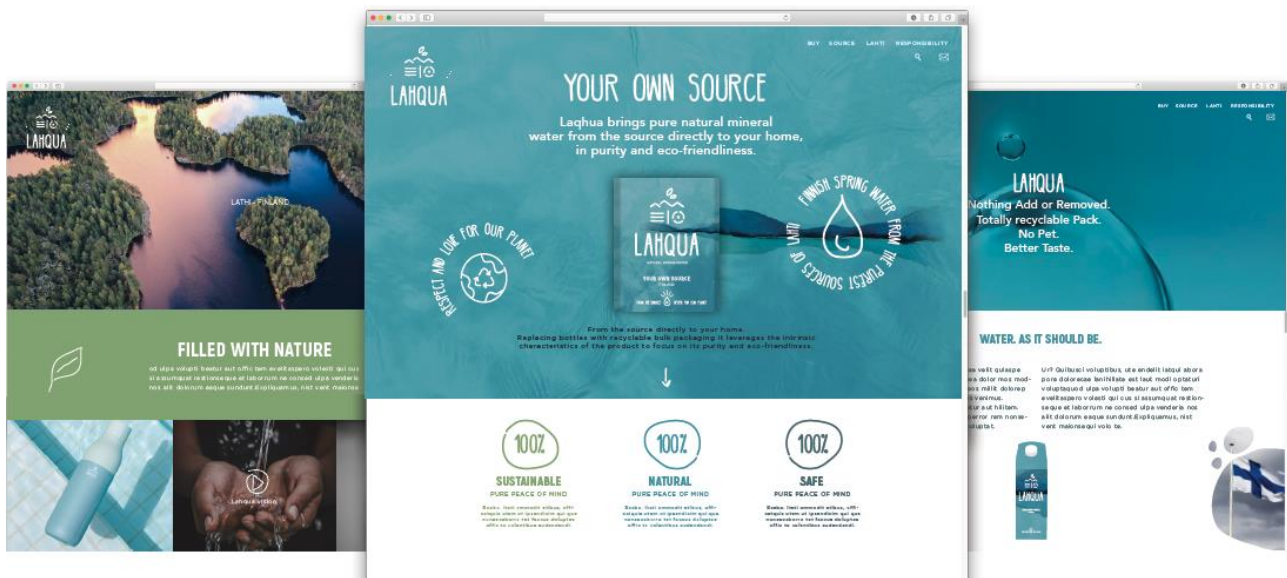
Image 1: Integration of the elements into a prototype storytelling website.

The role of design storytelling: An engine of alternative framing, meaning-making, and actions

The second construct derived from the case study relates to the role of design storytelling.
In the context of societal transformation, Wittmayer et al. (2019) insist that narratives can play
a fundamental role in the construction of individual and social identities and efforts dedicated to the
development and communication of collectively shared worldviews. They label them "Narratives of
Change" (NoC), stating that they can reframe the alternative frame, drive meaning-making and prompt
actions. To adapt this theoretical argument to the case, an analysis was conducted (as shown in Table 2).
The following describes the analysis based on each analytic unit from the theoretical viewpoint.

First, the case showed that the design team intentionally reframed conventional thinking by posing critical
narration and changing the frame through a provocative narrative. During the early phase of the design
project, the team formed a reframing narrative phrase that challenged current water consumption
behaviour. After conducting an existing market analysis of the worldwide natural water industry in terms
of packaging design strategy and practice, the team recognized some key trends and insights into the
competition. Following the "ethical consumerism" trend and new regulations, existing natural water
companies were making further "responsible commitments" and supporting charitable causes to raise their
profile, focusing mainly on "carbon neutrality", the recyclability of materials, the use of recycled materials,
energy efficiency and corporate social responsibility programmes. However, many of the dominant brands
still use plastic packaging, which adversely impacts the environment. The team also recognized that around
the globe consumers aspire to live a healthy lifestyle, desiring simple products with naturally healthy
attributes, minimal processing and natural ingredients. They want transparent and traceable ingredients
that can be read about on the packaging. The design team then issued a sharply critical narration: "Who
would drink from plastic when they can drink from the source?" (Image 2). The design director recalled
the following:

> "We, for example, say we are different from all the other water producers. The other water
> producers are all inside the plastic bottle icon. We say, 'No, we're not that, we're completely
> different,' and we put ourselves in a new concept where the content is more important than
> the container".

Image 2: Changing the frame and making meaning.

Parallel to the reframing and posing of a provocative narrative, the design team interwove different narrative components into coherent narratives, consequently creating new meanings. By aligning the factual matters related to the brand, the design team explored relevant and emphatic narrative components in everyday life in Finland, the purpose of the brand and the wider contexts of change. The factual matters emphasized were relevant to the essential values of the brand, such as "North EU Origin Finland Lathi heritage", "untouched source since the ice age", "pure quality with balanced mineral content", "innovative packaging" and "sustainable production processes". Those facts were gathered iteratively through a collaborative discourse between the design agency and the client as a team. It is notable that by posing hypothetical elements with provisional narratives alongside carefully selected images and words, the design team gradually wove the core narrative structures through discursive activities.

Thereafter, putting those factual matters at the centre of the structural narrative, other emphatic and emotional narrative components were sprinkled throughout the core narrative. For instance, "the everyday habit of people in Finland to drink pure water for healthy well-being" "the brand's purpose to dedicate [itself] to inspiring change with imagination and creativity" and "contextual stories of emergent needs of sustainable worldviews" were the key empathic narratives added to the fact-based structural narrative.

Consequently, those interwoven fragmented narrative elements were integrated into a simple narrative phrase: "LAHQUA is your source". The design director stated the following:

> "With that in mind, here's the 'big idea,' the theme of saying, 'I bring the water source, from Finland, I bring it to your home'. Therefore, this product is your spring in some way."

Finally, in the development phase of the design project, every touchpoint and design element were synthesized into an actionable practice to which potential customers could be easily and naturally guided (i.e. guided practice). Specifically, all the outcomes were designed to engage potential customers to act towards ethical consumption through the simple narrative phrase "Less Plastic Better for Earth". The initial touchpoint that the brand chose was remarkable. The brand decided to launch its exposition on one of the most effective occasions to draw international attention to its values of innovativeness and environmental friendliness, namely the Finland pavilion at the Dubai Expo 2020. The Expo had a powerful underlying message of environmental friendliness, and the brand intentionally chose a provocative occasion to position itself within the wider context of environmental awareness and succeeded in encouraging international leaders to embrace a sustainable world. Furthermore, the innovative packaging line was coherently designed with three types of packaging produced: a bag in bag format, an Elopak format and a glass bottle for the HORECA channel (Image 3). The brand thoroughly avoided the use of environmentally hazardous plastics, instead using paper and glass containers, while tailoring its packaging to the various usage scenarios of its users. In addition, other touchpoints and elements, such as the logo, font, merchandising and website, were designed carefully to contribute to the emphatic storytelling.
In conclusion, the design director and the PR manager emphasized the following:

> "We have to imagine who will drink this water. We imagine a free person, an international person, a person who can have these characteristics. Therefore, in storytelling, we already visualized what the target audience could be […] This project has been done, 'It's now displayed at the Dubai Expo'. It's a project very focused on the future, very focused on a new vision of water consumption".

The Packaging Line

Image 3: Directing actions through the newly designed packaging systems.

These design storytelling practices are intended to trigger change of mindsets and behaviours of target users, hence generating user experiences. Generally, it is not easy to change people's mindsets and behaviours. It requires stimulating the imagination, understanding and even creativity of the people involved. In this case, the team designed whole user experiences where people can change their mindset

and behaviour step by step as naturally as possible, through leveraging on the power of story, which evokes imagination and provides a guide for action and structural uncertainty (Milojević & Inayatullah, 2015). Coherently united social, symbolic, physical and material aspects formulate "a good story", which enables the target users to understand the story logic and perceive the verisimilitude of the narrative account, not the truth of it (Bruner, 1986). It is notable that once the users take the action to select this brand for everyday water consumption instead of other brands that use PET, their small single actions can contribute automatically to reducing PET bottle consumption, hence taking a tiny step toward an alternative better future in which a "naturally circular" ecosystem is realized.

In summary, this analysis implies that design storytelling aimed at a social transformation toward sustainability contributed to reframing the existing view into a new one, making new meaning and providing a reason for practical action. In other words, this role of design storytelling can be highlighted as creating a new worldview for the general public to take small ethical actions, which may potentially accumulate into societal transformation.

Table 2: Analysis of the role of narratives by design.

Dimension of the role of narrative	Key narrative phrase	Related design activities	Analysis
Changing frames	"Who would drink from plastic when they can drink from the source?"	Deconstructing current standardized water consumption behaviour through a critical view	Questioning the current form of consumption through a provocative narrative
Making meaning	"THE BRAND is your source".	Weaving factual matters (e.g. North EU Origin Finland Lathi heritage, Pure quality with balanced mineral content, innovative packaging) with emphatic stories from everyday life in Finland, the brand purpose and wider contexts	Generating new meanings through a coherent narrative using facts, people, the brand and contexts
Guiding practice	"Less Plastic Better for Earth".	Synthesizing every brand touchpoint and element into holistic user experiences for people to naturally take action	Prompting a new type of consumer behaviour through an actionable narrative message and user experiences

Discussion and conclusion

This paper explored certain fundamental roles of design and design storytelling that aimed to achieve societal transformation. First, design can form the elemental factors of societal transformation by decomposing extant elements and substituting them with new multi-dimensional ones. Starting from the gap analysis between existing realities needing to be overcome and alternative futures; design decomposes current realities into pieces of elements with the power of images and keywords. Thereafter, design can reconstruct those newly proposed elements in social, symbolic, physical and material dimensions into an integrated whole. Second, design storytelling can fuel alternative framing and meaning-making and lead actions as part of a societal transformation movement. In other words, design storytelling can perform

as an agent to convey "Narratives of Change (NoC)" through leveraging the power of story, which evokes imagination and provides a guide for action and structural uncertainty. The findings of this paper suggested that design can contribute to constituting fundamental changes and that the role of design and design storytelling is to steer and navigate societal transformation. Hence, these findings can partially fill the gap indicated by Feola (2015) regarding a certain lack of knowledge of what constitutes fundamental changes and how these changes can be prompted in multiple disciplines.

Furthermore, these findings can extend the knowledge of transition design (Irwin, 2015) from the perspective of design storytelling for societal transformation. As we have seen in our analysis, it is worth mentioning the implication of the importance of storytelling and the strategic aspect of design, which can guide societal transformation. In addition, our analysis indicated that design could play a remarkable role when aiming for societal transformation. Indeed, it should be underlined that design starts the transformative practice from the initial deconstruction and reframes the issue and extant elemental factors, integrating newly developed elements into a specific whole and then leading to an actionable practice in a comprehensive way. Also, the study notably implied that design can be a potential driver of "Narratives of Change" or NoC, as the empirical case study showed. More broadly, in relation to the argument of the ontological reorientation of design (Escobar, 2018), this study can add an empirical contribution, namely that design and design storytelling can possibly perform as a trigger for the overhaul of the relationality of people, nature and culture (even if the packaging redesign can surely only scratch the surface in terms of sustainable practice).

However, some limitations of this study are worth noting. First, methodologically, although the case was selected with specific analytic intention and empirical qualitative triangulated data were used, the results and considerations rely on a single case. More case studies or other empirical studies should be conducted to certify the findings of the research and generalize them. Second, the case itself was mainly derived from a branding design and packaging design project, even though the project team intended to create a game changer in the broader context of water consumption and hence become part of societal transition. The authors believe that this case should not be interpreted as a case of brand differentiation in commercial contexts, but rather as one that can lead to societal change. However, to figure out the potentialities of design and design storytelling, diverse types of design projects (e.g. product design, service design and product-service system design) should be investigated according to the theoretical perspectives of transition design and design storytelling. Third, the theoretical views borrowed from transition studies and future studies to analyse the case itself may not be mature, since the topic of research and debate in multiple disciplines needs to be developed further (Feola, 2015).

Future work should be expected in several research directions. First, further empirical studies on the role of design and design storytelling can investigate the validity and generalizability of the findings. Specifically, other case studies or empirical action research could provide supportive findings for the role of design and design storytelling in societal transformation. Second, the collaborative aspects of societal transition involving different actors could be a meaningful research path. Since societal transformation is a huge matter, potential actors could be considered broadly to include innovative private companies, governments, citizens and so forth. Therefore, a specific question that could be posed among different actors is "How can design storytelling have an impact on societal transformation involving different societal actors?" Taking into consideration the urgent demands for societal transformation in the Anthropocene era, further research and practice by interdisciplinary researchers and practitioners are awaited.

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Ma. Karysa F. Garcia, Karl P. Campos

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Consumers' purchase intention towards eco-friendly packaging in Kidapawan City, the Philippines

Ma. Karysa F. Garcia, MBA[a], Karl P. Campos, PhD[b]

[a]University of Southern Mindanao-Kidapawan City Campus, Cotabato, Philippines. mkfgarcia@usm.edu.ph
[b]University of Southeastern Philippines, Davao City, Philippines. karl.campos@usep.edu.ph

Abstract

The severity of the plastic problem in the Philippines has prompted the public and private sectors to take measures to address it. As the country shifts to sustainable ways, information about green consumer behaviour is essential to effectively implement policies and programmes. This study aimed to determine consumers' level of purchase intention towards eco-friendly packaging, whether a significant difference in consumers' purchase intention exists when they are grouped according to socio-demographic characteristics and identify the factors that significantly affect consumers' purchase intention. A total of 393 consumers from Kidapawan City were selected as respondents using purposive random sampling. The results revealed that respondents have a high level of purchase intention for eco-friendly packaging. There were also significant differences in the level of purchase intention when the respondents were grouped according to age and sex. Notably, females had a higher level of purchase intention. The findings from the hierarchical moderated regression analysis show that attitude, subjective norms, perceived behavioural control, environmental concern, awareness, willingness to pay and quality significantly and positively influence purchase intention towards eco-friendly packaging. In particular, it willingness to pay, quality and awareness strongly affect purchase intention. Meanwhile, the moderating variables do not affect the dependent and independent variables. The results of the study infer that purchase intention is greater among consumers when they have favourable attitudes and supportive social circles, perceive that it is easy to buy eco-friendly packaging, are more willing to support or participate in environmental initiatives, more knowledgeable, more willing to pay and have a positive perception of the quality of eco-friendly packaging.

Keywords: Eco-friendly packaging, Factors, Hierarchical moderated regression, Marketing, Purchase intention

Introduction

As countries experience economic progress, the natural environment deteriorates as a trade-off. Countries address this by adopting sustainable development, which includes the promotion of green behaviour, i.e. pro-environment behaviour that minimizes harm to the environment (European Commission, 2012). This involves research that aims to develop sustainable production techniques, innovate technologies, craft business strategies and understand consumer behaviour in relation to environmental concerns.

Filipino consumers' green behaviour needs to be researched because businesses lack the information they need to decide whether to adopt sustainable ways, such as using eco-friendly packaging. As the country has recognized the plastic problem, groups and individuals from the public and private sectors are combatting this problem by practising and promoting sustainable practices, such as using eco-friendly packaging. However, the adoption of eco-friendly packaging remains slow because some businesses view this as a costly alternative (Alpad, 2021) and they lack information on consumers' behaviour towards it (Prakash et al., 2019).

Previous research on green behaviour, especially green consumption, has mostly been conducted in other countries. Existing research has addressed several aspects of green consumption, including the purchase of green products, consumer theory to be used and determinants of green purchase (Zhang & Dong, 2020). Focusing on eco-friendly packaging, most research has been conducted in China, the United States, India, Brazil, Italy, the United Kingdom, Spain, Malaysia, Canada and Germany (Wandosell et al., 2021).

In the Philippines, research on green consumption is relatively new. The topics that have been studied are consumers' profile, purchase intention and preferences. For example, Gregorio (2015) and Resurreccion (2015) pioneered green consumer research by creating a profile of Filipinos as green consumers. In addition, San Juan-Nable (2016) and Palmero and Montemayor (2020) investigated consumers' purchase behaviours for green products. Consumer studies about green behaviour, particularly eco-friendly packaging, in the Philippines remain scarce. The closest literature is the study by Gano-an (2018) about consumer preferences and perceptions of the use of eco-bags. To date, many opportunities for research about green behaviour in the country remain.

Some of these unexplored concepts about green behaviour appear to be important and worthy of investigation in the context of the Philippines. An investigation of these issues is essential because consumer preferences are shifting, and people are paying close attention to sustainable development. Moreover, promoting green consumerism must strike a balance among the perspectives of not only businesses, government and environmentalists but also consumers (Gano-an, 2018). Furthermore, previous empirical research has focused primarily on establishing Filipino consumers' green profile and green products, and little consumer research has been conducted on eco-friendly packaging.

This paper seeks to address the following objectives: (1) to determine the level of purchase intention of consumers towards eco-friendly packaging; (2) to determine significant differences in the level of purchase intention when grouped according to socio-demographic profiles; and (3) to identify the factors affecting purchase intention. This research contributes to the scant literature on green consumerism in the Philippine context. More importantly, it presents consumers' perspectives on the adoption of eco-friendly packaging that could prove useful in business decisions and policymaking.

Literature review

Green behaviour, also known as pro-environment or sustainable behaviour, involves actions that impact water conservation, air quality, energy efficiency and use, transportation, agriculture and waste reduction (McKenzie-Mohr et al., 2011). Businesses have viewed green behaviour, especially by consumers, as a commercial opportunity, and it has developed further as a research field (Peattie, 2010). As such, research related to green marketing is important, as it can foster cleaner production by businesses and sustainable consumption through successful marketing to consumers (Dangelico & Vocalelli, 2017). In particular, green consumption has been widely studied to gain a better understanding of consumers' changing behaviour in relation to their environmental concerns. According to Peattie (2010), green consumption research encompasses studies related to consumers' intentions and behaviours and studies founded in industrial ecology or environmental economics.

The existing literature shows that research related to green consumer behaviour in the Philippines is scarce and relatively new. Pioneering research includes Gregorio (2015), who aimed to understand the impact of green marketing and provide the profile of green consumers. The study revealed that the lack of green consumerism behaviour was attributed to the convenience and availability of non-eco-friendly products

compared to eco-friendly products. Another study provided a profile of Filipino green consumers. Using cluster analysis, Resurreccion (2015) found two groups of sustainable consumers: the "mature and product cautious" and the "young and socially pressured".

Few purchase intention studies on eco-friendly products have been conducted in the country. San Juan-Nable (2016) determined the factors affecting the intentions and behaviours of young consumers towards buying green products. The author found that parental influence and media exposure are significant predictors. Meanwhile, Palmero and Montemayor (2020) identified the factors that influence purchase intention toward organic local food. Their findings revealed that environmental concern and health and social responsibility are important drivers of young consumers' purchase intention toward organic products. Overall, green consumer research in the country has covered profiling and marketing research on eco-friendly products. Consumer research focusing on eco-friendly packaging is lacking.

Methods

This research utilized a descriptive-correlational quantitative design using a survey method for data gathering. Given the limitations that the COVID-19 pandemic brought during the study period, a nonprobability sampling technique, i.e. purposive random sampling, was used to determine the respondents. The selection criteria for the respondents included being a resident of Kidapawan City, earning his/her income and having a fair level of understanding of green consumerism.

The instrument used in the study was a self-administered survey questionnaire adapted and modified from Auliandri et al. (2019), Hoai (2017), Paul et al. (2016), Prakash et al., (2019), Rajendran et al. (2019) and Witek and Kuźniar (2021). The questionnaire was designed to obtain information about the respondent's socio-demographic profile, namely age, educational attainment, income and sex. In addition, statements about purchase intention towards eco-friendly packaging and the factors affecting it were included in the instrument. The factors considered in the study were attitude, subjective norm, perceived behavioural control, environmental concern, awareness, willingness to pay and quality. The questionnaire consisted of 40 items, which were measured using a 6-point Likert scale. This underwent reliability and validity tests to ensure the quality and unobtrusiveness of the statements.

The researcher utilized offline and online surveys to maximize the benefits of both. Ethical considerations were also considered during the data collection. The respondents were informed about the study and their consent to participate was obtained. For the offline survey, respondents were reached in urban residential areas, businesses and offices within the city. Surveys in businesses and offices were only conducted after the letters of request were approved.

A total of 393 responses were determined usable for the statistical analysis. The weighted mean was used to determine the consumer's level of purchase intention. An independent samples *t*-test and one-way ANOVA were used to determine significant differences in the level of purchase intention when the respondents were grouped according to their socio-demographic characteristics. Hierarchical regression analysis was employed to identify the significant factors that affect consumers' purchase intention towards eco-friendly packaging.

Results and discussion

The consumers' level of purchase intention towards eco-friendly packaging is shown in Table 1. The findings show that consumers have a high intention to purchase products with eco-friendly packaging when offered in the market (5.30). This finding is in line with the study by Palmero and Montemayor (2020), which found that young Filipino consumers have the intention to buy eco-friendly products. Consequently, their purchase intention significantly influenced their decision to purchase. The possible reasons for this are Filipino consumers becoming more informed of the ecological impact of plastic packaging (Cahiles-Magkilat, 2020) and the consequent initiatives launched by both the public and private sectors.

The respondents strongly agreed that they would consider buying eco-friendly packaging because it is less polluting (5.42), and they wanted to purchase products with eco-friendly packaging in the near future (5.37). A recent survey revealed that 75% of Filipinos were actively looking for brands that offset their impacts on the environment (Cahiles-Magkilat, 2021). This shows the changing preferences of Filipino consumers, which are geared towards sustainability. Furthermore, the results demonstrated the respondents' plans to spend more on eco-friendly packaged products (5.18). Gregorio's (2015) study found that consumers are willing to pay an average 12.5% premium for eco-friendly products. No literature in the Philippine context has specified the particular demographics of these consumers. However, several considerations are weighed by Filipino consumers when purchasing eco-friendly products, which are usually perceived as more expensive than their conventional counterparts. These important considerations are value for money (Palmero & Montemayor, 2020), information and social acceptance (Resurreccion, 2015).

Table 1: Consumers' level of purchase intention towards eco-friendly packaging.

Statements	Weighted Mean	Interpretation
1. I will pay attention to the eco-friendly aspects of the packaging of the products I buy.	5.22	Strongly agree
2. I will consider buying eco-friendly packaging because it is less polluting.	5.42	Strongly agree
3. I will consider switching to eco-friendly brands for ecological reasons.	5.33	Strongly agree
4. I plan to spend more on products packaged in eco-friendly materials rather than those that are not.	5.18	Strongly agree
5. I want to purchase eco-friendly packaged products in the near future.	5.37	Strongly agree
Total	5.30	Strongly agree

Tests of difference were conducted to determine differences in the level of consumer purchase intention when grouped according to age, educational attainment, income and sex. Table 2 shows the results of the one-way ANOVA. There was a significant difference in the level of purchase intention of consumers when grouped according to age (p-value = 0.025). This finding conforms to the research conducted by Witek and Kuźniar (2021), which found statistically different levels of green purchase intention among young and old consumers.

On the other hand, the level of purchase intention for eco-friendly packaging was not statistically different across educational attainment (p-value = 0.511) or income (p-value = 0.188) groups. This finding is like the results of the studies conducted by Naz et al. (2020) and Rahim et al. (2017). They posited that eco-friendly

products are accepted by consumers regardless of their income due to the popularity and increase in marketing campaigns. The findings could also be attributed to the growing consciousness of Filipino consumers about the detrimental effects of plastics and the availability of eco-friendly alternatives.

Table 2: Differences in the level of purchase intention when grouped according to age, educational attainment and income.

Profile	Mean Square		Test Statistic	p-value
	Between Groups	Within Groups		
Age	1.350	0.518	2.604	0.025*
Educational Attainment	0.437	0.531	0.823	0.511
Income	0.778	0.517	1.504	0.188

Table 3 presents the results of the independent samples t-test. The results showed a significant difference in the level of purchase intention for eco-friendly packaging in terms of sex (p-value = 0.009). Comparing the mean scores of the males (5.1656) and the females (5.3720) revealed that the latter had a higher level of purchase intention for eco-friendly packaging. These findings are supported by the studies by Witek and Kuźniar (2021) and Rahim et al. (2017), who found a significant difference in the green purchase intentions of females and males. They attributed this finding to female consumers possessing higher environmental concerns than male consumers.

Table 3: Significant difference in the level of purchase intention when grouped according to sex.

Profile	Mean Difference	Standard Error Difference	p-value
Sex	-0.2064	0.0786	0.009**

The influence of the independent variables, namely attitude, subjective norm, perceived behavioural control, environmental concern, awareness, willingness to pay and quality, on the purchase intention towards eco-friendly packaging were analysed using hierarchical regression. These variables were entered into the models after all assumptions of the regression model were met. In the first model, the independent variables established in the Theory of Planned Behaviour, namely attitude, perceived behavioural control and subjective norm, were entered. The additional variables, specifically environmental concern, awareness, willingness to pay and quality, were added in the second model.

At stage one, attitude, subjective norm and perceived behavioural control contributed significantly to the regression model (ΔF = 253.019, p < 0.001). Moreover, the coefficient of determination (R^2) showed that the independent variables explaiedn 66.3% of the variability in the purchase intention towards eco-friendly packaging. This indicates that model one (1) is a good fit. Adding environmental concern, awareness, willingness to pay and quality to the model explained an additional 9% of the variation in purchase intention, and this change was significant at the 1% level (ΔF = 34.873, p < 0.001). Furthermore, all the independent variables accounted for 75.4% of the variance in purchase intention. These suggest that adding the other independent variables yielded a model that better predicts purchase intention. Table 4 provides the b-values (b), beta coefficients (β), t-test scores and p-values for each variable accounted for in both models.

Table 4: Summary statistics of the variables.

Variable	b	β	t	p-value
Model 1				
(Constant)	.839		5.012	.000
Attitude	.383	.379	8.586	.000**
Subjective norm	.186	.217	4.716	.000**
Perceived behavioural control	.290	.315	6.967	.000**
Model 2				
(Constant)	.190		1.178	.240
Attitude	.110	.108	2.198	.029*
Subjective norm	.085	.099	2.417	.016*
Perceived behavioural control	.121	.131	3.070	.002**
Environmental concern	.129	.120	2.229	.026*
Awareness	.183	.168	3.433	.001**
Willingness to Pay	.174	.213	5.779	.000**
Quality	.176	.187	4.759	.000**

The findings show that all the independent variables considered in this study significantly and positively influenced purchase intention towards eco-friendly packaging. In particular, attitude (t = 2.198, p = 0.029), subjective norm (t = 2.417, p = 0.016) and environmental concern (t = 2.229, p = 0.026) are statistically significant at the 5% level, while perceived behavioural control (t = 3.070, p = 0.002), awareness (t = 3.433, p = 0.001), willingness to pay (t = 5.779, p = 0.000), and quality (t = 4.759, p = 0.000) were significant at the 1% level. The results also show that willingness to pay (β =.213), quality (β =.187), and awareness (β =.168) were the strongest predictors of purchase intention.

The findings on attitude, subjective norm and perceived behavioural control provide additional empirical evidence that supports the Theory of Planned Behaviour as a theoretical framework for research about purchase intention. Consistent with the studies in the literature, attitude was found to significantly affect purchase intention towards eco-friendly packaging. When consumers' beliefs and feelings towards buying eco-friendly packaging are favourable, they have a greater intention to buy it (Martinho et al. 2015; Moorthy et al., 2021; Prakash & Pathak, 2017; Trivedi et al., 2018). The results indicate that Filipino consumers' favourable attitudes towards buying eco-friendly packaging led to greater intention to purchase them. An explanation for this relationship is the exposure to information about environmental problems. This develops the consumer's favourable attitude to participate in efforts to solve these problems, such as buying eco-friendly packaging.

Subjective norm was also found to positively influence purchase intention. This indicates that the consumers' perceived social pressures from family, friends and/or important people influence them to purchase eco-friendly packaging (Auliandri et al., 2019; Martinho et al., 2015). The finding suggests that Filipino consumers are conscious of how people close to them and/or society in general view their actions, especially those that affect the environment. Culture may also play a part in this relationship. Conforming to the norm and the actions of the majority is deemed important in Philippine society. Consumers' perceptions of how easy or difficult it is to buy eco-friendly packaging, which could be determined by their ability to purchase and the availability of resources, was also found to affect purchase intention (Auliandri et al., 2019; Moorthy et al., 2021). When consumers perceive that it is easy for them to buy eco-friendly

packaging, the more likely it is that they intend to buy it. Consumer preference for convenient shopping can explain this relationship. Access and availability of eco-friendly packaging are essential to realize purchase intention.

Consumers' concern for the environment also influences their intention to purchase eco-friendly packaging (Martinho et al., 2015; Prakash & Pathak, 2017). This shows that consumers have a greater intention to purchase eco-friendly packaging when they are more willing to support efforts to solve environmental problems. Like attitude, exposure to information about environmental degradation caused by consuming single-use plastics among others may explain this relationship. This is manifested by consumers' growing demand for sustainable products and practices nowadays. Among all variables in the model, the strongest predictor is willingness to pay. The more willing consumers are to pay for eco-friendly packaging, the greater their intention to buy it. This finding coincides with the findings of the studies conducted by Auliandri et al. (2019) and Prakash and Pathak (2017). In the Philippine context, several authors have noted that Filipino consumers are willing to pay more for eco-friendly products in general (Gregorio, 2015; Palmero & Montemayor, 2020; Resurreccion, 2015). This relationship may be attributed to consumers' desire to protect the environment and/or to contribute to solutions, since eco-friendly packaging is more beneficial to the environment. This benefit could be seen as an added utility to the money spent on eco-friendly packaging. Palmero and Montemayor (2020) also noted that Filipino consumers greatly consider value for money when purchasing.

Another strong predictor of purchase intention towards eco-friendly packaging is quality. The quality of eco-friendly packaging is deemed an important determinant of intention to purchase it. Like the results found by Rajendran et al. (2019), in this study consumers had a greater intention to purchase eco-friendly packaging when they perceived it to have better quality. The notion that eco-friendly packaging is less polluting to the environment and is as good as conventional packaging could explain this relationship. The quality of eco-friendly packaging remains an important consideration to consumers, especially if they are paying more for it. Lastly, the study found that awareness is a significant predictor of purchase intention, i.e. consumers have a greater purchase intention for eco-friendly packaging when they are more aware and knowledgeable about it. This finding is consistent with the results of Rajendran et al. (2019) but contrasts with the results of Aleenajitpong (2013). One reason for this relationship is that Filipino consumers are becoming more informed about environmental problems, particularly plastic pollution, and more aware of the available eco-friendly alternatives. As such, this is manifested in their increasing demand for sustainable products and practices at present.

Conclusions and recommendations

The findings of this study revealed that consumers have a relatively high level of purchase intention for eco-friendly packaging. In addition, the test of significant difference revealed that a significant difference in the purchase intention of respondents only when they are grouped according to age and sex. In particular, female consumers have a higher level of purchase intention for eco-friendly packaging. Also, the results of the regression analysis imply that purchase intention is greater among consumers when they have the following: a favourable attitude, supportive social circles, positive perception of the ease of buying eco-friendly packaging, willingness to support or participate in environmental initiatives, knowledge about eco-friendly packaging, willingness to pay for eco-friendly packaging and a positive perception of the quality of eco-friendly packaging. Among these, willingness to pay, quality and awareness of eco-friendly packaging influence consumers' purchase intention the most.

Understanding the consumer perspective is essential for business decisions and policymaking. As this study has determined the purchase intention towards eco-friendly packaging, businesses and policymakers are provided with information regarding the receptiveness of consumers to its adoption in the country. In particular, businesses, manufacturers of packaging materials and inventors/innovators of eco-friendly packaging could use this information when deciding to expand the use, production and development of eco-friendly packaging. Together with government units, they could find the results about the significant factors useful in making business strategies, policies and programmes.

The current work only explored the direct relationship between the dependent and independent variables. Future researchers may consider exploring the interrelationships of the independent variables examined in this study. Moreover, they may use other statistical tools that include the analysis of the interrelationships of the independent variables. To give substantial support to the quantitative findings, it is suggested to include a qualitative analysis in future research. Hence, a mixed research design employing either in-depth interviews or focus group discussions is recommended.

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The benevolent future of fashion: A framework for business partnerships with a social purpose

Georgina Twamley, Francesco Mazzarella

The benevolent future of fashion: A framework for business partnerships with a social purpose

Georgina Twamley[a], Francesco Mazzarella[b]

[a] London College of Fashion, London, W1G 0BJ, United Kingdom, g.twamley@fashion.arts.ac.uk
[b] London College of Fashion, London, W1G 0BJ, United Kingdom, f.mazzarella@fashion.arts.ac.uk

Abstract

Consumers are increasingly buying from brands they believe in, and, therefore, fashion businesses increasingly need to align their operations with their customers' values. With this in mind, this paper reports on a research project aimed at demonstrating ways in which the fashion system can begin to benefit society, consumers and businesses more. Recommendations are distilled from desk research and primary data collected through a consumer survey and interviews with fashion industry experts. The findings from the research reveal how collaborations can be used as a multidimensional tool and expose the tangible advantages of communicating ethics and engaging audiences by aligning with consumers' desires. The research findings were used to inform the development of a framework which paves the way for a more socially conscious fashion industry by providing businesses with a checklist to follow to create partnerships and projects with a social purpose. To conclude, this paper advocates for how the fashion industry should begin to create more positive social impact and lays the foundations for further research on the benevolent future of fashion.

Keywords: Fashion, Strategic Partnerships, Activism, Social impact, Charity

Introduction

The fashion industry causes a negative impact on society and the planet in many ways, including abuse of labour rights, compromise of workers' health in a fast fashion production system, non-inclusive fashion media, anxiety related to over-consumption and a sort of 'waste colonialism' (i.e. communities in the global South face the impacts of fast fashion trends in the global North). Within this context, there is a lack of insight into how the fashion industry can create positive social change. Contemporary research on how businesses can be benevolent to society often refers to the concept of the 'triple bottom line' or the 'three Ps' (i.e. people, profit and the planet) (Stoddard, 2017). Within the scope of this paper, this means that businesses can help wider society through new approaches like collaborations designed to have a social impact. Building networks and business partnerships can be one way to address complex societal issues, develop a social purpose and therefore contribute to social justice.

This paper addresses the rise in popularity of collaborations in the fashion sector and discusses how they can be harnessed to improve businesses' actions and therefore reputations. The research presented in this paper intends to address a knowledge gap about how brands can take small steps towards being more socially inclusive and impactful. Particularly in a post-COVID world, many businesses may not be ready to make substantial changes, but smaller one-off projects and collaborations can act as a gateway towards new ways of doing business with a social purpose. Collaborations in fashion have always existed, and in recent years their popularity has exploded, as they are used for marketing campaigns, new concept development and acquiring new markets, as well as developing more systemic responses to complex issues. Aziz and Jones (2018) track the increasingly benevolent trajectory of contemporary business and marketing strategy in their book series *Good is the New Cool*. Their work has been influential in shaping a potential benevolent future of marketing, one in which "a great CEO should have the brain of a CFO, the heart of a storyteller, and the soul of an activist" (Aziz & Jones, 2018).

The theories reviewed in this paper were applied to a mental wellness platform called 'HelpingYourself', set up by the first author of this paper. Strategic partnerships are at the heart of 'HelpingYourself', which aims to work with others to grow faster and benefit from collaborators in terms of credibility, authority and audience. This approach has been beneficial. Similarly, other industries have been analysed for this project to find out if their approaches could inform benevolent fashion collaborations. However, there is limited literature that analyses the topics of business, society and consumer wellness together. With this in mind, the overall aim of the research project presented in this paper was to develop a framework for fashion-related collaborations enabling consumer wellness and social enterprise creation. The framework was then applied to 'HelpingYourself' to validate its effectiveness.

Literature review
The following sections discuss the key findings from the literature review concerning consumer wellness, business collaborations and social entrepreneurship – to identify a knowledge gap and inform the development of a framework.

Consumer wellness, values-led fashion and emotional bonds
Consumer wellness has become increasingly prominent as a marketing concept and business approach. Discussing the make-up brand L'Oréal, Martin and Shackleford (2021) state that the company is now focusing its marketing less on the product and more on the feelings that consumers wish to feel, saying the brand is now selling a "sense of belonging, self-realization and self-confidence" (para. 1). This builds on Cartner-Morley's (2019) argument that wellness does what fashion used to do by selling consumers an ideal vision of themselves. Vogue Business (2021) uses the new term 'comfort consumerism' to reflect consumers' new prioritisation of wellbeing alongside luxury. Hilton (2007) suggests that consumerism was typically a cause of societal ills; however, now consumer culture moves towards catering to society's needs.

Given the urgency to address sustainability challenges, brands face increasing pressures to show that they are not supporting relentless consumerism. Gaffney (2020) points out that Generation Z (Gen Z) customers are facing unprecedented stress and that they expect brands to authentically engage with their needs and aspirations. Businesses which show they care about societal challenges create for themselves the opportunity to bond with their customers as a consequence of a shared value system. According to Chitrakorn (2021), consumers expect that brands have a purpose in society and are consistent in their messaging or they suffer the consequences of not following through on the values they espouse. On the other hand, companies may be reluctant to take a strong stance on societal issues due to fear of losing customers in case their positioning or messaging does not please everyone. However, brands that speak up about issues in a heartfelt honest way can develop an emotional bond with customers, resulting in increased brand loyalty. When customers develop an emotional connection with a brand's purpose, they become brand advocates (Moore, 2015). Younger shoppers want to buy from brands that align with their values, including 33% of baby boomers and 60% of millennials surveyed as part of a study by Deloitte (2020).

Brands that act on their values are not going 'above and beyond', but are merely meeting customers' expectations (Thomas, 2021). According to Aziz and Jones (2021), a customer is 83.7% more likely to support a brand that they believe in. This change in consumer behaviour affects how fashion is perceived and purchased (Hilton, 2007); this consumer agency contributes to shaping a more sustainable world in which we want to live. Conscious fashion consumers now see shopping as a moral choice. Accordingly, there is now a marketing need to think about people as citizens as well as consumers (Hilton, 2007.).

Collaborations, compatible values and catering vs. pandering to consumers

Collaborations across the fashion industry have become hugely popular, featuring multifaceted objectives. Mondalek (2021) states that the best collaborations are financially beneficial, bridge audience gaps and 'reinforce existing consumer bases'. They are proving a valuable contemporary instrument in resolving business challenges and allow organisations to co-create solutions. Collaborations are so advantageous to brands that their future seems assured as a strategy within the fashion industry. Table 1 summarises and categorises the applications and objectives of collaborative projects.

Table 1: Objectives of collaborations.

Customer approaches	Marketing approaches	Bridging gaps
Cross-pollination of audiences.	Seeking media attention through novel content.	Harnessing design skills or technical expertise from another company.
Reinforcing the brands' beliefs by partnering with an ethical organisation.	Receiving social media engagement.	Gaining credibility or authority in a new area.
Benefiting from another brand's influence and authority. For example, a brand considered new/cool/fresh or representing Gen Z ideals.	Using marketing & PR to create and contribute to a new brand narrative; can introduce a brand to new audiences and hopefully increase sales.	Strategising for gaining market share and customer acquisition.
Creating good 'karma'/benefiting brands' reputations.	Positioning a brand differently in the marketplace.	Reliable introduction of benevolent marketing that can avoid appearing self-serving.

Companies often adopt multidisciplinary approaches to address complex challenges; these can include partnerships with other organisations having different skill sets or audiences (Aftab & Bailey, 2013). Moreover, companies often start with low-risk experimentation and small steps before developing large innovations. Collaborations can be a way of experimenting by adding value for existing customers, while also opening up new markets.

Previously, companies' marketing efforts aimed to interrupt customers. In contract, now the aim is for brands to become part of contemporary culture. Increasingly marketing activations show a trend of including messaging with a community feel and social impact. For campaigns to have legitimacy, brands that collaborate need to ensure they have shared values. Deeley and Sergison (2021) suggest direct questions that a business can ask itself to ensure alignment with its collaborators: for instance, 'Is the collaboration going to damage or support the brand messaging?' and 'Is the collaboration going to support change?'. Collaborations involving people in the public sphere have been described as utilising 'reliable idols'. However, without shared values or clear communication of the reason behind them, campaigns featuring reliable idols can appear vague or even inauthentic. For instance, H&M's 'Role Models' marketing campaign (Figure 1) highlights young people who are making progress on causes including social equality, sustainability, etc. Yet the poster does not show a connection to the brand or charitable efforts the company is making; it lacks social impact.
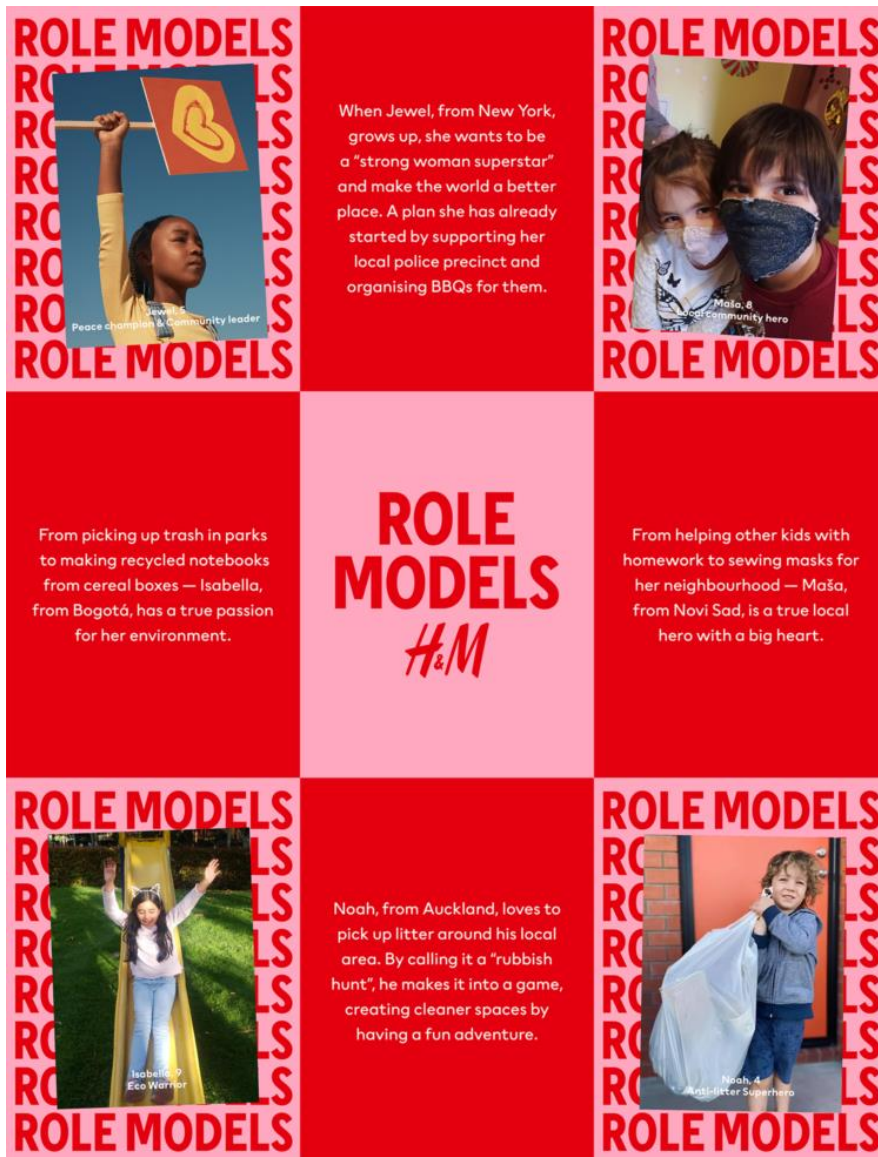
Figure 1: Poster of role models campaign (Source: H&M).

Gaffney (2021) advises that companies need to strike a balance between pandering to and catering to consumers by showing sensitivity and respect in order to build successful collaborations. Benevolent campaigns in the right tone can 'cater' to consumers as well as benefit companies by increasing customer engagement and sales. Within this context, Paulins and Hillery (2020) refer to the need for 'socially responsible' communication and advertising. Approaches like donations and long-term plans help communicate that the brand intends to make a positive contribution to society and that the project has integrity. Consumers' expectations mean that companies must be careful in managing their collaborations and be considered in their approach to crafting a message that is going to be well received, otherwise they risk seeming 'self-serving'. When communication is not received as intended, it can seem that companies lack sensitivity and are merely 'pandering' to a consumer trend. Therefore, careful consideration of the correct approach to support a 'good cause' is crucial. The wrong tone can risk a company missing the mark, facing criticism or, in extreme cases, exposing the brand to 'cancel culture'-type conversations.

Cancel culture began with observations of commercial communication missteps highlighted in the media. Companies face the risk that the public sometimes ridicules brands that miscommunicate about important topics (Meyer, 2021). The atmosphere of blame has been described by some critics as inflexible and stifling. Others renounce the humiliating effect cancel culture can have, questioning its fairness. Mishan (2020) points to the consumerist nature of cancel culture, which means that businesses must pay attention to this new critique of their products, services and people. An atmosphere of social responsibility for communicating in a politically correct way has become part of the business. Romano (2021) describes how confusion about cancel culture has not prevented it from becoming 'culturally and politically entrenched'. Insensitive messaging is now usually noticed by society, and companies have to face the consequences of getting their communications wrong.

Careful messaging is important for consumers but also for a business's reputation; it affects wh cichompanies will collaborate with them and even its future workforce. Research shows that Gen Z employees want to work at companies that have a social purpose. Figure 2 depicts Apple's job advertisements based on working somewhere that aligns with employees' values, which is good for both recruitment and PR.
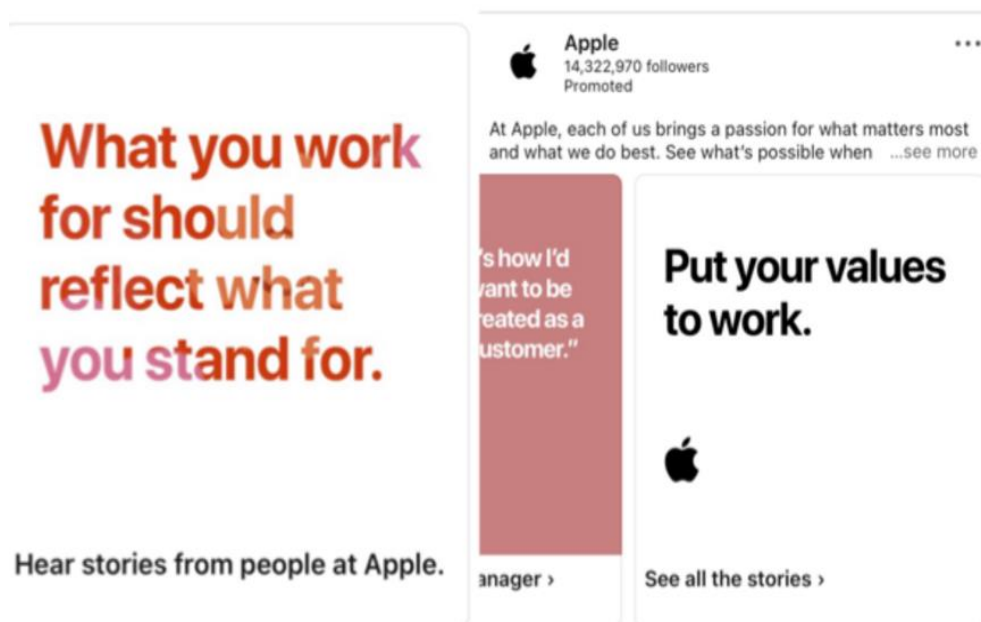
Figure 2. Apple's advertisements to future employees (Source: LinkedIn).

From fashion as the 'business of inequality' to socially conscious companies
Benevolent collaborations help charities fundraise, build social credibility for brands and help brands offer aspirational allure while sharing inclusive messaging. D'Agostino (2021) discusses the fine line between fashion's aspirational, exclusive nature and the new trend of social inclusivity, highlighting the contemporary challenge of balancing community feel with aspirational allure.

Within this context, we are witnessing the rise of socially conscious companies that intend to activate positive social change and develop charitable projects as profitable business opportunities embedded in corporate culture (Stoddard, 2017). Pallotta (2013) discusses innovative ways in which social causes are tackled through business partnerships and charity projects instead of through donations. These contemporary approaches provide shared responsibility and generate larger financial contributions towards charitable causes, creating a social impact. Aziz

(2018) echoes this, endorsing partnerships with non-profits as the new combination of commerce, conscience and culture. Research shows that positive social impact also positively affects the bottom line. According to Kantar (2020), brands with high perceived positive impact are outperforming value growth by more than double of those with low impact. Another stark statistic is that 95% of millennials would switch brands if a company supports a good cause in an authentic and meaningful way (Kantar, 2020). For businesses trying to increase market share, these data offer enough evidence for adopting new socially active approaches both for socially impactful campaigns and for developing a long-term social purpose.

Overall, the literature review shows that the market and cultural trend for doing 'good' is undeniable. However, there is scope for further research to better understand what incremental steps businesses can take to build collaborations that bring about positive social change. Figure 3 illustrates the key learnings from the literature review, which informed the primary research discussed in the following sections of this paper.

Figure 3: Key learnings emerging from the literature review.

Methodology

The project presented in this paper was conducted by adopting grounded theory as the research strategy to create a framework that could be tested and used in the future. This implied the development of a theory through multiple stages of data collection and identifying interrelationships between categories of information to refine the theory (Creswell, 2013). The project entailed a cross-sectional study investigating a phenomenon within a particular time. An inductive research approach was used, and multiple data collection methods and thematic analysis contributed to building from particulars to general themes (Creswell, 2013.). Figure 4 illustrates the research design, consisting of three main consecutive steps, incrementally contributing to addressing the aim and objectives of the project discussed in this paper.

The following AIM statement appears at the top of the figure:

'To create a framework for fashion-related collaborations enabling consumer wellness, social enterprise, and then apply it to 'HelpingYourself' in order to validate its effectiveness.'

	OBJECTIVE	METHOD	OUTPUT
CONTEXTUALISATION	1. To review literature and practice on strategic partnerships and understand how they're used in fashion for customer acquisition and consumer wellness, as well as in social enterprises and charitable partnerships for social impact.	Literature and practice review	Foundation of framework, which informed questions asked in primary research.
RESEARCH	2. To identify best practices, identify and assess systems for charitable partnerships and fashion collaborations, and understand through interviews with industry professionals. Gather information on consumers' experience of collaborations and consumer wellness by surveying the public. 3. To develop a framework for collaborations that benefits businesses, consumers and society.	Semi - Structured interviews & Survey	Patterns, themes and insights. Framework and initial feedback.
EVALUATION	4. To test the framework on HelpingYourself in order to evaluate its effectiveness and develop recommendations for how this could be put into practice to benefit the fashion industry and its reputation.	Semi - Structured interview Panel discussion	Feedback on framework and recommendations for its application. Beginning distribution.

Figure 4: Research design.

Considering the project's timeline and scale, as well as the available resources, an online survey and semi-structured interviews were chosen to collect the data and inform the development of the intended framework.

Based on insights from the literature review, the survey comprise 8 questions, mostly multiple-choice and Likert scale questions. The survey was filled in by 100 participants from 14 countries, providing insight into the public's perception of fashion brands and consumer wellness. The survey mostly provided quantitative data but also included one open question, which allowed for qualitative data collection too.

Semi-structured interviews were conducted with seven fashion sector professionals, each sharing their specific knowledge, providing feedback and advice on the project and contributing to a rich in-depth understanding of how collaborations are built. The interviewees had diverse expertise, including fashion education, social enterprise development, multidisciplinary collaborations, charity and retail, as illustrated in Table 2. In the final interview, Simone Parchment reviewed the framework draft and reinforced its legitimacy, stating that she had seen all of the benefits of collaborations described in action in the industry. This began the evaluation process. Following this, a panel discussion on the topic allowed for evaluation of the research in an open unstructured way. The panel consisted of a fashion designer, a fashion psychologist, an entrepreneur and a researcher, who

each contributed their experience of industry norms and innovations.

Table 2: Industry interviewees, with their roles and perspectives.

Interviewee	Role	Perspective
Farah Liz Pallaro	Business advisor and lecturer. Author of *Fashion, Business and Spirituality*	Fashion business trends and change drivers
Shehan Perera	Communications Officer at Social Enterprise UK	Socially enterprising business development
Jonathan Chippindale	CEO of Holition, cutting-edge luxury retail technology services company	Expert in multidisciplinary collaborative approach, knowledgeable about fashion collaborations and projects
Sarah Burns MBE	Chair of Operations for fashion charity Smartworks	Knowledgeable about how charities work with fashion brands
Jo Tutchener-Sharp	CEO of Scamp&Dude fashion brand that engages in charitable collaborations	Knowledgeable about how fashion brands work with charities
Ruby Wight	Creative Lead: Campaigns and Partnerships at Burberry	Retailer running collaborations with the goal of brand marketing
Simone Parchment	Head of Strategic Partnerships at Matches Fashion	Retailer running collaborations with the goal of customer acquisition

A process of thematic analysis (Saunders et al., 2019) was conducted to extract themes and patterns and draw meaning from the raw data collected in the form of the survey responses and interview transcripts. The process of data analysis was iterative, with each stage informing the subsequent one. Software (CodePen, Otter.ai and EdWordle) was used to identify duplicate words and phrases from the data and to flag key concepts. Quantitative data were categorised according to how they related to each key theme that emerged from the analysis. The themes were used to develop questions that were asked at the panel discussion, informing the development of the framework.

Findings

The following sections discuss the thematically clustered findings from the data analysis, revealing where relationships and contradictions arose.

The survey results evidenced consumers' perceptions of fashion brands. Figure 5 is a word cloud illustrating the values and qualities that the survey respondents believe fashion brands should have for consumers to feel more emotionally connected to them. Larger words indicate more popular concepts and consumers' priorities. Consumers communicated a general sense of disappointment, as evidenced through words like 'disillusioned',

as well as a call to action – 'transparency'.

Figure 5: Word cloud representing values consumers want to see embodied in fashion brands.

The data collected through interviews with fashion industry professionals were analysed to identify recurring concepts and cross-checked to see which key points and perspectives were shared amongst the interviewees. A word cloud (Figure 6) was developed to represent fashion industry professionals' needs, aspirations, priorities and opinions about collaborations. Subsequently, the framework was developed based on the common ground between the consumer and industry perspectives.

Figure 6: Word cloud representing key concepts that emerged across all the industry professionals interviewed.

Overall themes were established using a variety of approaches to compare and contrast the data. Figure 7 illustrates the key themes which emerged from the primary research (survey and interviews); this means concerns that were common to both consumers and fashion industry professionals. They are discussed in the following sections alongside the key themes emerging from the secondary research. These areas of common

ground formed the foundation of the framework.

Figure 7: Key themes recurring in both the consumer survey and the interviews with fashion industry experts.

The fashion industry needs to change

Both the consumers and the industry experts argued that the fashion system needs to change. The survey respondents criticised the myriad of negative effects that the fashion industry – underpinned by a capitalistic system – produces. They questioned the consumeristic culture that the fashion industry contributes to, as highlighted by the following quotes: 'I'm interested in why the owners created the brand to begin with when there are so many brands out there. What is their clear and honest brand objective?' and 'It's getting to the point where it is unacceptable for brands not to make any effort'. These qualitative insights from consumers were accompanied by quantitative data with stark results: 86% of the survey respondents said that they felt let down by a brand or felt it did something that does not align with their values. Additionally, the interviewees expressed concerns about the industry's negative impacts; for instance, Jonathan Chippindale argued the following:

> *"The big piece of the pie is still toxic. I'm so sad to say that because I've worked for so many years to contribute to changing that. But it is what it is. So, the only way that you can change that industry is when we all – every one of us – take responsibility individually and, as a collective, we do things".*

Interviewee Shehan Perera said that employees want to work at companies that care about social issues and aim to make positive contributions to the world, stating 'People expect their employers to give a damn about the planet […] like about changing how capitalism works and taking the steps to get to that point'. Perera works for Social Enterprise UK and described how he has seen companies grow fiscally while also developing their connections with communities and making significant contributions to a fairer and more just world. This comment reflected the secondary research, which shows that the public wants to shop and work at companies that espouse values that align with their own.

Putting the customer first

Another theme emerging from the survey was a sense amongst consumers that their needs and aspirations are currently not heard. Two-thirds of the respondents said that they had participated in cancel culture in some way. Based on the findings from the survey, Figure 8 shows the values that consumers want to hear brands speak about. Ethical employment practices and sustainability were the two most prominent values. This echoes the point from the literature review that emphasised the benefit of advertising company values to attract employees and establish a reputation as an ethical company.

Keywords like 'transparency', 'community', 'accessible' and 'tone of voice' came up in the survey responses. However, surprisingly, they did not come up in the interviews with thefashion industry professionals. Interviewee Sarah Burns from the charity Smartworks was the only professional who emphasised that brands need to listen to consumers more, making insightful comments about market gaps, such as the lack of workwear for transgender people. She advised that brands should focus on one clear message to begin to play a more supportive role in society.
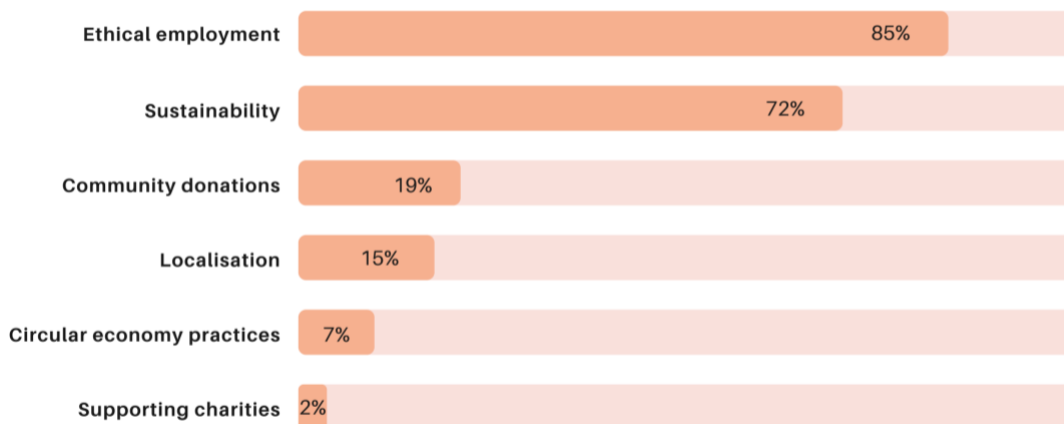

Value	Percentage
Ethical employment	85%
Sustainability	72%
Community donations	19%
Localisation	15%
Circular economy practices	7%
Supporting charities	2%

Figure 8: Brand values that consumers would choose to support.

Collaborations can be harnessed to 'walk the talk'

One consumer described fashion as one of the most popular industries and therefore that fashion should use its power 'to help improve the world we live in'. Others expressed the need for brands to be less self-serving, stating that they want to see them 'doing good for the world and not just for themselves - giving back'. Such comments reinforce Aziz and Jones's (2021) argument that brands should think of their customers as citizens, following a trend in which future consumers (such as Gen Z) are merging their morals with their shopping habits. Consumers are voting for socially impactful businesses with their purchasing power. In line with research showing that younger consumers want to know why a brand is doing a project, interviewee Jonathan Chippindale described how a 'fight [is] going on inside consumers' brains between the need to be a citizen of the planet and […] consumerism'. Additionally, Shehan Perera argued that 'responsible business' is 'the strongest kind of business model'. Ruby Wight discussed her work in building partnerships and collaborations at Burberry (exemplified in Figure 9) as contributing to creating a more benevolent fashion industry:

> *"We're always making sure our community, our campaigns and our content reflect both the truths and dreams of the world we live in and inspire people to imagine their possibility. Because we create so much, so regularly, we have the opportunity to put our values and ambition for even greater diversity and inclusion at deeper levels, into practice and act on it".*

Overall, the findings from the primary research indicate participants' recognition that collaborations and charitable projects can provide a stepping stone for brands and organisations to work together to make benevolent work become an everyday part of the business.

Figure 9: Burberry collaboration featuring footballer Marcus Rashford, who received racist abuse following missing a penalty in the European final and has since been defended and celebrated (Source: Wonderland magazine).

Importance of ethics and values

The findings from the secondary research establish that it is important that collaborations are mindful and considerate of sensitive topics and avoid tokenistic attitudes. In line with this, one consumer participating in the survey explained that 'clear communication of ethos and practices is what we need most in the industry; anything else feels like pandering to a consumer looking for change'. Several survey respondents mentioned that they prefer shopping from brands whose beliefs they 'buy' into. As interviewee Shehan Perera put it, 'It's very easy for a brand to pretend to be doing the right things'. Discussing the ethics of collaborations, Jo Tutchener-Sharp highlighted the need for researching whether potential collaborators have the same ethics in all areas of their business, ensuring that nothing is hidden. She added that any bad press brands receive could have a knock-on effect on the company's reputation. For instance, Ruby Wight mentioned Burberry's 'brand guardians', who help guide the partnership process and ensure that the content is in line with the brand's character. On the other hand, when brands cannot find an alignment of values and vision, they should not be afraid to say no to potential collaborations.

Authenticity

Good ethics require integrity to feel authentic. A lack of alignment can risk compromising a brand's reputation. Consumers participating in the survey commented that they can 'see through' campaigns or communication that are greenwashing or 'hopping on a bandwagon'. They want to know why a business is supporting a cause and require clear communication. Brands need to build trust and meaningful connections with their customers; otherwise, efforts can appear tokenistic. This speaks to Sinek's well-known hypothesis that people 'don't buy what you do, but they buy why you do it' (ROI Group, 2016). Sharing a 'why' through a personal story can be authentic, which may be easier for small and medium enterprises (SMEs) in fashion.

Value of collaborations for venturing into new sectors

The value of collaborations was consistently mentioned in the interviews. Jonathan Chippindale stated that collaborations can help brands align themselves with 'another cooler organisation' or lean on it. He referred to some collaborations that connect similar brands such as 'Hermes x Rolls Royce' versus other partnerships between two very different brands such as 'Dolce & Gabbana x Smeg'. Interviewee Ruby Wight (working at Burberry) highlighted that collaborations can be useful to 'venture' into new sectors. For instance, to create the first sneaker collection for the brand and make sure it reached its full potential, the brand 'worked with Hypebeast to bring their perspective to that collection, as they have a lot of authority in this streetwear field, so could bring this new era for us to their community in a credible way'. Here, Wight refers to collaborations activated by brands to benefit from another company's credibility. Cross-pollination of audiences or skill sets is a popular reason why brands decide to collaborate and bridge market gaps.

New ideas through partnerships

The foundation of a successful partnership involves celebrating individual perspectives while creating new content. Interviewee Jonathan Chippindale argued that progress happens when two people collaborate and develop 'a third idea that they wouldn't have had individually'. Collaborations can be used in guiding creative content that gives both parties a chance to highlight their work as well as create opportunities for new combined perspectives. To exemplify this, Ruby Wight shared her experience in building collaborations at Burberry:

> *"Through that process, our role is one of commissioners, as the brand guardians that guide the content, to make sure it feels connected to our broader brand narrative, and something that our audience can associate with. That is where the magic and mystery of the collaboration comes together, because you have to make space for both of you as creative teams to exercise your individual perspectives and find a way to spot the synergies, the frictions, the contrast and contradictions, and bring them together to make something that may not have existed otherwise".*

Such collaborative processes can create unique outcomes and innovative ideas and lead to customer acquisition through increased engagement. The hope for a successful collaboration is that it can increase sales and make a beneficial addition to the brand narrative which will last for the long term.

A framework for business partnerships with a social purpose

The findings from the primary and secondary research discussed in the previous sections informed the development of a framework for building business partnerships with a social purpose. The research findings informed the outline of questions which were used at the panel entitled 'Fashion and Wellbeing' that was held in September 2021 as a collaboration between 'HelpingYourself' and 'The Fashion Clinic'. The latter was created in conjunction with the MA Fashion Entrepreneurship and Innovation course at London College of Fashion, University of the Arts London (UAL) to be a hub connecting creatives in the fashion industry. This was deemed an appropriate audience for disseminating this research and its output, since members of The Fashion Clinic are interested in fashion entrepreneurship. In doing so, the collaboration between HelpingYourself and The Fashion Clinic adopted principles drawn from the framework such as cross-pollination of audiences. The panel discussion was publicised on social media and then published as a podcast on Spotify. The panel led to plans being made for two more collaborations.

Drawing from the findings from the primary and secondary research, the framework includes a checklist of things

that brands could consider when creating collaborations and charitable projects. Moreover, the framework so far was presented by the first author of this paper to students in the BSc in Psychology of Fashion course at London College of Fashion, UAL to disseminate the research and begin to nurture the next generation of professionals who could create positive social change in and through fashion.

Figure 10 illustrates the key headings and insights from the 'Benevolent Future of Fashion Framework'. The framework summarises the benefits of benevolent collaborations and provides a guide to using 8 key principles to create a successful benevolent collaboration. In this context, success is measured by longevity, as, ideally, socially impactful projects benefit everyone involved, leading businesses to commit to a social purpose. As more businesses discover the multifaceted benefits of these projects and adopt these practices, there is an opportunity for large-scale change in consumer culture as it moves towards benefiting businesses, consumers and society. To make the framework accessible, the content of the framework is written in an accessible 'newspaper' tone of voice. The framework is distributed as a 'read-only' website link which can be easily accessed by the public (https://rebrand.ly/ecwldzl). The online document is editable by the researcher and first author of this paper. Embedded into the framework is a request for readers who have adopted the framework to contribute feedback and suggestions via email. The feedback will be evaluated and amendments made, fulfilling the intention of sustaining an ongoing project that can continue to develop and widen its scope, contribution, and impact. This resource constitutes a legacy of the project presented in this paper.
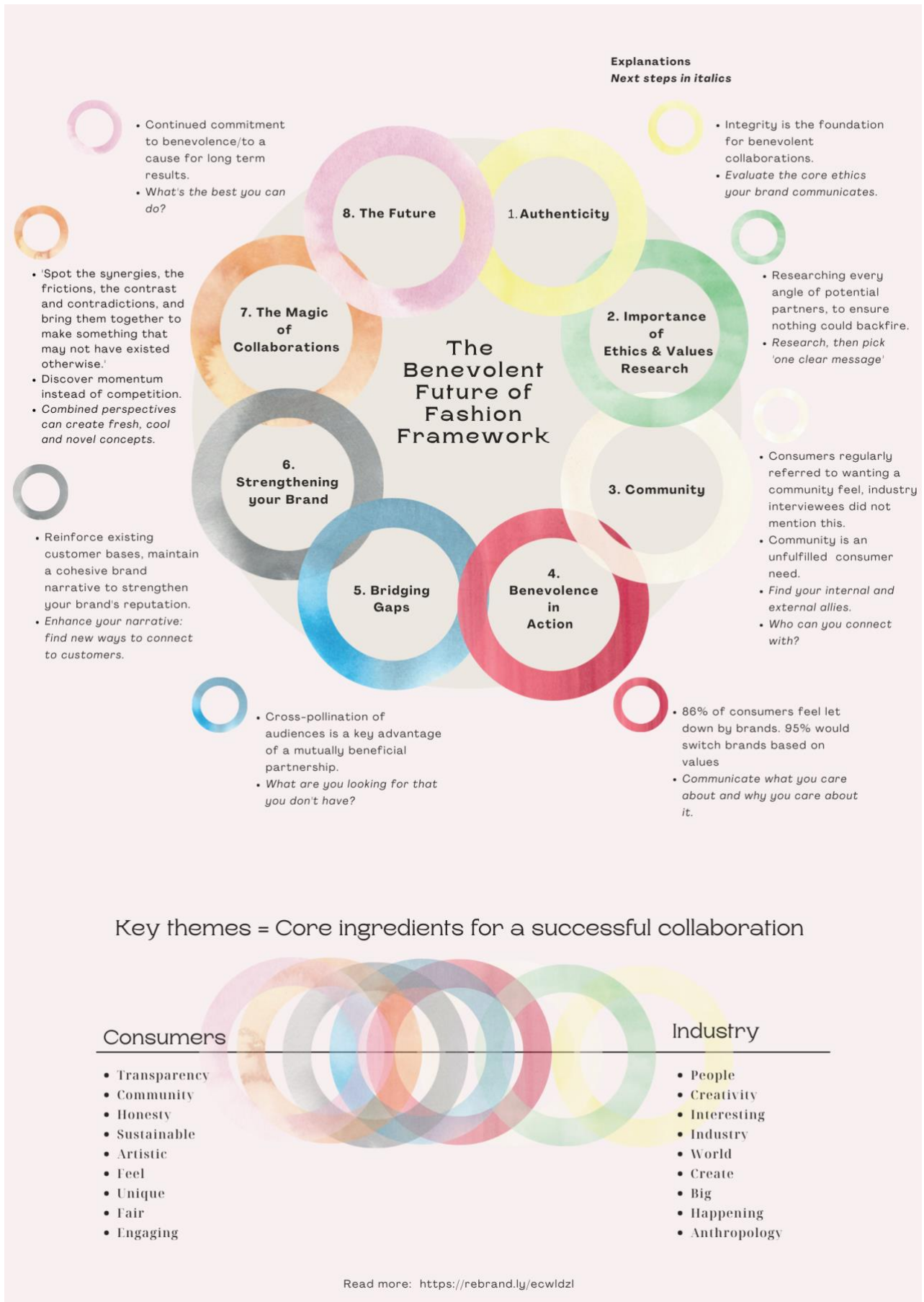
The Benevolent Future of Fashion Framework

8. The Future
- Continued commitment to benevolence/to a cause for long term results.
- *What's the best you can do?*

1. Authenticity
- Integrity is the foundation for benevolent collaborations.
- *Evaluate the core ethics your brand communicates.*

7. The Magic of Collaborations
- 'Spot the synergies, the frictions, the contrast and contradictions, and bring them together to make something that may not have existed otherwise.'
- Discover momentum instead of competition.
- *Combined perspectives can create fresh, cool and novel concepts.*

2. Importance of Ethics & Values Research
- Researching every angle of potential partners, to ensure nothing could backfire.
- *Research, then pick 'one clear message'*

6. Strengthening your Brand
- Reinforce existing customer bases, maintain a cohesive brand narrative to strengthen your brand's reputation.
- *Enhance your narrative: find new ways to connect to customers.*

3. Community
- Consumers regularly referred to wanting a community feel, industry interviewees did not mention this.
- Community is an unfulfilled consumer need.
- *Find your internal and external allies.*
- *Who can you connect with?*

5. Bridging Gaps
- Cross-pollination of audiences is a key advantage of a mutually beneficial partnership.
- *What are you looking for that you don't have?*

4. Benevolence in Action
- 86% of consumers feel let down by brands. 95% would switch brands based on values
- *Communicate what you care about and why you care about it.*

Key themes = Core ingredients for a successful collaboration

Consumers	Industry
• Transparency	• People
• Community	• Creativity
• Honesty	• Interesting
• Sustainable	• Industry
• Artistic	• World
• Feel	• Create
• Unique	• Big
• Fair	• Happening
• Engaging	• Anthropology

Read more: https://rebrand.ly/ecwldzl

Figure 10: Key themes underpinning the 'Benevolent Future of Fashion Collaboration Framework'.

Conclusions

This paper discussed a research project aimed at demonstrating ways in which the fashion system can begin to benefit society, consumers and businesses more. This is driven by a desire to address the needs and aspirations of contemporary societies and to counter the lack of critical disclosure in the past of the negative impacts caused by the fashion industry. The research was fuelled by a desire to change the fashion system, and this was highlighted by the theme of disillusionment that recured across all the data collected (from the consumer survey to the interviews with industry experts). With this in mind, the project presented in this paper was developed at the intersection of fashion, collaborations/partnerships and non-profit development. Perspectives from the public and fashion sector experts were collected and cross-referenced, providing valuable insights that point towards strategies to shape a benevolent future for fashion.

Findings from the research indicate that when businesses take action to help society, the benefits can also lead to commercial growth. Fashion brands can contribute to addressing societal needs by partnering with charities and non-profit organisations and developing aspirational and benevolent projects. Building on findings from primary and secondary research, a framework was developed to guide fashion brands and non-profits in creating collaborative ventures that provide societal and commercial advantages. Following on from the successful launch of the framework at a panel discussion, the first author of this paper is gathering ongoing feedback and will continually amend this resource to actively contribute to shaping a benevolent future of fashion.

Building on the successful presentation of the framework to students from the London College of Fashion, there is an opportunity to continue to use it not only in business settings but also as an educational resource to prime the next generation of professionals who could make a positive impact on consumerism and society. Considering the limitations of the project presented in this paper in terms of the timeframe and sampling strategy, it is recommended to expand the research by including more global perspectives from international participants and involving people from a variety of socio-economic and educational backgrounds.

A natural next stage of the project would be to further apply the framework and evaluate its effectiveness, for instance through interviews with the industry experts already involved in this project, as well as with other professionals to gather more feedback. Other recommendations for the next steps include further developing the framework into a more comprehensive guidebook and developing business collaborations and charitable projects to scale up its impact. For instance, an opportunity was identified by the two authors of this paper to collaborate with ReGo, a project using fashion activism to address societal issues (such as youth violence) and offer educational and employment opportunities for young people in fashion.

In conclusion, it is envisaged that thanks to an alignment of values and continued engagement in collaborative ventures and charitable projects, this paper can inspire readers in shaping a more collaborative and socially benevolent approach to business practices in the fashion industry, perhaps using and contributing to the framework here presented as a step in the right direction.

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Social cause advertising is not your traditional advertising: A graphic design framework for social change

Rafaella-Maria Lakeridou, Christos Karpasitis

Social cause advertising is not your traditional advertising: A graphic design framework for social change

Rafaella-Maria Lakeridou[a], Christos Karpasitis[b]

[a]University of Central Lancashire, School of Arts and Media, Cyprus. rmlakeridou@uclan.ac.uk
[b] University of Central Lancashire, School of Sciences, Cyprus. ckarpasitis1@uclan.ac.uk

Abstract

When designing advertisements, designers use a framework created by principles (guidelines) that form the foundation of the design. However, based on the literature, designers apply existing graphic design frameworks in social cause advertising without acknowledging that such advertisements differ from traditional advertising. These advertisements are designed not to promote a brand name but to influence the public and attempt to change social behaviour towards a cause. When designing for social change, designers should differentiate their advertisements and apply a tailored framework with the most effective and influential graphic design elements. Although some academic studies exist on how advertising can initiate social change, further investigation is needed on which graphic design elements are the most effective. Such research can add new knowledge to the multidisciplinary fields of graphic design and advertising and to the existing literature. This paper describes how social cause advertising differs from traditional advertising and presents the need for a graphic design framework for out-of-home social cause advertising. The objective is to identify graphic elements that can be applied specifically in the design of out-of-home social cause advertisements and build a tailored framework. The research followed a mixed methods approach: quantitative (surveys) and qualitative (interviews) data. The findings indicated that specific graphic design elements (like monochromatic colour schemes, geometric shapes, etc.) can be applied in social cause advertising to build a tailored framework targeting different age groups/genders. Such findings lead towards more public engagement and action towards the social cause advertised; but also add new knowledge to existing research, which suggests that elements like image and typography are the most effective visualization techniques. This research is part of a PhD in Graphic Design inspired by social cause advertisements. The researchers, who lost a loved one due to ischaemic stroke, devote this research to create awareness for different social causes and design for social change.

Keywords: Social cause advertising, Out-of-home advertising, Graphic design, Graphic design elements

Introduction

Social cause advertising differs from traditional advertising in that it does not attempt to promote a brand, product or service and increase sales. Rather, it attempts to change social behaviour, raise awareness, educate or promote a public benefit towards a cause (Landa, 2021; Gupta, 2012). Social cause advertising has been around for years because of its immense power to promote action. Karen and Fox (1980) point out that social cause advertising aims to move people from intention to action, while Gupta (2012) argues that social cause advertising is one of the most effective means to create social awareness, bring social change and shift the public mindset. On the other hand, out-of-home advertising (which is the main focus of this research) covers all advertising that is seen out of home, such as billboards, transit advertising, posters, etc. (Altstiel & Grow, 2006). Studies have shown that this type of advertising is ideal for raising awareness, but also vital in providing information and enhancing knowledge (Manickam, 2014; Walia, 2012).

Generally, graphic design involves a creative process to build a visual. Designers use a framework created by a set of principles (guidelines) that can assist in creating a visual design. In this paper, we argue that social cause advertising should be more clearly differentiated from traditional advertising when it comes to design. It is observed and reported that designers apply universal design techniques in social cause advertising, without acknowledging which design elements are the most favourable amongst different demographics to create effective advertisements. Such criteria are important, as this will enable designers to reach their target audience and engender a more favourable attitude. For example, visual language is a key asset when composing an advertisement. Kronrod et al. (2012) concluded that language in environmental campaigns needs to be carefully assessed and selected. Hence, as social cause advertising is based on collecting issues and addressing them to the public, designers must identify and apply elements that the public favour.

By creating a tailored framework with elements that are the most favourable and effective amongst different demographics, designers will be able to customise their campaigns. Timke's (2019) visual analysis on disability and advertising recommended that disability be represented more carefully in social awareness campaigns. More specifically, Timke (2019) suggested that designers should start using images that represent different disabilities more clearly. Therefore, in our proposed framework, designers would be able to use a specific type of imagery, such as graphics, drawings or photographs.

Related studies have been conducted on the multidisciplinary fields of graphic design and advertising (Borba et al., 2015; Manickam,2014; Nazim, 2020; Park, 2014; Troy, 2019). However, these studies examined different aspects of graphic design or advertising without focusing specifically on graphic design elements. According to Troy (2019), although a few academic studies on advertising design and initiating social change exist, further investigation is needed. Therefore, this research focused on graphic elements such as line, shape, texture, colour, value, typography and image. We investigated how these elements could be applied in designing out-of-home social cause advertisements to build a tailored framework that will attract more people and lead towards more public engagement and action towards the social cause advertised. For example, as stated by the National Heart, Lung, and Blood Institute (2022), although women's heart disease awareness has doubled since 2002, it remains the leading cause of death. Therefore, with this research's potential to inspire action towards prevention, a tailored design will not only show a different perspective on social causes like heart disease (e.g. inspiring more women to be aware and increase checkups), but also connect with societies through a more supportive and favourable approach that will increase health assessments in general and reduce mortality.

Out-of-home social cause advertising
Out-of-home social cause advertising addresses social issues publicly through out-of-home media. The Outdoor Advertising Association of America and advertising agencies such as DASH TWO, bMediagroup and the Empire Group use the term out-of-home advertising for:

- Billboard advertising - The traditional large, printed advertisement on a podium positioned for the public eye.
- Transit advertising - Content displayed on public transport vehicles.
- Posters - Print advertisements, often displayed in noticeable places specifically for people on foot.
- Street furniture advertising - All forms of out-of-home advertising displayed at street level/ printed on outdoor furniture.

- Place-based advertising - Located within a specific location where a particular group of people congregate for different purposes.

This research focused on the list above, as it was important that the findings apply to all media classified as out-of-home. According to one study, this type of advertising can be more reliable, accurate, highly appealing and effective advertising tool than Internet advertising (Borisova & Martynova, 2017).

Graphic design elements

Dabner et al. (2013) note that every discipline has its own set of rules and methods. Graphic design is a discipline which follows fundamental principles to create an effective composition and form a visual language for the public (Poulin, 2018). Graphic elements are building blocks which compose a design (Samara, 2011). Below, the key design elements are listed as presented in multiple sources (Dabner et al., 2013; Evans & Thomas, 2012; Poulin, 2018; Resnick, 2003). The elements are applied in all types of advertising as they give character to the design. Therefore, studying the elements gives a better understanding of their function in the design composition. However, each element has different variations. An investigation of the graphic design elements will enable this research to conclude on each element's role and how it can be utilised in social cause advertisements for maximum impact.

Line

A line can be actual or implied. However, for this research, it was most appropriate to investigate literal lines in design, as implied lines are a conceptual element. Lines add character and direction to the design, yet they can communicate emotion and give unique characteristics. Figure 1 illustrates the different line variations applied in design, as presented by Field (2018).
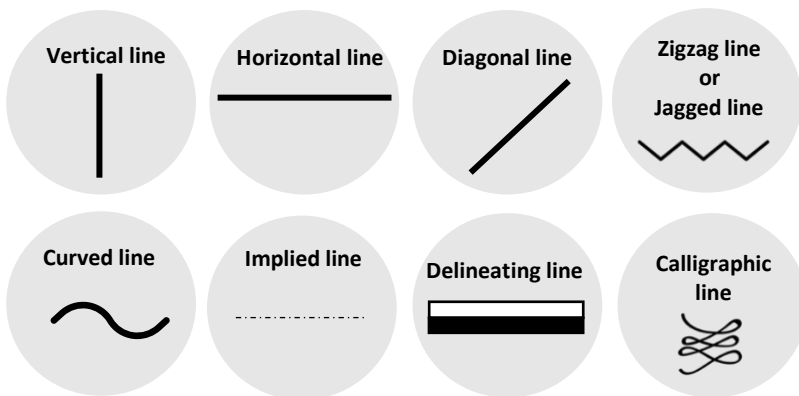

Figure 1: Line variations (Field, 2018).

Shape

Shapes in design can be symbolic or create a pattern (Wong, 1972) and are an important building block in visual grammar. More specifically, shapes add characteristics to the design composition. According to Wong (1993) and Malamed (2011), three universal shape groups known as the basic types of shapes are used in design (Figure 2).
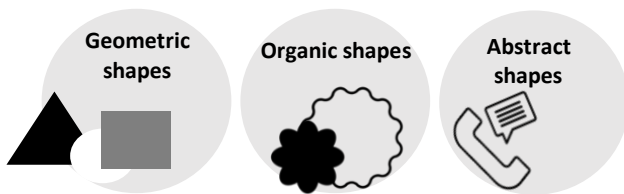
Figure 2: Three universal shape groups (Wong,1993 and Malamed, 2011).

Texture

The element of texture is defined as the look and feel of a surface (Resnick, 2003). Visual texture refers to the effect of the surface which can add richness and dimension (Poulin, 2011). Texture can be described through a variety of visual effects ranging from flat and shiny to bumpy and rusty (Poulin, 2011) (Figure 3).

Figure 3: Visual effects (Poulin, 2011).

Space

Space is a conceptual element which refers to the area within the design known as positive space or negative space (Figure 4). Positive space is an area which contains graphical elements such as shapes, images and typography. Conversely, negative space is the empty area of the composition. Space in design creates a visual effect which has an impact on human perception (Samara, 2014).
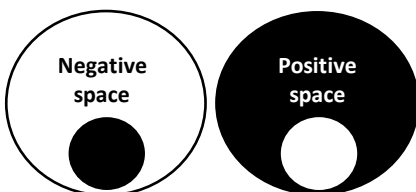
Figure 4: Negative and positive space (Samara, 2014).

Colour

Colour in graphic design is a powerful element which delivers meaning, emotional moods and functional information (Buether, 2014). The use of colour in design conveys a story. However, the element of colour is a broad subject which can be investigated and specialised solely as research. For this research, it was most appropriate to investigate the six types of colour schemes, as they are the foundation of colour composition (Figure 5).

Figure 5: Six colour schemes (Feisner, 2006).

Value

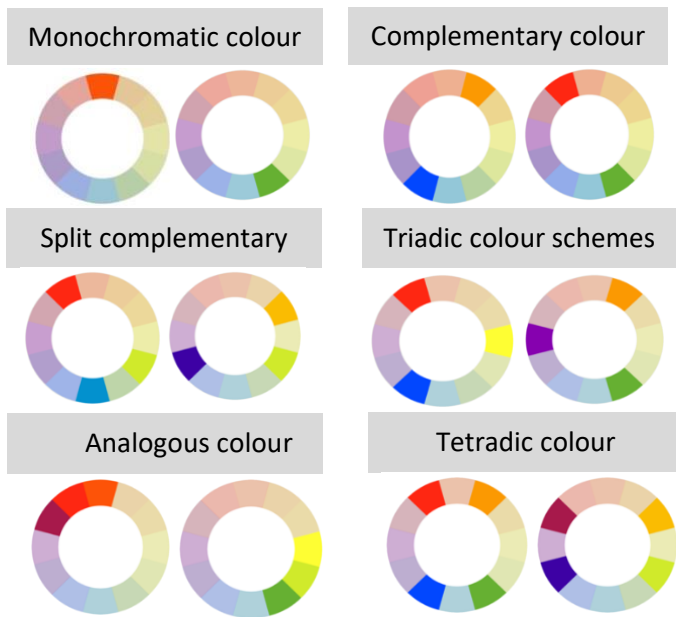When referring to the element of value, one refers to the degree of colour (Figure 6). The element of value is a tool which indicates how light or dark design elements appear in a composition. Value can be used for multiple purposes, ranging from creating a contrast to building a visual hierarchy amongst the design elements. Value can evoke feelings in design, as dark values indicate mystery, while light values can reflect happiness (Smith, 2017).
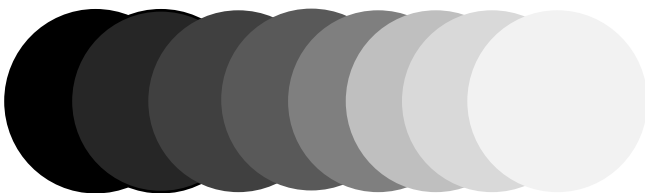

Figure 6: Value scale (Smith, 2017).

Typography

Typography (or fonts, as known by many) is an element which cannot pass unnoticed, as it is the process of making language visible (Cullen, 2012). Typography gives character to the content of the composition. This research examined the typography categories most used in advertising (Figure 7).
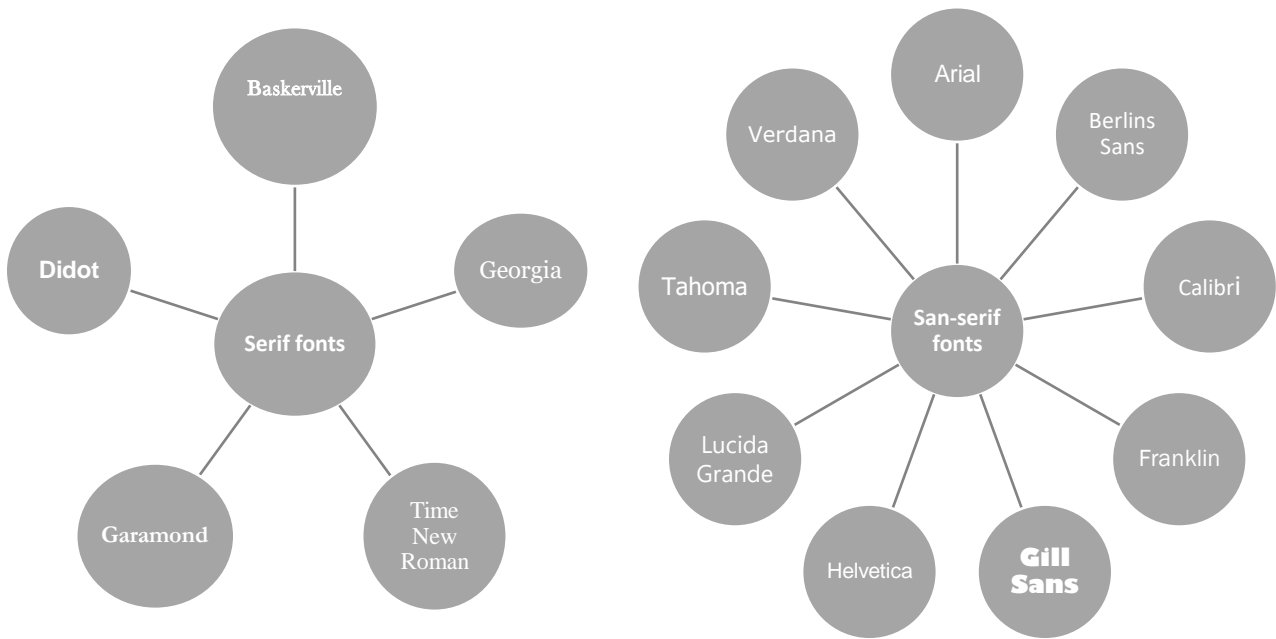
Figure 7: Typography used in advertising (Amplify, 2019; Amstel, 2019; Inman,2020; JGI Outdoor, 2020; The Perfect Media, 2019).

Image

Images are a powerful visual element and essential in several disciplines, such as advertising, as they can bring a design alive (Ambrose & Harris, 2006). Drawing a summary from authors like Meggs (1992), Poulin (2011) and Landa (2021), this research focused on two types of images (Figure 8).
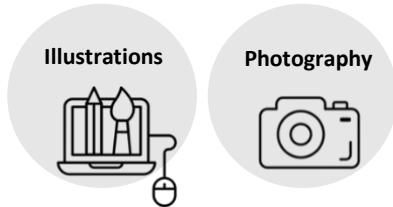
Figure 8: Image type.

Concerning the impact that each element can have on the design of advertisements and on influencing public perception, research suggests that the impact can differ across different elements and demographics (Guthrie, 2009). Moreover, research conducted by Park (2014) on the most effective ways of communication in a cause-related campaign design found that images, infographics and typography were among the most comprehensible elements for the intended audience.

Methodology

To develop a graphic design framework for out-of-home social cause advertising, this study was based on a deductive approach and was supported by mixed-methods research. Quantitative and qualitative data were collected simultaneously, and the results were combined in the overall analysis (Tashakkori & Teddlie, 1998).

Both primary and secondary data were collected during this research. Secondary data related to graphic design and social cause advertising were obtained from sources like journals, books and articles published between 1972 and 2022. Such data helped the researchers to empower the primary data, which were

obtained through web-based surveys and through interviews. These two methods were combined in similar studies in the past (Dombrowski et al., 2013; Troy, 2019), as such data collection helped strengthen the research.

Table 1 summarises the research instruments used in this research and their purpose. Survey 1 (n = 150) investigated the participants' perceptions, attitudes and favorability towards different graphic design elements and styles applicable in out-of-home social cause advertisements. Survey 2 (n = 50) was an advertisement recall test that investigated which advertisement graphic design elements contribute more to recalling a social cause. The participants in surveys 1 and 2 were initially identified using convenience sampling, followed by snowball sampling whereby each participant was asked to share the survey with eligible friends. The sample population represented a range of demographics such as age, gender, nationality (e.g. American, Cypriot, Lebanese, Australian, etc.) and region of residence (e.g. Europe, Middle-East, Asia etc.).

Survey 3 (n = 11) targeted professionals in the design industry and their perceptions of different graphic design elements and how social cause advertisements are designed. Finally, interviews with 3 professionals in the design industry helped obtain more in-depth information and deeper insights into the aspects addressed in Survey 3. For survey 3, agencies from across Europe, the Middle East, the USA and the UK were selected and contacted through a personalised email invitation. These agencies were selected based on their portfolio to ensure that they were experienced with social cause out-of-home advertising. The participants in survey 3 were also invited to participate in a short virtual interview.

Table 1: Research instruments applied and purpose.

Target Group	Instrument	N	Purpose
General Public	**Survey 1**: (web-based via Qualtrics)	150	Investigated perceptions, attitudes and favourability towards different graphic design elements and styles applicable in out-of-home social cause advertisements.
	Survey 2: (web-based via Qualtrics)	50	Conducted an advertisement recall test, specifically on existing out-of-home social cause advertisements, and determined which elements (e.g. typography, graphics, colours, headlines, etc.) attract the general public but also contribute to remembering the social cause.
Design Agencies	**Survey 3**: (web-based via Qualtrics)	11	Understand from professionals in the design industry: (i) how social cause advertisements are designed and (ii) how different elements and styles are perceived.
	Interviews (Virtual via MS Teams)	3	Obtained more in-depth information on the aspects addressed in the design agencies survey.

N = number of participants

The sample consisted of adult participants aged 18 and over (Table 2). To understand the audience, the population was divided into generations to enable the researcher to understand the different

demographics and their preferences in order to develop a tailored graphic design framework for the general public.

Table 2: Age groups and generations.

Generation	Age group
Generation Z & Millennials	18–30
Millennials	31–40
Millennials & Generation X	41–50
Generation X & Baby Boomers	51–60
Baby Boomers, The Silent Generation & The Greatest Generation	61 and above

The demographic data of the respondents to Survey 1 is shown in Table 3. Of the respondents, 81 (54.0%) were female and 69 (46.0%) were male.

Table 3: Demographic characteristics - Survey 1 participants (N = 150).

Characteristic	n	%
Gender		
Female	82	54.7
Male	68	45.3
Age (years)		
18–30	35	23.3
31–40	69	46.0
41–50	23	15.3
51–60	12	8.0
61 and above	11	7.4

*N = number of participants

The survey was divided into two sections, as follows:
Section one: Qs1–5 were about demographic variables: gender, age, nationality, etc. Such data gives background information on the research population and also helps divide findings into different categories for comparison (e.g. gender and age preferences).

Section two: Qs6 20 examined public perceptions, attitudes and favorability towards graphic styles and elements (e.g. Please rate the level of attractiveness for the following line variations: 1 = not at all attractive, 2 = slightly attractive, 3 = moderately attractive, 4 = very attractive and 5 = extremely attractive). In these questions, some other criteria were also investigated, such as out-of-home advertising types and social causes (e.g. Please rate on average the level of attention you pay to the following out-of-home mediums: 1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always).

Survey 2 included 50 participants, of whom 26 (57.8%) were female and 19 (42.2%) were male (Table 4).

Table 4: Demographic characteristics - Survey 2 participants (N = 50).

Characteristic	n	%
Gender		
Female	29	58.0
Male	21	42.0
Age		
18–30	15	30.0
31–40	21	42.0
41–50	9	18.0
51–60	2	4.0
61 and above	3	6.0

*N = number of participants

This survey combined picture choices and closed multiple choice questions, using 30 advertisements, including two sets of 15 different social causes. The survey was divided into two main sections, as follows:
Section one: Qs1–5 assessed demographic variables like gender, age group, nationality, etc.
Section two: Qs6–25 were a series of short advertisement tests. Hence, 2 sets of 15 different social cause advertisements were tested. Each set was given 30 seconds viewing time, which corresponds to approximately 10 seconds viewing time per advertisement (this gave participants the experience of being out of home while simultaneously conducting a recall test).

Survey 3 obtained data from design industry professionals (Tables 5 & 6). The population (*N* = 11) included directors, co-owners and designers from graphic design/creative firms and out-of-home advertising agencies that either specialised in social cause advertisements or had a strong knowledge of their design (e.g. some participants either worked in well-known design agencies or created popular social cause campaigns, ranging from climate change and environmental awareness to health and poverty).

Table 5: Design agencies sample (N = 11).

ID	Job Title	Industry
A	Co-owner	Advertising
B	Co-owner	Graphic design
C	Co-owner	Graphic design
D	Co-owner	Design for social change
E	Head designer	Design for social change
F	Creative director	Graphic design
G	Head and creative director	Design for social change
H	Director	Graphic design
I	Creative director	Graphic design
J	Director	Design for social change
K	Director	Design for social change

Table 6: Demographic characteristics- Survey 3 participants.

Characteristic	n
Gender	
Female	4
Male	7
Age	
18–30	4
31–40	3
41–50	2
51–60	1
61 and above	0
Position	
Founder/Co-Founder	6
Creative Director	3
Junior Designer	1
Service Designer	1

*N = number of participants

The survey was divided into two main sections, as follows:

Section one: Qs1–3 obtained demographic variables like gender, age group and agency location. Such information helps to evaluate cultural diversity in the sample and build a complete profile of the respondents.

Section two: Q4s–21 assessed the respondents' knowledge and perceptions of different graphic design elements and styles and the design of social cause advertising and out-of-home advertising (e.g. Please rate the level of emphasis on the following design elements when you are designing an out-of-home social cause advertisement: 1 = no emphasis, 2 = minor emphasis, 3 = neutral emphasis, 4 = moderate emphasis and 5 = major emphasis).

With regards to the data measurement and scaling, a number of techniques were applied. Some questions were worded in an open-ended way and used semantic differential scales (Figure 9).

Please rate on average the level of attention you pay to the following out-of-home mediums:				
1 = Never	2 = Rarely	3 = Sometimes	4 = Often	5 = Always

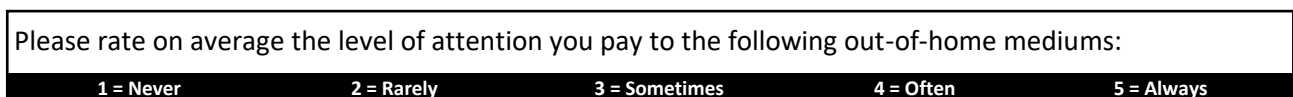*Figure 9: Semantic differential scales.*

For some questions, Likert scaling was most appropriate. As shown in Figure 10, negative responses were scored with the lowest number.
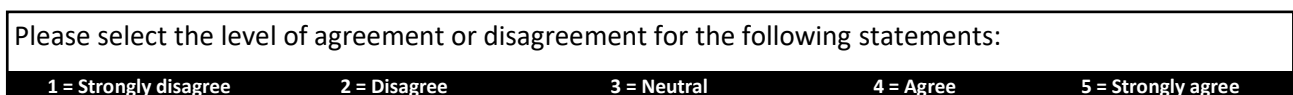
Please select the level of agreement or disagreement for the following statements:				
1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree

Figure 10: Likert scaling.

The other forms of survey questions were matrix, multiple-choice and picture choice questions.

Findings
The data analysis showed that different demographics had different preferences. Therefore, it was appropriate to divide the findings into two sections: 1) designing to attract age groups, and 2) designing to attract gender.

Designing to attract age groups
The participants (all ages) found delineating lines the most attractive (Table 7). However, the 31-40-years-old age group found implied lines equally attractive. This suggests that the type of line that mostly should be used in the design of out-of-home social cause advertising is delineating.

Table 7: Line variation attractiveness (age group preferences).

Age (years)	Line Variation	Attractiveness of each line variation (within age group) %
18–30	Delineating line	50
31–40	Delineating line	69.2
	Implied line	69.1
41–50	Delineating line	60.9
51–60	Delineating line	83.3
61 and above	Delineating line	81.8

With regards to shape preference, although the data collected from the designers indicated that organic shapes were the most used (54% of participants replied 'often' or 'always'), over 52% of the respondents perceived geometric shapes as attractive (e.g. 'very' or 'extremely' attractive'). Such learning will be shared with the professionals who participated in this study.

The element of texture is a visual effect. Of the professionals (N = 11) who participated in this study, the creative directors (n = 3) gave a 27.3% major emphasis on texture. Therefore, this element should not be used in out-of-home social cause advertisements, as a rating of 27.3% is deemed too low. Rather, texture is an element that should be applied in printed advertisements where the public can feel the surface.

The element of space is applied as a conceptual element in design. The professionals (N = 11) gave a 54.5% emphasis on space when designing an out-of-home social cause advertisement, without any particular preference (e.g. negative or positive space). Therefore, space in design should be applied, as it is a component that draws attention to the content but also strengthens the relationship between the viewer and the communicating message (Samara, 2014).

Most of the participants (50.7%) found monochromatic colour schemes the most attractive, except for the 51–60-years-old age group, who had no preference. Therefore, to draw a conclusion on colour favourability for the 51–60-years-old age group, designers should rely on the second highest response within that age group, which was monochromatic.

Furthermore, value and colour are two elements which are combined to form a composition. The professionals (N = 11) gave a 54.5% emphasis on value when designing an out-of-home social cause advertisement. Hence, depending on the social cause, it is recommended that designers apply the most applicable shade (lightness or darkness) of monochromatic colour.

With regards to typography, the findings showed some differences in the typeface preference (Table 8). The 18–30-years-old age group (63.8%) found the Didot typeface the most attractive, whereas the 31–40-years-old age group (77.9%) and the 41–50-years-old age group (65.2%) both perceived the Garamond typeface as the most attractive. On the other hand, ages 51–60 years (83.3%) and 61 years and above (82.8%) both selected the Georgia font. However, ages 61 and above found Times New Roman equally attractive.

Table 8: Typeface attractiveness (age group preference).

Age (years)	Typeface	Attractiveness of each typeface (Within element) %
18–30	Didot	63.8
31–40	Garamond	77.9
41–50	Garamond	65.2
51–60	Georgia	83.3
61 and above	Georgia	81.8
	Times New Roman	81.8

Lastly, concerning the most preferred type of image, most of the participants (ages 18–30, 41–50 and 61 and above) found drawings the most attractive (Table 9). However, ages 31–40 (59.5%) had no preference, and ages 51–60 (8.7%) perceived graphics to be the most attractive.

Table 9: Image type attractiveness (age group preference).

Age (years)	Image Type	Attractiveness of each image type (within element) %
18–30	Drawings	40.7
31–40	No preference	59.5
41–50	Drawings	18.5
51–60	Graphics	8.7
61 and above	Drawings	11.1

Designing to attract gender
It is important to mention that the studies performed throughout this research took measures that allowed the participants to declare a nonbinary gender identity. However, during the studies, all participants declared themselves as either male or female.

When designing to attract gender, the findings suggest delineating lines. Both the female (65.4% - within element) and the male (65.2% - within element) participants found delineating lines the most attractive option. Additionally, with regards to the type of shape, both females (55.5% within element) and males

(49.3% within element), also found geometric shapes the most attractive (e.g. 'very' or 'extremely' attractive).

Further, both female and male participants found monochromatic colour schemes the most attractive (50.7%). However, some social causes (e.g breast cancer awareness and prostate cancer awareness) need to apply monochromatic colours accordingly. For example, when designing a breast cancer advertisement, designers can apply monochromatic red colours with different values to create pink tones.

With regards to typography, the female and male participants had different preferences. The female participants found serif fonts like Didot, Garamond and Times New Roman the most attractive (Table 10). The male participants found serif fonts like Didot, Garamond and Georgia the most attractive (Table 11). Figure 11 presents a visual of each preferred typeface.

Table 10: Typeface attractiveness (gender- female preference).

Gender	Typeface	Attractiveness of each typeface (within element) %
Female	Arial	24.4
	Baskerville	53.7
	Berlin Sans	19.5
	Calibri	29.3
	Didot	67.1
	Franklin	11
	Garamond	70.8
	Georgia	53.6
	Gill Sans	17
	Helvetica	18.3
	Lucida Grande	22
	Tahoma	22
	Times New Roman	69.5
	Verdana	20.8

Table 11: Typeface attractiveness (gender -male preference).

Gender	Typeface	Attractiveness of each typeface (within element) %
Male	Arial	32.3
	Baskerville	58.9
	Berlin Sans	19.1
	Calibri	30.9
	Didot	72.1
	Franklin	19.1
	Garamond	72.0
	Georgia	63.3
	Gill Sans	5.9
	Helvetica	19.1
	Lucida Grande	23.6
	Tahoma	16.2
	Times New	61.8
	Roman	14.7
	Verdana	

Figure 11: Preferred typeface.

Lastly, concerning the type of image, both female and male participants found graphics/illustrations the most attractive (Tables 12 and 13).

Table 12: Image type attractiveness (gender - female preference).

Gender	Imagery	Attractiveness of each image type (within element) %
Female	Graphics/illustrations	63.4
	Drawings	23.2
	Photographs	50
	No preference	13.4

Table 13: Image type attractiveness (gender - male preference).

Gender	Imagery	Attractiveness of each image type (Within element) %
Male	Graphics/illustrations	58.8
	Drawings	20.6
	Photographs	42.6
	No preference	22.1

The framework developed

Figures 12 and 13 present a summary of the findings and, more specifically, the framework with the graphic design elements that should be applied in the design of out-of-home social cause advertisements. Figure 12 illustrates the elements this research suggests when designing to attract different age groups; Figure 13 presents the elements suggested when targeting gender.
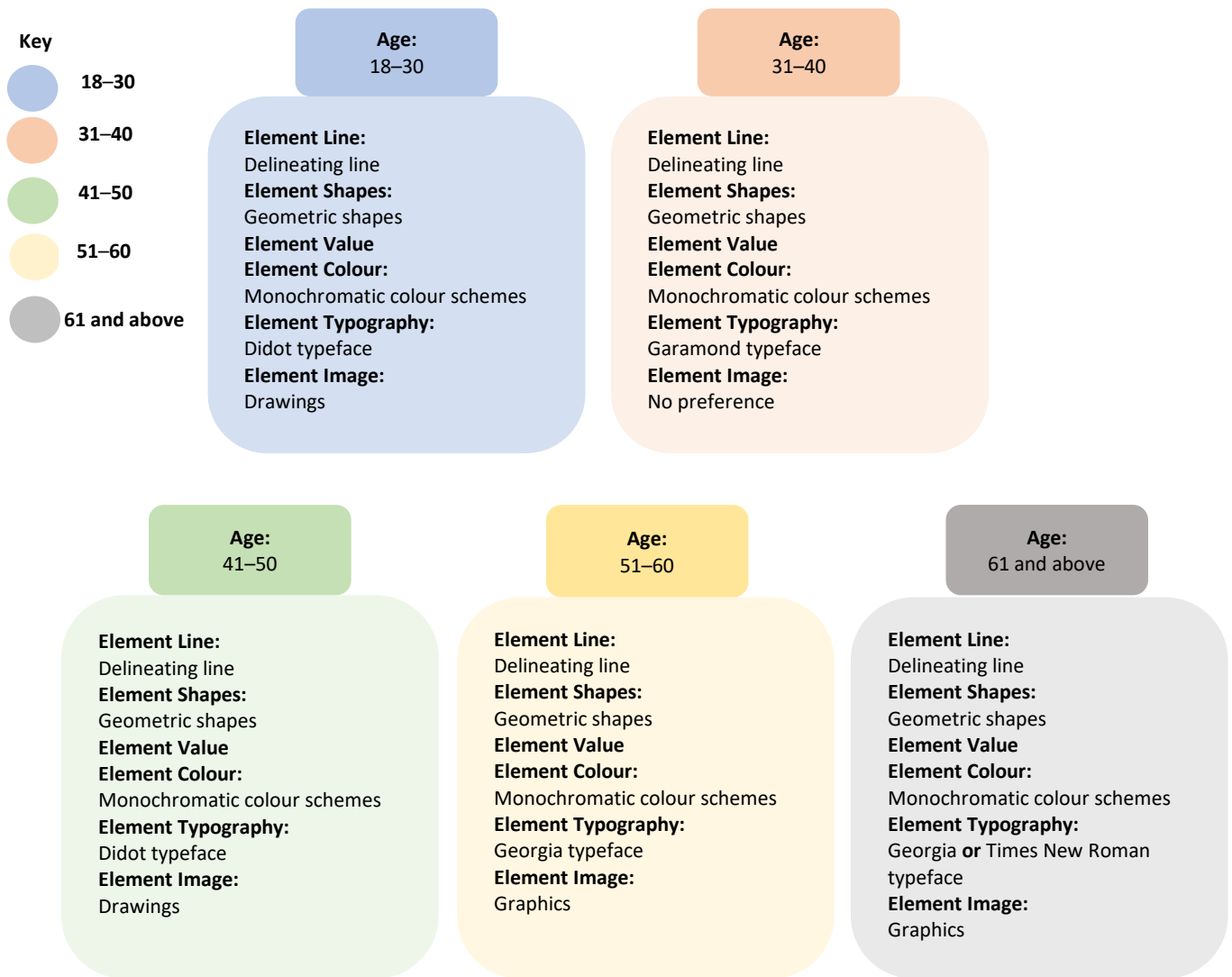
Key

18–30

31–40

41–50

51–60

61 and above

Age:
18–30

Element Line:
Delineating line
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Didot typeface
Element Image:
Drawings

Age:
31–40

Element Line:
Delineating line
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Garamond typeface
Element Image:
No preference

Age:
41–50

Element Line:
Delineating line
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Didot typeface
Element Image:
Drawings

Age:
51–60

Element Line:
Delineating line
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Georgia typeface
Element Image:
Graphics

Age:
61 and above

Element Line:
Delineating line
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Georgia **or** Times New Roman
typeface
Element Image:
Graphics

Figure 12: Designing to attract age groups.

**Gender:
Male**

**Gender:
Female**

Element Line:
Delineating line
Element Space:
Negative & positive space
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Didot, Garamond and Georgia
Element Image:
Graphics/illustrations

Element Line:
Delineating line
Element Space:
Negative & positive space
Element Shapes:
Geometric shapes
Element Value
Element Colour:
Monochromatic colour schemes
Element Typography:
Didot, Garamond and Times New Roman
Element Image:
Graphics/illustrations

Figure 13: Designing to attract gender.

Discussion

This paper investigated graphic design elements that can be applied specifically in the design of out-of-home social cause advertisements and presented the key elements for effective advertising. Although elements currently applied in the design of out-of-home social cause advertisements may be influential, such form of advertising should have a tailored framework. These findings suggest that social cause advertising should be differentiated from traditional advertising. Hence, a universal graphic design framework tailored for the design of out-of-home social cause advertisements was developed after carefully analysing data collected from surveys and interviews.

The designers who participated in this study who specialised in out-of-home advertising reported a lack of good design in social cause advertising. Such forms of advertising should have a graphic design framework to create more effective out-of-home social cause advertisements, to attract the public (reach more people) and lead towards more public engagement /action.

Moreover, according to the interview data, the characteristics of the target audience should play a key role in the design decisions about social cause advertisements. More specifically, campaigns should be designed to meet the target audience's demographic characteristics (e.g. gender and age). These research findings could have a positive impact on practice, such as the design process and achieving design for social change. However, this claim should be further tested in long-term studies. For example, further research should be conducted to determine more specifications for the elements presented in this paper as well as the validity of the proposed framework. In our opinion, the next steps of this research are to present findings to designers and practitioners.

On the other hand, with regards to the impact this research can have on the literature, our research supports existing research about increasing awareness towards a social issue. In an empirical study conducted in Jordan, 'The Effect of advertising campaigns in encouraging women's early breast cancer screening' (Alhawamdeh & Azzam, 2019), the main findings showed that in a specific advertisement

campaign, there was a 54% effect in encouraging women´s early breast cancer screening due to the overall design. Therefore, with our research, designers can tailor advertisements with specific elements favoured by females regardless of their age group (Table 10) e.g. delineating lines, geometric shapes, monochromatic colours (light red value to create pink tones), typefaces like Garamond or Times New Roman and graphic images.

This research can have a significant impact when designing for social change. The visual content included in social cause advertisements can influence the public by creating an attraction (attracting more people), which can lead towards more public engagement and action. The findings aim to motivate and connect with the public, as our mission and responsibility as designers is to design for action.

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Exploring mutual learning in co-design

Mirian Calvo, Leon Cruickshank, Madeleine Sclater

Exploring mutual learning in co-design

Mirian Calvo[a], Leon Cruickshank[b], Madeleine Sclater[c]

[a]ImaginationLancaster, Lancaster University, Lancaster, England, UK. m.calvo@lancaster.ac.uk
[b]ImaginationLancaster, Lancaster University, Lancaster, England, UK. l.cruickshank@lancaster.ac.uk
[c]The Glasgow School of Art, Glasgow, Scotland, UK. m.sclater@gsa.ac.uk

Abstract

An emerging body of literature identifies a connection between mutual learning and co-design, yet it does not specify the nature of this connection or its implications for the practice of co-design. In this paper, we explore the theoretical and practical implications of mutual learning in co-design. We present three case studies with rural communities in the Highlands and Islands of Scotland (UK). Using participatory action research, we undertook a series of co-design projects with each case forming an action research cycle. Through these, we build cycles of insights concerning mutual learning and how this can contribute to practical co-design outcomes for participants. We also present insights that increase the duration and amount of mutual learning in co-design projects.

Keywords: Co-design, Participatory design, Mutual learning, Community engagement, Design research, Social design

Introduction

Many co-designers and researchers have experienced the magic of a project that just 'flies', seemingly with little effort, and the inverse where things seem always to be 'stuck'. In this paper, we explore how mutual learning between the participants in co-design processes may influence the success of projects and call for more co-design research focusing on this area. While the labels of co-design and participatory design (PD) are "often tangled" (Mattelmäki & Visser, 2011, p. 1) and used interchangeably to name collaborative design approaches (Fuad-Luke, 2009), co-design is also described as a contemporary progression of PD (Meroni et al., 2018; Selloni, 2017). Initially, co-design was described as the collective creativity happening over the entire design process (Sanders & Stappers, 2008), depicted as workshops (Binder, 2010) or events where people explore issues together in creative and open-ending ways (Brandt & Eriksen, 2010). Rizzo (2010) refers to co-design as an umbrella of creative methods, techniques and practices whose aim is to inspire and enhance the divergency of the design process.

In the context of social design, where design is driven by social demands (Manzini & Meroni, 2014), design goals and objectives are established with community members in their environments (Mattelmäki & Visser, 2011) and within a broad social agenda (Markussen, 2013). In a review of the social design agenda (which is the theoretical context of this study), co-design and its methods have been divided into four orientations (Mattelmäki & Visser, 2011). The first orientation emphasises people's expertise and involvement, while the second one focuses on people's contributions unfolded with tools developed by designers. A third orientation concentrates on the twin roles of designers as simultaneously facilitators and participants of collective creativity. The fourth orientation focuses on collaboration between designer-people, adopting a distinctive attitude to people, who, given appropriate tools and engendering inclusive and creative third spaces (Muller & Druin, 2012), become creative contributors to the design process (Manzini, 2015, 2019). In all these orientations, Mattelmäki and Visser (2011) observe, collaborative engagement is required, as well as the development of an interdisciplinary methodology of knowledge exchange (Winters & Mor, 2008), whereby mutual learning can be supported (Fuad-Luke, 2009). Here we focus our attention on the

fourth orientation, seeking to amplify and support mutual learning to nurture collaboration between participants including designers and non-designers.

Zahedi (2011) contributes to an emerging body of literature that identifies a connection between mutual learning and co-design (see also DiSalvo et al., 2017; Robertson et al., 2014; Smith et al., 2017). Simonsen and Robertson (2013, p. 2) define co-design as "a process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants in collective 'reflection-in-action'". This statement emphasises that co-design requires participant learning and foregrounds mutual learning as a key part of the practice of co-design. The literature, though, does not specify the nature of this connection or its implications for the practice of co-design. This is a relevant issue because mutual learning influences both the co-design process and its outcomes (Bødker et al., 2004). Bødker et al. (2004) call for the active integration of people directly affected, arguing for a pragmatic need for mutual learning between designers and users, embracing its inherent democratic stance and aligning with the fourth orientation outlined by Mattelmäki and Visser (2011). This underscores the need for more research to deepen our understanding of mutual learning and co-design.

Origins of mutual learning in co-design
Co-design can be traced back to the early 1970s with the emergence of the work of Kristen Nygaard and colleagues in the Scandinavian countries (Muller & Druin, 2012; Simonsen & Robertson, 2013; Spinuzzi, 2005). At that time, there was a move to include trade unionists and workers in the design of computing technologies introduced in the workplace rather than imposing new solutions in a hierarchical manner (Ehn, 2017). In the UK, co-design took inspiration from the works developed by the Tavistock Institute in London, which conducted action research projects. Mumford (1987) built upon the emerging field of design research (Archer, 1981; Cross, 2001), Tavistock's experience, and upon the 'soft systems' methodology, developed by Checkland (1981). The soft systems methodology focused on supporting dialogue as the basis of the design process, emphasising mutual learning. Since then, co-design has been used in human-computer interaction (HCI) and design interaction and recently been expanded to other design disciplines, such as urban design, architecture, social innovation and public participation (Meroni et al., 2018; Zahedi et al., 2017).

In Europe, researchers laid the foundations of an approach based on democratic social constructivism and participatory action research (PAR) methods and techniques (Bannon & Ehn, 2013; Spinuzzi, 2005). Nygaard and Bergo's (1975) research revealed that a local knowledge production strategy needed mutual learning. Such learning was considered the cornerstone of an emerging methodology. As Ehn (2017, p. 10) states, "our ambition was to unite participatory actions research in the field with systematic theoretical reflections aiming at a productive interplay between academic and local knowledge production". This statement illustrates co-design as a form of community engagement (Selloni, 2017), which strengthens community-research partnerships as means of investigating communities and their sociocultural issues (Davis et al., 2011), and in turn enhancing community conditions (Balazs & Morello-Frosch, 2013). It also outlines how co-design borrowed from Lewin's (1946) work and PAR with a vast social research tradition (McNiff, 2002; Walter, 2009; Whyte, 1991).

Co-design also found inspiration in Freire's (1970) emancipatory learning notion, which helped assemble epistemological strategies. As Ehn (2017) explains, two strategies were aligned: (i) the 'decentralisation' of power underpinning local knowledge production (Nygaard & Bergo, 1975) through central strategies and local actions around disruptive practices in the workplace; and (ii) the emphasis on community-contextualised learning as the means for emancipation and liberation (Freire, 1970), which opposes

traditional theorisations of learning (formal learning based on knowledge acquisition). Combining both strategies, co-design developed methods and techniques to study the dynamics of social life through an approach focused on collaborative enterprise, mutual learning and reflection (McNiff, 2002). As Sanders (2017) states, mutual learning in co-design was originally perceived as an emergent type of learning, happening there in all the interstices between social real-world situations and in between hands-on designerly activities. The notion of such learning in co-design situations was aligned with Freire's (1970) pedagogy of emancipation.

This changed when co-design became more prevalent in the United States, where trade unions were less powerful in the workplace, with a corresponding move from democratic aspirations towards functional product features (Spinuzzi, 2005). With this shift the (often implicitly understood) notion of mutual learning shifted away from Freire's (1970) emancipatory aspirations; it was considered a taken-for-granted process (Robertson et al. 2014). This created a gap in understanding between co-design and mutual learning (Brereton & Buur, 2008; Karasti, 2001). We propose in this paper that research attention should be focused on addressing this mismatch between theory and practice.

Case studies

This section presents the methodology adopted and discusses three cases associated with Leapfrog, a three-year (£1.2m) UK Arts and Humanities Research Council (AHRC)-funded research project. Leapfrog used co-design as the methodology to bring people together from diverse backgrounds and with different levels of expertise to engage in dialogue to develop transformative agency through community engagement. This entailed a process involving communities in co-design situations and developing engagement tools to take into those communities to support effective engagement. Partnerships were built on the triad of university—public—community.

The three cases were conducted in the Highlands and Islands of Scotland (UK), with a total of 15 co-design workshops and 277 participant interactions, where we explored the connection between mutual learning and co-design. The overarching aim here was to explore whether and how mutual learning contributes to co-design with external stakeholders with real-life challenges to address. The first case describes a six-month project on the Isle of Mull with five non-profit organisations aiming to develop engagement skills and supporting tools to re-animate engagement of disengaged people. The second case focuses on a nine-month project with 12 service providers and third-sector partners who address loneliness and social isolation of elderly people in rural communities. This project aimed to develop effective ways to engage with lonely and socially isolated people and share best practices. The third case discusses collaboration with a social enterprise committed to sustainability and focused on engaging wider local communities in the renewal of the social enterprise's physical assets and future services.

Methodology

The methodology that guided these three cases followed a PAR approach, informed by ethnographic and co-design methods. PAR is an interdisciplinary research umbrella that covers an extensive range of approaches, which have change and action as common key drivers of research (Walter, 2009). It has two objectives: (i) to produce knowledge and action that has a direct and meaningful use for the communities researched; (ii) to empower those communities through the construction of local knowledge, aiming to enhance their sociocultural and economic conditions (Reason, 1998). We used the PAR approach to acquire a greater grasp of how the communities produced knowledge through mutual learning in designerly engagements.

PAR illustrates a spiral of research stages where each stage informs the following one (McNiff, 2002). Each stage is also represented by a cycle within the steps of 1) planning: systematising experience and problematising, 2) action: reflecting and choosing action, 3) reflecting upon the action: observing the course and consequences of action and change, 4) systematising learning: coding and organising insights and 5) dissemination: validating and sharing new knowledge (Loewenson et al., 2014, p. 13). The three cases were structured as action research cycles, allowing each one to inform the next one. The researchers also looked at the idealised model of co-design developed by Fuad-Luke (2009, p. 149), which illuminates four phases: (i) initiation and planning (collective catalysing), (ii) informed participatory design (collective understanding and exploring), (iii) PD with design team (collective designing and deciding) and (iv) doing and learning (collective actioning). A schematic idealisation of this was used as the theoretical basis for elaborating a research design capable of supporting mutual learning, onto which the researchers combined ethnographic and creative co-design methods and drew on reflective and analytical techniques.

Ethnographic methods were employed to reveal the dynamics of social interaction that would otherwise go unnoticed. The researchers devised creative tools for engagement and data collection to support not only the co-design workshops but also ethnographic encounters. Co-design methods were used to accommodate participants' agencies and orchestrate collective creativity, geared towards co-articulating shared goals. The data-gathering sets of each case study were analysed separately with a three-step process of affinity diagramming. This is considered "an interpretive, reflective method that is used to achieve new insights and ideas - not to provide definite, objective answers" (Harboe & Huang, 2015, p. 96); thus it follows abductive reasoning (Simonsen & Friberg, 2014). At the end of the project, data triangulation was deployed to consolidate our insights.

A methodological framework to study mutual learning in co-design

We developed a methodological framework encouraging positive change and action in the communities we collaborated with. PAR provided a meta-process where each case study was configured as one action research cycle. The research design focused on the infrastructure of each action research cycle following five steps: 1) preparation for co-design, 2) co-design situations, 3) follow-up, 4) systematising learning and 5) dissemination (see Calvo, 2019). Each 'research situation' was designed based on the insights from previous ones. Figure 1 illustrates the research design with two-way gears, reflecting the flexibility and responsiveness of a research design to the contextual changes that may arise. The varied sizes of the gears symbolise the estimated amount of time for each step.
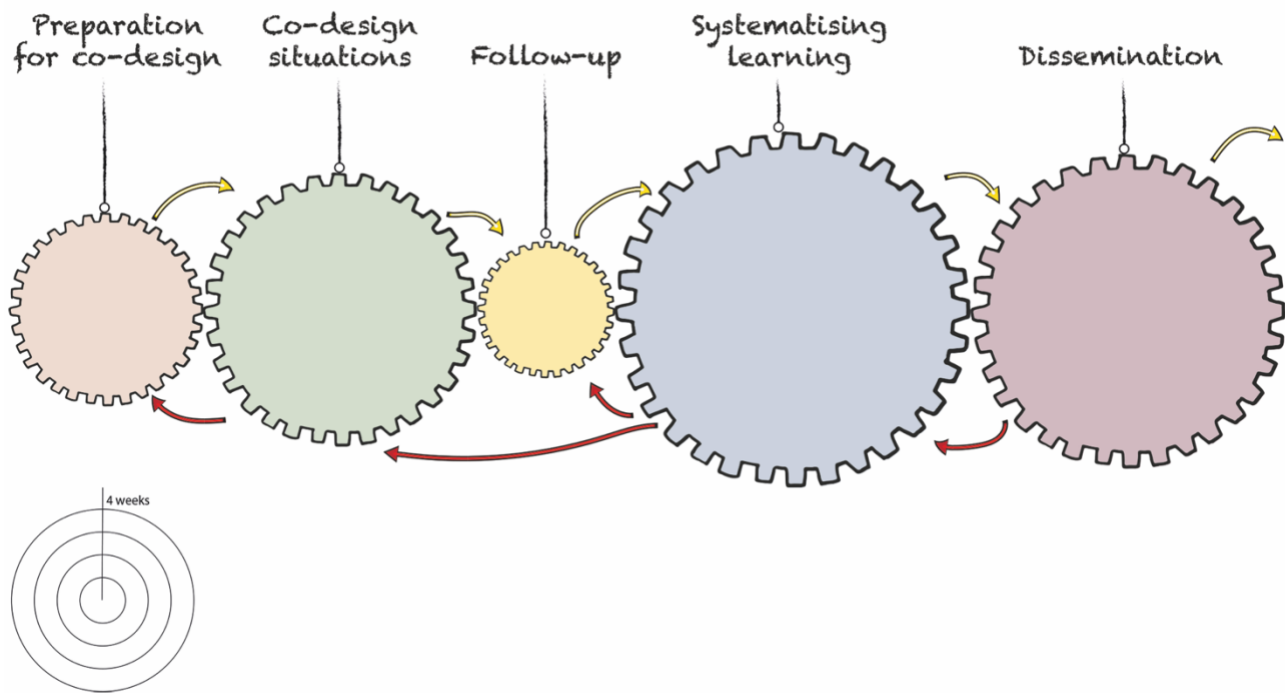
Figure 1: Methodological framework scheme. Source: Calvo (2019).

Preparation for co-design
This first step of three stages is depicted with small, exchangeable gears, meaning that one stage informs the others and vice versa. This involved (i) initiation and planning and collective catalysing, (ii) historical research and (iii) interviews.

Co-design situations
Step two comprises several stages: (i) a catalysis situation, (ii) a co-design workshop, (iii) prototype testing, (iv) delivery and (v) design ethnography: reflective group interviews, participant observation and reflective drawings.

Follow-up
The follow-up step methods are (i) participant observation and (ii) conducting reflective interviews, observing the course and consequences of the co-design situations in perspective.

Systematising learning
This step comprises the analysis and involves (i) affinity diagramming, which embeds (ii) stimulated recall analysis (Messmer, 2015), (iii) narrative inquiry (Chase, 2008) and (iv) production of second-order reflective sessions.

Dissemination
Following PAR principles, the last step aims to close the circle by presenting to the participants and other relevant audiences the theoretical concepts uncovered by the study. This involves dissemination, validation workshops and showcases.

This research design gave us flexibility and consistency between the case studies, allowing us to draw out insights focused on mutual learning whilst being responsive to the tangible needs of the participants.

Case one: Co-designing on the Isle of Mull

The first case involved four visits to the island in which three ethnographic encounters, four in-depth semi-structured interviews and three co-design workshops were facilitated with a total of 13 participants with contrasting backgrounds and experiences, including the following non-profit organisations: Highlands and Islands Enterprise (HIE), Mull and Iona Community Trust (MICT), Ulva School Community Association (USCA) and Tobermory Harbour Association (THA). The participants included volunteers, community managers, trustees and chief officers. Overall, their shared motivation was to collectively develop skills and tools to support engagement activities within their respective communities and enhance participation, as participant 3's statement reflects:

> "It is just to get more tools or experience on how to increase participation in the community […]. Things happen in Mull because community members make them happen."

The co-design workshops in this case study were conceived as a progressive sequence, from initial conversations to prototyping. The workshops created spaces for design-participant interactions, gradually gaining trust and building mutual understanding in in-between designerly activities and coffee breaks. Once we established interpersonal bonds, we gained access to some participants' natural settings, for example during the THA community event in Tobermory and with USCA in Ulva Ferry, where participant observations were conducted, as well as semi-structured interviews (Image 1). For the research team, it was crucial to build trusting relationships with the participants and to be able to gain access to natural settings so that we could experience first-hand and empathise with some participants' everyday life constraints. In turn, we were also able to identify those learning moments by being there and bringing their voiced perspectives to the fore. We also observed the sequence of methods we were using and assembled them into an emergent research design with five steps: (i) co-design situations; (ii) learning from the context; (iii) delivery; (iv) access to natural settings; and (v) systematising learning. All steps were synchronised with the four visits in which we conducted the fieldwork.

Image 1: Participant observation at Ulva Ferry with USCA members.

We identified a strong component of mutual learning associated with the designerly engagements we facilitated. Mutual learning emerged between the participants in the process of building trust, respect and mutual understanding through sharing perspectives and ideas, questioning each other's ideas and co-developing early prototype ideas. This was evidenced when the research team discovered that some of the participants began collaborating on some community development projects after their involvement in the co-design workshops. Insights were gathered around how the co-design situations supported knowledge exchange about participants' skills and ways of engagement. This led to building trust and certain levels of collaboration. The emerging productions were the eventual result of mutual learning. One insight from this process was that participants were not aware that they were learning by participating and doing. Towards the end of the project, via conducting design ethnographic methods (participant observations) in natural settings, we began unpicking some of the participants' notions of mutual learning. Participant 10 said the following about learning during a community event in Tobermory:

> "There is very important learning behind these events. All the schools on the island are very used to community events, helping to put their efforts into entertaining other people. There is a lot of exchange between different organisations. They are also in the schools, so they know each other […]. The children learn from a very young age about being part of the community."

Mutual learning went unnoticed through the participants' eyes, in that all interviewees were unaware of the degree of their knowledge production, competencies, skills and/or dispositions to engage in co-design situations or even in volunteering within their communities. Participant unawareness of learning was identified as a challenge to overcome, as Mündel and Schugurensky (2008) suggest: how does one make explicit an implicit process of mutual learning? We used this insight of a lack of participant awareness (and reflection) to inform the next case study project.

Case two: Co-designing to address loneliness and isolation

The second case took place through six visits to the Inverness, Aviemore and Moray area in the NE Highlands of Scotland, engaging with a total of 17 participants. The participants came from social enterprises and public service providers, including Badenoch & Strathspey Community Transport Company (BSCTC), Health and Social Care Moray, Family Outreach, Art Therapy, Let's Eat Forres, Unit Credit and TSI Moray. The participants had diverse roles, from social care officers to well-being coordinators, art therapists, volunteers and more. All the participants wanted to address the loneliness and isolation of elderly people in the rural areas of Inverness, Aviemore and Moray. The case focused on developing tools that could enable them to share assets, resources and best practices – tacit knowledge produced through their everyday ways of working.

Image 2: Co-design workshop 2: sharing personal stories through playing.

Responding to the understanding developed in case study one, we refined the research design, devising and facilitating a series of co-design situations (Image 2), in which we assembled collective and individual reflective activities (Image 3). The aim here was to draw out participant learning awareness. To help the participants reflect more on their learning process (when they are not used to such actions), we designed and introduced a reflective journal, with prompt questions and drawing tasks, to capture their thinking and emergent learning moments. We also observed that, in each case, the spontaneity and improvisation of everyday life affected and modified the course of events and thus the methods deployed. For instance, gaining trust and access to natural settings had a different pace in this case. In the first case, participant observations came late in the project, hampering the collection of enriched data about participant learning. Therefore, the research design was reformulated reinforcing the use of design ethnography methods at the start and what produced early interactions with key participants to begin building trust right from the start.

Image 3: Reflective sessions.

The first stage, 'preparation for co-design', helped us gain an in-depth grasp of participant motivation. In the second stage, 'co-design situations', we observed how the quantity of participation directly influenced not only the quality of the co-design process but also mutual learning. The participant observations called for attention to personal stories as vehicles for sharing experiential learning to mutual learning. In the third stage, 'follow-up', we gathered insights pointing out that the learning happened through participation and socialisation, through experiencing, playing, listening and having fun and observing how people behaved. As participant 1 said:

"By listening, by having fun, we were connecting in that moment of hearing the stories, hearing other people's opinions in a good atmosphere that it was not a debate or people trying to get rid of others. It was comfortable, fun, and sharing. It was playing."

This statement was shared with all the participants interviewed, and it emphasises the insight that personal stories enable mutual learning in a two-way, collective process of communication. Different learning channels were activated through listening, empathising (emotional connection) and hence better understanding people's identities, values and the motivations behind their stories.

In the fourth stage, 'systematising learning', we used affinity diagramming to analyse the data, which suggested that the co-design situations and the follow-up interviews elicited the participants' awareness of mutual learning. Participant 8 commented on this:

"It certainly broadens my understanding and feelings of how to relate to people and systems [...]. I think the game and having fun in those activities were essential to learning [...]. In terms of how the learning happened, well, most was interactive and fun. For me, that is the peak experience of learning."

All the participants interviewed expanded their understanding of mutual learning, through human interaction and collective fun, key conditions for mutual learning. They also reinforced their dispositional learning towards embracing openness from the divergence of ideas brought to co-design. The role that quotes from other participants played in this is significant: offering statements in a lexicon natural to the participants helped them recognise their own mutual learning experiences.

Case three: Co-designing tools for renewal projects

This project comprised a close-knit collaboration with the Newbold Trust, a social enterprise committed to sustainability in Forres, NE Scotland, with seven visits involving a total of 31 participants from the Newbold Trust, the Findhorn Foundation and Forres local community groups, e.g. Sky Delights (Nairn), Roots, Fruits and Leaves (Across Moray), Manna Juice (Elgin), Roseisle Gardens (College of Roseisle) and The Bread Kiln (Garmouth). The trust had a Victorian house and about seven acres of grounds, most of which were neglected due to financial constraints. We initiated a co-design project that involved the renewal of both its physical assets and its identity as a social enterprise. The aim was to explore innovative ways to include wider local communities in the physical transformation of those neglected spaces and envision future uses. We also wanted to extend our use of early interaction and sharing participant statements on learning as a stimulus for more collaborative learning. We also deployed reflective journals to support independent reflective tasks and encouraged the participants (and the researchers) to embed reflective practice to raise awareness of our ways of learning in such designerly informal environments.

Figure 2: Route of the facilitated walk.

After a series of co-design activities, including role-playing, switching roles and prototyping, walking (see Careri, 2002; Ehrström, 2016) emerged as the method to engage such communities. Touring the Trust's grounds became the method for engagement. One member of the Newbold community facilitated the

walks following a route around the grounds (Figure 2). We moved, walking in small groups, comfortably observing our surroundings and letting ourselves be embraced by the environment (Image 4). Through walking, we shared our ideas on future uses for the different physical assets. These conversations sparked mutual understanding through mutual learning. Here, we consciously removed graphic artefacts to create a third space (Muller & Druin, 2012) based on the participants' voices, placing a focus on human-to-human interactions and also encouraging statements on reflection on learning to be shared naturally through conversation.

Image 4: Catalysis workshop facilitated walk activity.

In terms of the research design, we employed participant observations during the 'initiation and planning' stage, which allowed us to establish favourable conditions for attempting an immersive approach. Our stay with the Newbold community facilitated our immersion as we got to know the participants in a more natural (informal) context, away from the more formal ones associated with the workshop contexts. We also introduced two new methods in the 'co-design situations' stage: the catalysis workshop and test prototypes. The catalysis workshop was designed to enhance the construction of group dynamics and to animate the sharing of personal stories of their experience. The test prototypes emerged when some participants identified actual situations for trying out the prototype tools with wider communities that involved experimentation. This situation favoured letting the participants take the lead.

Analysing the methods used and the gathering of data from the participants, we observed that the greatest volume of insights was revealed during the co-design situations stage. Yet, the reflective interviews of the follow-up, along with the reflective journals, proved crucial in identifying specific learning situations during the project. The sense of ownership was embedded in the group dynamic right from the start. Interestingly, the breadth and depth of results were quite like case two. As in case two, mutual learning happened through participation and socialisation, learning through experiencing, playing, listening and having fun, using all the senses. Participant 6 stated:

"We learnt in different channels, visual, auditory, kinaesthetic etc. – our feeling channel, then our dreaming, our relationships channel and our cultural channel. My impression of what you did reinforced that notion of learning as you have to approach it from different channels and not just sitting and trying to figure it out with your brain."

The participants acknowledged having learnt through their experience, listening and sharing different perspectives on the different spaces explored through the facilitated walks. This reinforced the idea that stories enable mutual learning. During the reflective interviews of the 'follow-up', we began unpicking the impact (transformational agency) upon the Newbold community. As participant 1 said:

"The process helped to open ourselves up, and our relationship is a little different now. We are more comfortable. For instance, we used to have a non-flexible system. Every week we had, like, a business meeting, and we decided during the process we would have meetings when we really needed them."

The community had adjusted their organisational ways of interaction based on a change in interpersonal relationships, which suggests that the co-design process contributed to enhancing interpersonal relationships (see Calvo & Sclater, 2020). This process was ignited by mutual learning moments that drew from verbal-only interactions at the beginning of the project then were reinforced by more explicitly designerly interactions once the group was more familiar with each other. The use of only verbal activities at the beginning of the co-design workshops was explicitly experimented with during this case study to support mutual learning, interspersing these activities with collective reflective activities. The knowledge co-produced by these verbal-only activities was then used as the content of other designerly activities/interventions later in the project, amplifying and building upon the meanings transcribed by the participants' exchange and learning processes.

Throughout these three workshops, we experimented with different approaches to understanding mutual learning in co-design while at the same time being respectful of the needs and motivations of the participants. This, to our minds, is an ethical concern. A developmental research design suggests a strong commitment to establishing egalitarian relationships.

Discussion

Increasingly, co-design projects reflect new emerging themes and goals that are socially ambitious, going beyond the design process that shapes designerly innovations (Akoglu & Dankl, 2019). We argue that mutual learning is a key part of the co-design process (as do Muller & Druin 2012 and Simonsen & Robertson, 2013). Further, though, we contest that the structure of co-design projects can be configured to enhance mutual learning and that this may also lead to positive impacts on participants beyond the tangible outputs of a co-design project.

In case study one, we found that informal learning was present if the researchers probed for it through explicit interview questioning and that this learning was very much situated towards the end of the project. Responding to this in the second case study, we introduced a more explicit and reflective co-design structure to help reflect on processes. Also, we introduced reflective journals and statements from the participants to be shared across the group to get people thinking about mutual learning without it being imposed from the outside in the design researcher's language.

We found that this prompted informal learning to be recognised by the participants and took place earlier in the project. For the final case study, we extended the notion of reflective language between participants and prompted more and earlier mutual learning and built activities around walking, where the focus was on human-to-human interaction. Analysis of the activities indicated that mutual learning in this mode was not significantly different to the previous two case studies, but that combining informal walking and reflective talking activities with more explicitly designerly activities did have a positive effect on mutual learning. Further, the bond developed during a combination of walking and wa orkshop led to impactful, long-term relationships between the participants.

This combination of walking and a workshop is an indicator, we believe, of a shift in approach for co-design activities that may prove to be more effective overall, but on the weight of the research undertaken so far will have a positive effect on the informal, mutual learning present between participants of a co-design project.

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Fighting the opioid crisis by design. Technology solutions as innovative systems for advancing communities of care against overdose deaths

Claudia B. Rebola, Sebastian Ramirez-Loaiza

Fighting the opioid crisis by design. Technology solutions as innovative systems for advancing communities of care against overdose deaths

Claudia B. Rebola[a], Sebastian Ramirez-Loaiz[b]

[a] University of Cincinnati, Cincinnati OH, 45221, United States. rebolacb@ucmail.uc.edu
[b] University of Cincinnati, Cincinnati OH, 45221, United States. ramirej3@mail.uc.edu

Abstract

The epidemic of opiate overdose deaths has continued to advance in the United States, even more so during the COVID-19 pandemic. The state of Ohio is at the centre of the nation's opioid crisis, with one of the highest rates of overdose deaths. Ohio's approach to fighting the opioid crisis involves several items as part of the RecoveryOhio plan, including increasing accessibility of naloxone in communities and promoting harm reduction through education. Various state programmes exist for distributing naloxone, but these are not sufficient for the magnitude of the crisis. Moreover, Emergency Medical Services (EMS) are oversaturated with calls concerning overdoses. The opioid epidemic has scaled to proportions where the country is in dire need of innovative solutions. This paper describes innovative community-based solutions for fighting the epidemic. Two pilots are described in detail: NaloxBox and AntiOD. These pilots involved collaborations between experts in emergency medicine and industrial design, trainers in overdose recognition and rescue, and community agencies and municipalities to design and launch systems for providing community access to naloxone so that lay people can rescue overdose victims in advance of the arrival of EMS. These pilots are design-led projects, implemented in communities, which aim not only to educate individuals about naloxone administration but also to empower communities to act and save lives. This model leverages technologies to bridge the access gaps and comply with the requirements of different stakeholders and state regulations while sharing the responsibility of saving lives from opiate overdose.

Keywords: Opioid crisis, Overdoses, Harm reduction, Community-led

Introduction

In the United States (US), drug overdose is the leading cause of injury-related deaths, with more than 932,000 cases since 1999 (Centers for Disease Control and Prevention [CDC], 2022a). The number of deaths from overdose involving either prescription opioids or illegal opioids, such as heroin, was six times higher in 2017 than in 1999 (Hedegaard et al., 2020). In 2020, the states with the highest rates of death due to drug overdose were West Virginia (81.4 per 100,000), Kentucky (49.2 per 100,000), Delaware (47.3 per 100,000), Ohio (47.2 per 100,000) and Tennessee (45.6 per 100,000), while Ohio registered 5,204 opioid-related deaths (CDC, 2022b). In Cincinnati, a city located in Southwest Ohio, the emergency medical services (EMS) reported 2582 responses to overdoses in 2017 (City of Cincinnati, 2022). Narcan® (naloxone) is a powerful medication that reverses the effect of opioids and can save a person in an overdose situation (Emergent Devices Inc., 2022). Naloxone is currently used by quick response teams (QRTs) to answer opioid-related emergencies. It must be delivered as promptly as possible to avert death or permanent injury from hypoxia, and the need for prompt administration of naloxone has become a central point. Naloxone is available in different delivery methods, and while all methods are effective for use and administration, the intranasal formulation is more suitable for layperson use. Significant figures, such as the Surgeon General of the United States, have emphasized the importance of naloxone and encouraged the public to have naloxone in reach (US Department of Health & Human Services, 2018). Although there are significant efforts to increase its availability, access to naloxone is still limited and, in many cases, problematic (US Food & Drug

Administration, 2019). Even if someone has naloxone for personal use, they cannot self-administer it if rendered unconscious by an overdose. In addition, communities rely heavily on EMS, whose systems are saturated with requests.

The opioid epidemic has scaled to proportions where the country is in dire need of innovative solutions to fight the crisis. Community involvement to rescue lives from overdose affords an opportunity for innovation and helping with the crisis. Most states in the US have Good Samaritan laws protecting lay rescuers (Good Samaritan Assessment Act, 2016), meaning that liability is limited and protection from claims of negligence is provided for those who voluntarily perform care and rescue in emergencies. Within this rationale, involving the community as first responders may become a vehicle for innovation.

Community engagement and social innovation
The Centers for Disease Control and Prevention (CDC) defines community engagement as a process of collaborative work, focusing on building trust, involving added resources and allies, and improving communication, which can have a positive effect on health and well-being (McCloskey et al., 2011). As the CDC states, community engagement "frequently involves — and often evolves into — long-term partnerships that move from the traditional focus on a single health issue to address a range of social, economic, political, and environmental factors that affect health" (McCloskey et al., 2011, p.7). Community engagement initiatives link people who may have a passive attitude to a problem and initiate a collaborative process that will lead the community to an active leadership role, guaranteeing the sustained effort of the initiative. This linkage opens the possibilities for social innovation to be sustainable and effective.

Phills et al. (2008) note that many innovations can tackle social problems or meet social needs, but only for social innovations is the distribution of social value. For Phills and colleagues, if a solution to a social problem renders a bigger benefit to a stakeholder different than society, it is not social innovation. Manzini (2015) moves from the grassroots description towards collaborative organizations, companies evolving in highly connected environments characterized by freedom of choice of their members and an open attitude.

From the social innovation perspective, there is a good opportunity to bridge the gap between communities and patients in addiction treatment and to provide platforms in which we share the care of members of our society who are vulnerable due to addiction and increase their chances to stay in treatment.

The opioid epidemic is an issue that requires a multi-modal approach, not only a top-down view where legislation and policies slowly move forward and communities are passive protagonists, but a combination that includes bottom-up views where the community takes a leading role and drives change. Social innovation perspectives propose a change in the ownership of the solutions, giving communities the possibility to take responsibility and actions. Bottom-up approaches also open up the potential for more compassionate and empathetic solutions because they represent the community responding from within.

There is evidence that communities are self-organizing and attempting to prevent and reduce the rise in opioid overdoses at various levels (Leece et al., 2019). These groups of citizens use strategies that can be focused on different areas such as social change, represented in activities of training, education, stigma reduction and advocacy, and intersectoral collaboration or harm reduction programmes that include naloxone distribution (Ramirez-Loaiza & Rebola, 2022). There are different barriers to the distribution of this life-saving medicine, including stigma, lack of outreach and the overall need for easier access.

The purpose of this paper is to describe two design-led projects, Naloxbox and AntiOD, that use technology to bridge the gap between communities and life-saving resources.

Community resources

The state of Ohio is addressing the opioid use disorder with approaches on different fronts, including stronger regulation of pharmaceutical wholesalers, increased penalties for trafficking in and possession of fentanyl-related compounds, expanding local prescription drug overdose prevention initiatives, and investing in strategies for granting better access to naloxone (RecoveryOhio, 2018).

Project DAWN is a community-based overdose education and naloxone distribution programme in which members of the community receive training on recognizing the signs and symptoms of overdose, distinguishing between diverse types of overdoses, performing rescue breathing, calling EMS, and administering intranasal naloxone (Ohio Department of Health, 2019). Hamilton County Public Health works through the Naloxone Distribution Collaborative to give naloxone free of charge (Hamilton County Public Health, 2019). The critical element that hinders access to naloxone is the required training before obtaining naloxone.

Other stakeholders involved in access and distribution of naloxone include AltrixMedical, which developed NaloxoFind, a mobile app that allows people to locate naloxone in a two-mile radius from registered carriers (and registered locations), making it a crowd-sourced supply of naloxone (AltrixMedical, n.d.). There is also a community of first responders that seeks to build a community of trained and empowered citizens to act in an overdose emergency and save lives where QRTs have longer response times (Community of First Responders, n.d.). While these are effective mechanisms for naloxone distribution to save lives, there is no system for providing or integrating community-access naloxone, meaning preventable deaths due to the absence of a system that furnishes life-saving naloxone for Good Samaritan, community use.

NaloxBox

NaloxBox was an innovative programme to provide tools, training and awareness to empower laypeople to rescue victims of opioid overdose (RIDMAT Inc, 2022). NaloxBox is to opioid overdose what an automated external defibrillator is to sudden cardiac arrest. It provides requisite tools in public places to enable laypeople to save a life in advance of the arrival of EMS. NaloxBoxes contain multiple doses of naloxone, the antidote for opioid overdose, along with a barrier mask to administer rescue breaths. The NaloxBox programme design included technologies to support collaborators and end users, and installations were coordinated with overdose training.

The NaloxBox design involved collaboration between an emergency medicine physician and an expert in industrial design. The design purpose was to create an attractive, approachable, accessible unit that communicates emergency (Image 1), with graphics and instructions to facilitate rescue, and information about what NaloxBox is, how to secure personal naloxone and how to access addiction services.

Image 1: NaloxBox pilot product design.

The NaloxBox pilot project was supported by the Rhode Island Department of Health's mini grant programme in overdose prevention, which, in turn, is supported by the CDC. The pilot was launched in cities and towns across Rhode Island, a state severely affected by the opioid overdose epidemic. Two mini-grants supported this work, which commenced in mid- 2017. Initially, NaloxBoxes were implemented in homeless communities where training was provided. The pilot partnered with initiatives such as Preventing Overdose and Naloxone Intervention (PONI), which was part of the task force where the cabinet was first deployed (Prevent Overdose RI, 2022).

NaloxBox's novel design and collaborative engagement of overdose education and naloxone distribution experts, agencies serving high-risk populations, and public health and municipal officials provide a replicable, scalable model for community countermeasures for the epidemic of opioid overdose deaths. The overall purpose of the project and its implementation was to empower communities to save lives by providing naloxone and the information to administer it. This programme created accessible units with a tech component that sent a text message to the owner when the box was opened (Capraro & Rebola, 2018). A significant aspect of deploying NaloxBox as a pilot was to evaluate the response from the community taking a role as first responders in the crisis. While the project hoped for a successful impact involving community members, the results exceeded expectations in validating the need for refining and scaling programmes, products and services such as NaloxBox (Jochem, 2019; Kantor, 2019; Orestein, 2017).

From Naloxbox to AntiOD
Learning from NaloxBox, the AntiOD project started the goal of replicating the programme in Cincinnati with an increase in the wide distribution of naloxone by involving the community as first responders for the crisis and supporting EMS response. The design was improved by providing single-use kits of Narcan, containing disposable gloves and a cardiopulmonary resuscitation (CPR) shield. The package itself was

a bilingual training tool (Image 2), providing education about signs of overdose, steps to administer Narcan, and how to roll a victim into the recovery position.
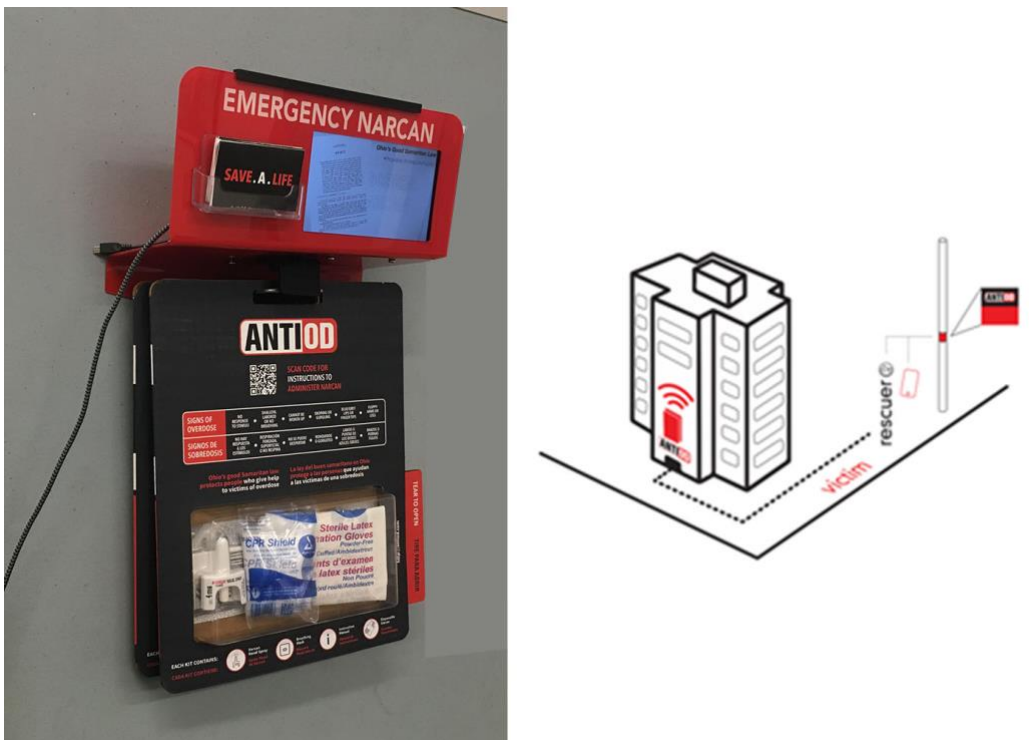

Image 2: AntiOD product design.

It was designed to be opened in an emergency by pulling from a tab and tearing a pre-cut strip, leaving the blister and the content ready for use. Instead of a box enclosing the packages, AntiOD proposed a smart dispenser for each location that could hold two kits (Image 3). The packs are unlocked by providing information to the smart dispenser (e.g. name and phone number).

Image 3: AntiOD single-use pack.

The smart dispenser used a lock safety mechanism for naloxone access to address regulatory mandates. A spectrum of access types was designed within the unit described as private, semi-private and semi-public configurations. The private configuration would be available for unit holders who would keep units in monitored spaces (e.g. offices) without the need to input information for unlocking the unit. The semi-private configuration would allow the unit holder to generate a unique access code to be shared with a group (e.g. front desk spaces). Lastly, the semi-public configuration would require users to input their names and phone numbers for data collection-tracking of naloxone distribution. With any configuration, removal of the single-use pack (Narcan) is enabled. When someone requires Narcan, they touch the 7-inch (17.78 cm) screen, and a 4-digit passcode is requested. When the passcode is given, the product is unlocked and a video of the four steps to administer naloxone is displayed. A switch in the latch is used to confirm that the product was retrieved. This action sends a notification to the location staff and the AntiOD team.

Besides being part of the safety mechanism, the platform had three objectives: 1) to give information to bystanders (i.e. how to recognize an overdose, where to get Narcan); 2) to provide instructions on the administration of Narcan, giving rescue breathing and rolling the victim to the recovery position— a necessary component to meet state regulations for naloxone distribution; and 3) to alert EMS with the location for completing the rescue of a victim from overdose (Rebola & Ramirez-Loaiza, 2020). Several graphic materials were developed to help the AntiOD deployment meet the requirements (Image 4). Several iterations were developed to provide fast and accurate and accessible information for naloxone administration: bilingual, graphical, and video.

Image 4: AntiOD collateral materials for locations.

The system relied on WiFi connectivity via the touch-enabled tablet screen, and information is input directly into the unit. By connecting the dispenser to a wireless network, the team can keep track of each location, plan restocking, keep a record of the activity and, more importantly, oversee the expiration date of every naloxone dose in the programme. Moreover, having the smart dispenser be unlocked with a passcode as an access feature ensures accountable staff in each location and the mandatory data (name and zip code) for naloxone distribution.

The programme was well received within the Cincinnati community, validating the need for such programmes (DiTirro, 2019; Kirklen, 2019). AntiOD received an honourable mention in the Fast Company's World Changing Ideas in the Health and Wellness category (Fast Company, 2019).

From AntiOD to the public

AntiOD partnered with several initiatives and organizations for its implementation. For example, the Community of First Responders was involved to provide information access to the smart dispensers for the people enrolled and trained in their programme, registered as naloxone carriers in the NaloxoFind app. In addition, the AntiOD project worked with organizations such as the former Downtown Cincinnati Inc., now part of the 3CDC group, for stakeholder engagement, and Cincinnati Bell for supporting the communication and technology aspects of the project. While these collaborations were instrumental, the larger public community was a necessary component to close the circle of innovation. It became apparent that there was a necessity to engage and educate the public about the reality of the crisis. The "AntiOD: Reclaiming our City" exhibition, hosted at the Cincinnati Central Public Library of Hamilton County (Image 5), was deployed to empower the public to take action (Royzman, 2019).

Image 5: AntiOD Exhibition at Cincinnati Central Public Library.

Instead of delegating the problem to institutions, the idea was to design mechanisms to share the responsibility of combatting the crisis.

The exhibition was designed to be an interactive platform for collecting and distributing information on overdose signs, treatment, support and resources for victims, relatives and the public. The exhibition was divided into four main sections: Act: what and how can someone save a life from an overdose? Share: what are the real stories related to addiction and/or overdose? Learn: what are the facts and resources available for overdoses? And Know: how is life after an overdose and can we learn from individuals touched by the crisis? With these four areas, the public was provided with information on naloxone administration, signs of overdose, local resources like Project DAWN and destigmatized language guidance, to mention a few. The exhibit also engaged the public by displaying *The Enquirer*'s Pulitzer Prize-winning "Seven Days of Heroin" video documentary (Enquirer and Media Network of Central Ohio staff, 2017). Overall, the exhibition was an invaluable venue for creating a network of shared responsibility and community involvement.

Scalability and opportunities

Any design project presents obstacles throughout the process. NaloxBox and AntiOD encountered different obstacles that served as motivation to design technology for community engagement. This article presented iterations in creative development that explain how products and systems evolve to meet requirements across states. The success lies in transforming those obstacles into opportunities, thus making the later design stronger, as presented in the public exhibition. Additionally, it is noteworthy how the design had to meet regulations and comply with legislation, in our case, set by local and state health entities, while at the same time keeping in consideration its ease of use, for example, the collection of names and zip codes before unlocking the pack and the display of interactive information on how to use naloxone. Design can be an agent of change, generating community engagement and a social push to change legislation and promote better situations in our cities and communities, such as wider access to Narcan. Overall, this article claims that collaboration among experts, stakeholders and the public can result in a supplemental method to rescue overdose victims

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