VIABLE FUTURES THROUGH DESIGN: COMMUNITY ENGAGEMENT EXPERIENCES IN THE CREATIVE INDUSTRIES

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Abstract. Community engagement projects for social innovation are increasingly happening across the globe and show a trend that involves communities in participatory approaches for the resolution of a variety of social needs. However, little has been discussed about how this type of projects could possibly lead to the production of viable futures as design innovations, and how social and cultural factors influence people's engagement and participation in community-based projects. We argue that making viable futures by design requires a bottom up approach where ideas depart from the community itself, where the co-production of knowledge takes place through a process that is collaborative, participatory and engaging. From this perspective, in this paper we discuss insights gained through a study tour project in which we explored the various aspects of the concept of engagement as a key component of design innovations in people's everyday activities. The study tour project took place at a Faculty of Creative Industries in Australia and comprised two different design creative explorations: *Mutant Piggy* student project involving students from Australia, China and Peru; and the *InstaBooth* research project involving Brisbane's, Australia community. From our experiences we establish the concept of viable futures by design as the enabling of new endeavours that are made possible within particular contexts and within local people's knowledge. Finally, we propose that the making of viable futures by design is an engagement process that requires co-production of knowledge and suitable tools to facilitate democratic and true participation; and that this process can prompt social change as a by-product of these community-engagement experiences.

Keywords: community engagement, creative industries, design, participatory design, social innovation, viable futures.

Introduction

Can prosperous futures be designed? Could positive community engagement-based projects lead to the production of viable futures (VFs) as design innovations? A growing number of exemplars of current and past projects show a trend in involving communities in participatory approaches for the resolution of a variety of social needs (Hillgren, Seravalli, & Emilson, 2011; Brown & Wyatt, 2010). Participatory design (PD) is a well-known approach in design and the

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creative industries (CIs) disciplines that focuses on working with end users in design development (Bødker & Pekkola, 2010; Muller, 2003; Muller & Kuhn, 1993). The literature shows that PD is a key strategy in community engagement (CE) projects (Manzini, 2014) and a large body of research exists around participation and engagement in various fields of knowledge (Bowen, Newenham-Kahindi, & Herremans, 2010; Anastasiadis, 2013) such as urban planning, policy development, and change management (Caldwell Amayo, Guaralda, Donovan, & Rittenbruch, 2016). These participatory strategies are often built on collaborative and democratic aspirations, aiming to facilitate an equal opportunity to all involved voicing their ideas in a given project or process (Ehn, Nilsson, & Topgaard, 2014; Foth & Brynskov, 2016).

But what happens in contexts where there are evident inequalities (Ehn et al., 2014; Brown & Wyatt, 2010) in power structures, gender imbalance, or socio-cultural representation? Workplaces with defined hierarchies, urban developments or community projects that include a mixture of government representatives, industry stakeholders and local residents exemplify contexts in which challenges exist in fair representation and ability to voice the needs of all. While extant studies discuss the challenges of maintaining sustainable practices through participatory approaches in CE projects (Hillgren et al., 2011; Ehn et al., 2014), a gap in the literature seems to be the identification of the social and cultural factors which shape those collaborations and influence people's engagement in community-based projects.

We argue that making VFs by design is a participatory process. This process employs the creation of social innovations (SIs) as a means to envision alternative futures and depart from CE processes. We refer to VFs as the enabling of new endeavours that are context specific and reflect the knowledge of the local people and actors who inform them. This process requires a bottom up approach where creative ideas are initiated from the community itself, where the co-production of knowledge takes place through a process that is collaborative, participatory, and engaging. SI by design projects have been mostly led by their aspiration of utilising design for the common good, where the design researcher has fully led the process or have moderated and interpreted it. Is it possible to consider a different approach where it is the community that leads the project through their authentic engagement and participation?

In this article we discuss the concept of engagement as a key characteristic of design innovations that capture people's everyday activities. Two distinct design projects are explored: a student based design project, the *Mutant Piggy* (*MP*), and a research driven project, the *InstaBooth* (*IB*). Both projects are infused with participatory methods and approaches from the design and CIs disciplines. The first one, *MP* is a design task which prompted undergraduate students from the School of Design (SD), Queensland University of Technology (QUT) to consider the meaning of "savings for their future" and exemplifies a social SI approach. The *MP* project involved an iterative design work of a piggy bank that was explored in collaboration with peer undergraduate design students from Peru and Chile. The project is contextualised as the main outcome from an undergraduate study tour (ST) to South America (SA) led by the authors. Design groups from three different countries with different cultural assumptions engaged through peer-to-peer workshops on the collaborative SI project. The resulting experience the students had through this design process revealed the critical role that "assembling" knowledge plays in a democratic participatory project. This is what Pelle Ehn, Elisabet M. Nilsson and Richard Topgaard call "knowledge alliances" (2014).

The second project, the *IB*, is a research and community engagement tool which incorporates a combination of tangible and digital interactive media to elicit the engagement of community members regarding a range of issues from urban planning, policy development, or organisational change. The *IB* project addresses the need of people to have access to open communication channels to voice their views of the future, their ideas, and concerns; it is an engagement tool that can assist communities feel empowered and able to create VFs. Results of the *IB* project highlight the critical role of methods as a mediator to facilitate the assembling of local knowledge and to engage citizens in a participatory and open process.

These examples are design explorations that were set out to understand the extent to which participatory approaches can facilitate the making of VFs by design as a creative process for envisioning potential futures. From our experiences we conclude that making VFs by design is an engagement process that requires co-production of knowledge and context appropriate tools to enable true democratic participation. These projects still need to further explore whether such creative approaches can instil social change as a result of these CE experiences.

1. Context: viable futures, design and participation

Countries have always been differentiated from one another based on their technical and economic status. This differentiation or divide has traditionally seen two groups: the developed countries and the emerging economies. From this perspective, promoting and supporting economic progress (EP) has been seen as a way to help emerging economies to establish better technology based practices for improving industries and creating jobs. The creation of better economic futures had usually been seen in this way. The line defining those traditional differences between countries is becoming blurred as developing digital and manufacturing technologies are increasingly accessible by anyone in the world. These developments provide the opportunity to anyone to be a creative mind, a manufacturer, an entrepreneur. Can new futures be imagined and become viable by design? How is this happening?

In the 1970's German design theorist and practitioner Gui Bonsiepe started a design discourse about the role of design in a global society (Fathers, 2003; Groll, 2015) and established the notion of center and periphery to distinguish a power relationship between two contexts for design: the Western world and what was known then as the developing countries (DCs). From his experiences in South American countries (SACs), his concept described the influence or paternalistic view of countries leading technology, innovations and the global economy towards the countries at the periphery, receiving those innovations, not creating them. Assisting EP in the DCs had traditionally focused on the transfer of technologies. Some authors argue that such transfer needs to consider culture as a whole (Farvar & Milton, 1972) as traditional cultures and local communities feel threatened by the insertion of Western technology for the sake of EP (Norberg-Hodge, 2001). From the point of view of the design discipline, Bonsiepe (Fathers, 2003) insists that design problems can be addressed in the local context, and stresses the disadvantages of having outsiders from other countries resolving such problems with very little local knowledge or awareness.

With the advent of the digital revolution age, we use the term emerging economies to refer to the periphery, and the power of technology-led innovation seems to not reside only in the countries at the center. In this respect, Knut O. J. Ims and Laszlo Zsolnai (2014) argue that there are large groups of people in the Western world who are reaping significant benefits from recent innovations, consequently it is difficult to see how those same innovations can establish similar benefits within DCs. However, with the emergence of wide spread technology sharing through *Web 2.0*, society is being driven into a new age, the age of "knowledge", with digital fabrication (DF) at the forefront of the movement. The method of transforming digital data into physical outputs via computer driven technologies and tools is referred to as DF (Sass, 2007). These processes have been driven from the automotive, navel and aerospace industries (Kolarevic, 2003). With the sharing of information through *Web 2.0* the knowledge and access to DF tools including 3D printers, laser cutters, and computer numerically controlled machines, has revolutionized design providing the ability to experiment with complex concepts, forms, and novel materials (Iwamoto, 2009; Caldwell Amayo & Foth, 2014). DF helps to streamline the design to production process (Sass, 2007; Caldwell Amayo & Foth, 2014).

Tomas Diez (2012) compared the emergence of DF to the evolution of tools throughout history, citing DF techniques as the "wheel" of the 21st century. DF, in particular the growth of techniques in lower socio-economic areas, may be seen as not only a tool for, but also a strong catalyst for SI. The emergence and rapid uptake of DF in SACs serve as an example for the possibility, and potential failure, of the expansion of DF, and its effect on societal change. In order to explore the validity of DF as tools and catalysts for SI in SA, it is important to research and discuss a number of existing and developing examples; for example, the fab lab (FL) emerging hubs as tools for "citizen based innovation" (Diez, 2012).

The sharing of information through social networks and global community groups is driving continuous development of technology and use of novel materials in DF, causing it to become more accessible and affordable (Caldwell Amayo & Foth, 2014). The Massachusetts Institute of Technology Fab Lab Network (FLN) arose from the Center for Bits and Atoms. FLs focus on providing workshops and self-replicating tools to communities; they have increased awareness and knowledge surrounding DF technologies in emerging economies and rural areas across the globe. FLs rely on the exchange of information through shared Internet based knowledge networks to distribute processes and projects. This increase in knowledge has led to an uptake of SI employing diverse technologies and platforms in different areas particularly those considered as emerging economies. Technology can introduce SI in another format, platform, system and with less constraint of introducing knowledge and ideas. With the inception of the FLN, the world has increasingly welcomed and supported the concept of benefitting from and creating social change through open sourcing digital and information technology platforms. The FLN demonstrates the power that "sharing of knowledge" can provide to increasing engagement and participation regarding the use of new technologies. Contributions and engagement from different communities are regarded as collaborative and democratic participation strategies. The purpose of discussing DF and the FLN in this article is to reveal how the concept of shared knowledge can serve to engage communities who are often on the fringe of technological development and innovation. In

this case the DF tools and processes provide the opportunity for diverse communities to create their own creative solutions to local problems, to innovate with evolving technologies, and contribute to the discourse surrounding design and technological development.

2. Cultural issues in participatory design and social innovation

Culture has been defined by international world development organizations as the integrity of the multiple distinctive spiritual, material, intellectual and emotional features characterizing a society or a group (Swanson, 1997), including its creative expressions, community practices and material or built forms. From this perspective, the critical need of developing culturally sensitive approaches to strengthen ownership and sustainability of community projects had led to strategies that acknowledge the value of a community's socio-cultural capital, and that of community project designs that are people centered. In recent years, SI has risen as an approach for people to collaborate in resolving a social problem, where the value of the solution is for the social group contributing to it and where PD strategies are employed.

SI is an evolutionary process of change born from the creative assembly of existing properties (from social capital to historical heritage, from traditional craftsmanship to accessible advanced technology), with the aim to create socially accepted achievements in novel or innovative ways (Manzini, 2014). Based on this understanding of SI, we can see that has always been an inherent aspect of and will continue to be a vital characteristic of every society. Due to the ongoing grand challenges society faces including economic instability and environmental decline, SI initiatives are rapidly increasing and becoming more common. With contemporary societal development, the nature of SI is evolving creating novel and until now unforeseeable possibilities. SI can occur in two very distinctive ways (Manzini, 2014): (i) incremental *versus* radical, and (ii) top down *versus* bottom up. The first one – incremental *versus* radical – refers to the pace of changes in the existing ways things are; the second – top down *versus* bottom up – describes changes that are brought upon a community from an external source compared to initiated from a community whom is directly involved in the process. SI through PD has been the approach involved in a broad array of design interventions addressing issues of climate change, aging populations and social exclusion. In terms of macro-innovation, it requires multiple perspectives where design is one of the creative disciplines active in SI initiatives (Ehn et al. 2014, p. 17). Anne Balsamo (2011) argues that design requires more than just the creation of new artefacts or objects, but always involves the making of new cultural possibilities. Therefore, it is considered that those who participate in the design and creation of novel technologies are also part of the process of designing culture. Balsamo (2011) stressed that it is through approaches and practice of designing that cultural knowledge are materially replicated, identities emerge, and social relations are organised. This statement about culture and design is consistent with Victor Papanek's argument (1985) that design is basic to all human activity. It can be said then that PD processes not only bring together cultural diversity, but also, it has the potential to help identify the cultural factors taking place in the process.

The focus of SI is explored in James A. Phills, Kriss Deiglmeier and Dale T. Miller's definition:

> "A novel solution to a social problem that is more effective, efficient, sustainable or just than existing solutions, and for which the value created accrues primarily to society as a whole rather than private individuals. A SI can be a product, production process or technology, but it can also be a principle, and idea, a piece of legislation, a social movement, an intervention or some combination of them" (2008, p. 39).

This definition indicates that SI can range from being a resulting object to new knowledge, a movement or any combination as long as it is solving a problem to make a situation better than before. From this perspective the projects we discuss in this article present two problems. The first project, the *MP* reveals an approach based on creativity to involve university students from different countries and their collaborative exploration of the meaning of savings for their future. The *IB*, the second project, also relies on creativity to promote CE by involving a community of strangers utilising a public space, the combination of architecture, and media in a temporary space. In both projects the role of context was central in the development of engagement. We believe that the outcomes from each exploration capture and helps us to reflect on the cultural values inherent in the level and quality of engagement from each participant, as individuals, and as part of a community.

With SI driving the emergence of community driven design interventions, consideration towards the shift in the relevance of traditional ethical foundations is required. Ims and Zsolnai (2014) define the success of innovation for local communities in the developing world, and explain that there are ethical concepts, rules and principles that should be taken into account when considering innovations in a social context. In his study of business cases, Ims and Zsolnai highlights that the vulnerability of people and communities requires acute ethical consideration, and indicates that sensitivity to local cultural needs, and an ethos for serving the common good appear to be the preconditions for successful and lasting SI by business. Design and culture are closely intertwined as they inform one another. We propose that by employing participatory methods in CE processes it is possible to foster SI. The following sections discuss the cases in which we unpack and exemplify the different actors and contexts through which these concepts have been explored.

3. The concept of viable futures through social innovation-led projects

According to Ezio Manzini (2014, p. 57) SI is "a process of change emerging from the creative re-combination of assets, the aim of which is to achieve socially recognised goals in a new way". For a SI project to be successful, designers must have a deep understanding and be sensitive to existing problems (Papanek, 1985, p. 151). The development of SI as a tool to combat poverty and social issues has accelerated internationally as these issues are addressed faster, easier, at a larger scale and more sustainably (Etchart & Comolli, 2013). An example of DF aiding SI in Peruvian communities is *Compadre*.

Compadre is a project aimed to empower rural coffee farmers in a province in Peru. It is backed by the Universidad de Ingienería y Tecnología (UTEC), and specifically by their start up accelerator centre UTEC Ventures (2015). For this project a prototype called *Inti Tec* was

developed; it is a solar operated coffee roaster that provides greater economical outcomes for coffee farmers of the Andean and Amazonian regions of Peru (Pérez, 2015). Farmers in this region have an autonomous lifestyle but need income to provide health care and education to their families. Small farms were found to be selling their dried (not roasted) coffee beans for 8 soles a kilogram. Juan Pablo Pérez, one of the founders of *Compadre*, says "this doesn't reflect the true value of their work" (2015). He found that if the famers are able to roast the beans they could sell the product for 20–50 soles a kilogram. Typically used commercial roasting machines are expensive investments and are not appropriate for rural conditions; the *Inti Tec* succinctly captures solar energy and transfers it to a drum where the coffee beans are roasted on site. It is a transfer of technology and knowledge that provides the farmers with a fairer and more sustainable economy (UTEC Ventures, 2015).

A team of industrial designers, mechanical engineers, solar energy specialists and anthropologists facilitated the *Compadre* project. The *Inti Tec*'s main structure is a large curved surface covered in mirrors with a focal point. This structure was designed using computer-aided drafting and manufactured in workshops. Although these workshops are not "typically" FLs, the same aspirations of sharing new technologies and information are demonstrated in the *Compadre* project, which is to create an improved quality of life for the farmers.

The case of the *Compadre* project reveals how a transdisciplinary group of researchers and designers worked closely with a community to identify and design a solution to improve their economic viability. By employing a participatory approach, thus working with the end users, the designers and farmers co-designed a portable coffee roaster powered by solar energy. Relying on collaboration and creativity a solution was conceived allowing the community of farmers to envision and create their own VFs.

4. The creative industries input

Acknowledging the challenges of applying creative approaches in research, Horst Rittel and Melvin M. Weber (1973) defined two types of research problems; tame problems and wicked problems. Generally, tame problems follow traditional scientific approaches that require linear and orderly processes to address and resolve. Tame problems are characterised by the phases of collecting data, formulating and implementing a solution (Rittel & Weber, 1973). In Rittel's and Weber's view (1973) design aligns with the wicked problems type of research, which is identified as an opportunity driven way to solving problems. Design problems are typically not linear and are concerned with social and cultural issues. Wicked problems are indeterminate in nature, which is inherently similar to the design process adopted by many practitioners where the outcome is an iterative result of exploration, experimentation, prototyping and testing. In the design field, research through design (RD) is "a research approach that employs methods and processes from design practice as a legitimate method of inquiry" (Zimmerman, Stolterman, & Forlizzi, 2010, p. 310).

The purpose of RD as a methodology is to develop and implement designed artefacts or interventions with the intention of discovering aspects of human experience (Dow, Ju, & Mackay, 2013) and to create theory (Dow et al., 2013; Zimmerman, Forlizzi, & Evenson, 2006; Zimmerman et al., 2010). From this perspective, it has been linked to wicked problems

(Zimmerman et al., 2006) as a way of producing knowledge through inquiring. This approach to research is a process which shifts the focus from research on the past or present to research on the future, and enables the ability for researchers to actively contribute to the future state of the world (Zimmerman et al., 2010). Although this approach tends to focus on the outcome of a physical artefact, system, or intervention more researchers are extending the approach through activist views towards improving society for the future (Zimmerman et al., 2010; Gaver, Dunne, & Pacenti, 1999; Swann, 2002; Zimmerman et al., 2006). The research discussed in this article is driven by a RD approach that seeks to explore the future state of our world through designed interventions and experiences. These designs and their processes help to gather insight about participatory methods and their role in creating meaningful CE that empower and inspire people to make change.

The CIs input in projects and endeavors to procure progress and innovation within culture, has been backed up by the Government of Australia (GA) since 1997, when it highlighted the importance of the CIs as a critical feature of industry development and the need to preserve "culture" in order to develop and uptake technology that is attune with the Australian identity (Swanson, 1997, p. 48). More recently, the GA (Australian Government, Department of Human Services, 2008) acknowledged the significant contribution of our CIs and their ongoing importance to our economy and culture, as vital for the country's prosperity in the 21st century. The CIs encompass a variety of disciplines whose contribution generates creative intellectual property with the potential to be commercialized. Within these disciplines, design and architecture disciplines share a common ground in various areas, in particular in their approach to working with user representatives and the use of technologies. In the following section two examples from CIs disciplines demonstrate our concept of engagement as a critical component of design innovations in people's everyday activities. These cases exemplify the implementation of a RD approach where different wicked problems were explored employing a range of design methods to envision possible futures. The design methods provided researchers with iterative and exploratory lenses to examine and address social issues. In addition, the RD approach allowed alternative and creative opportunities for different forms of CE to arise.

## 5. Participatory experiences towards the making of viable futures: *Mutant Piggy* project

The way people work, play, communicate, study, and do everyday chores is changing at a fast pace due to technological advances (Kolbitsch & Maurer, 2006; Foth, Hee-jeong Choi, & Satchell, 2011; Caldwell, 2014). This is real not only for affluent societies, but also for emerging economies where technologies have empowered the way communities resolve pressing needs. It is then fair to say that the future landscape of everyday life is constantly changing, and that the way young generations will imagine their future has no boundaries.

A SA ST was conducted with 13 undergraduate students from the SD of QUT in November 2015. The ST visited Peru and Chile, it was part of the SD curriculum and students enrolled in the ST unit for credit. As part of the ST course content, the *MP* project was presented to students as a design task to work with the university students overseas; there-

fore, QUT students began to explore the *MP* design project before departing for SA. The design challenge of the *MP* project was to explore *how culture mediates the way technology is employed in different social and cultural contexts to produce "designs"* (of objects, furniture, garments, *etc.*). Understanding the students' views, perceptions and values towards "savings" was the focus of the project, and it served as the design provocation for the project brief by design students from QUT (Brisbane, Australia), Pontifical Catholic University of Peru (PCUP, Lima, Peru), and from Duoc UC (Santiago, Chile).

As a point of departure, we established that in this project, "savings" needed to be interpreted as an enabler, a medium for empowering people, a means to an end. From this definition we established that this concept did not necessarily refer to the traditional notion of "savings as money". Instead, we asked students to consider that as technology is constantly changing the way people do things, in the future young people might think of "savings" in a different way. The *MP* project provided students from the three countries with an opportunity to rethink what "savings for the future" might be in different contexts, "what" could be "saved", and in what form could "savings" be collected in the near future.

This project's dynamics involved that QUT students worked in small groups of 3–4 students to design and develop their own concept of savings. Each group was required to digitally fabricate a prototype of their *MP* and take it with them on the ST as seen in Figure 1.
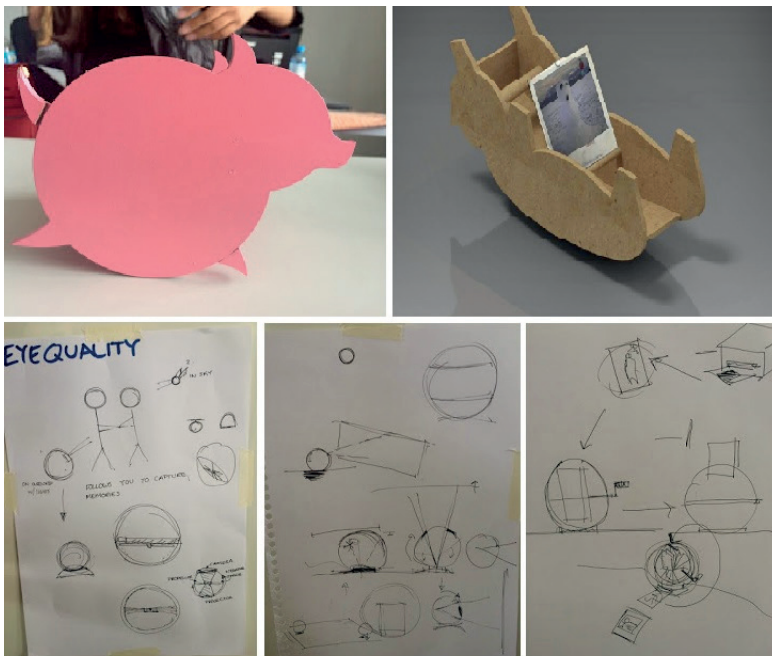
Print a micro photo - store that photo within the globe - each day the globe randomly selects and displays a memory.

Figure 1. *Mutant Piggy* project about saving "memories for the future": Queensland University of Technology student project (upper row), Queensland University of Technology and Pontifical Catholic University of Peru iteration in Peru (bottom row) (source: Danielle Daubney's Blog (assignment for Queensland University of Technology study tour unit))

The project brief was addressed during design workshops while in Peru and Chile. The QUT students worked with two different groups of local undergraduate students from PCUP and Duoc UC to redesign and mutate the piggy. This series of design workshops lead to the iteration of three different designs for the *MP*. Each one was unique and particular to the different contexts and actors through which they were developed and envisioned. The *MP* project not only served as a provocative issue through which the different students could consider their futures it also allowed an investigation of the issue through design methods. The students employed creative approaches such as sketching, model making, prototyping, diagramming, scenario building and testing to explore the problem as seen in Figure 2.

The creative methods allowed the students to communicate across language barriers. In very short amounts of time (approximately 2 hours) the different students were able to effectively engage with the problem, brainstorm ideas, develop a concept and present to the rest of the groups.

Figure 2. Images from design workshops at Pontifical Catholic University of Peru and Duoc UC (source: authors' photographs from the workshops)

The following is an excerpt from the Australian QUT students' description about their *MP* project, the meaning of "savings for the future" in the context of their generation, and the iteration with peer design students in Peru and Chile, for example, saving memories for the future (see Figure 2):

> "…the pictures above show our original version of the *Mutant Piggy*. My group in particular chose to focus on the concept of saving memories and the importance of capturing a special moment in time. The idea being that a physical item such as a printed photograph can have a significant effect on the value of the memory in comparison to a digital version however, it is extremely evident that we took the concept of 'piggy' very literally. The next few pictures demonstrate how valuable the workshop was and how much the design developed due to interaction with one of the Peruvian design students. The student we were working with studies Architecture at PCUP and the very first question he asked us was 'what shapes and interactions do you think of when I say the word memories?'. It was a simple idea such as this that completely changed the way we thought about the design. From here we started playing with spherical shapes and futuristic products that could interact with human to capture or display moments throughout their life. It was amazing to see how much the design changed and varied over the course of interaction with the Peruvian design student. The final idea we came up with is called iQuality" (Danielle Daubney, Samatha Menezes and Carl Gust).

At the Duoc UC, QUT students worked with the Chilean design peers on the same project of the *MP* saving for the future. On this occasion, students were led by Duoc UC academics and employed the design factory methodology. Students discussed and brainstormed their concepts and left these in words on post it notes (see Figure 3). The emphasis across the four groups was on people's values, knowledge, relationships and experiences. From the perspective of students from a young generation, saving for the future meant saving for a better life, a better future for all which was based on human values.
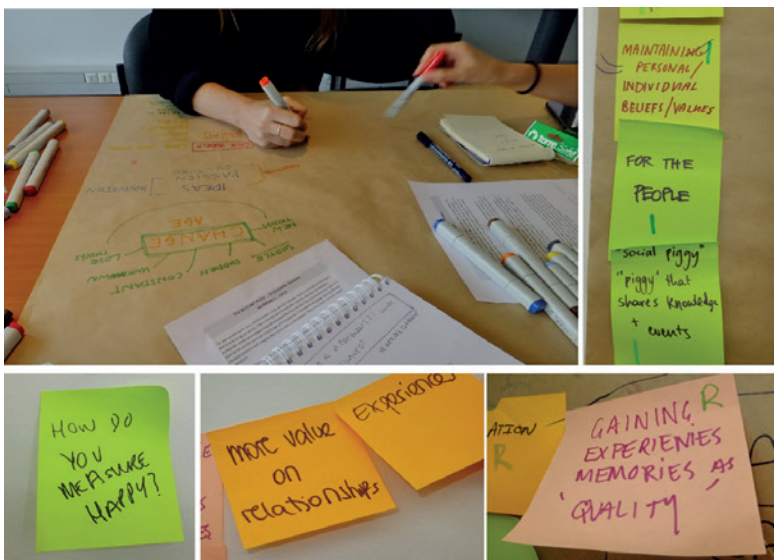

Figure 3. *Mutant Piggy* project about saving for the future: workshop led by Duoc UC with design factory methodology (source: authors' photographs from the workshops)

6. The *InstaBooth*

The *IB* (Figure 4) was developed as a situated community engagement tool and method by QUT based researchers from the Urban Informatics Research group, QUT Design Lab. The *IB* was designed based on participatory and co-design fundamentals where different design workshops were held with stakeholders (Caldwell Amayo et al., 2016). The purpose of the *IB* is to combine physical and digital interactive components and media within a temporary space to promote engagement from local people. It has been deployed around Brisbane and in the regional town of Pomona, Queensland during 2015–2017. In collaboration with local communities the *IB* was placed in each location to engage with community by presenting questions of users regarding their thoughts towards the future of the city or town. The responses to the questions allowed participants to co-create the content within it. Contributors were able to express themselves through drawing pictures, writing notes or letters, texting or tweeting messages, or uploading or ranking digital photos. The responses were mostly visible to other users and participants allowing users to read and reflect on the views of other people from the community. The range of interactive media and openness of the content provided people the ability to voice their ideas or concerns while sharing knowledge and allowing people to learn from each other (Caldwell Amayo & Foth, 2017).

A broader range of engagement occurred through the *IB*'s combination of creative approaches and interactive media. People who do not typically participate in community consultation or engagement activities were found to engage with the *IB* and provided meaningful responses. Participants also revealed that they obtained a better sense and appreciation of the different members of their communities by considering the thoughts shared through the *IB*. It was deployed in partnership with local communities or events who provided the questions that were asked through it. Although the information collected was in response to these

Figure 4. The *InstaBooth* in Brisbane, Queensland, Australia
(source: authors' photographs from the workshops)

questions coming from different stakeholders we argue that the deployments were primarily conducted from the middle-out where the *IB* acted as a mediator between the local citizens and the decision makers typically at the top of the hierarchy.

Through observation and evaluation of the *IB*'s deployments around South East Queensland we can conclude that the different media through which people could participate with the questions inspired a sense of creativity.

7. Discussion

The examples provided from the CIs disciplines, showed two different forms of CE. The *MP* project involved the participation of students from three different countries in an exploration of their concepts of savings and what that mean for their futures. The *IB* is a CE tool designed to be situated in the context within question. Involvement of participants in the *IB* depended on the purpose of the CE, as well as the venue and timing of where it was installed. Although these two projects are quite different in scale and scope they similarly reveal how employing a creative approach to CE can provide meaningful results. These two projects explored alternative approaches to the envisioning of potential futures for the groups of people who engaged and interacted with them. At their core, each project was framed according to a particular ethical and theoretical framework supporting their development, which was facilitated by participatory and co-design methods.

Therefore, by comparing the two cases we propose that the creation of VFs by design is an engagement process that involves co-production of knowledge. The use of participatory and co-design methods is fundamental in this process of producing designed objects, systems, processes, and structures for the purpose of creative CE and in order to foster participation and creativity that helps participants express themselves in authentic ways. Enabling the ability to question and communicate their ideas and visions for the future is an important and valuable step in creating empowered societies who recognise the strength in numbers as well as the wonders and challenges of difference. Empowered and inspired societies are more likely to create positive change and ultimately try to make a better world.

Conclusions

In this article a discussion of current literature situates our explorations from a CIs perspective. The concept of VFs by design is established as the enabling of new endeavours that are made possible within particular contexts and within local people's knowledge. The examples demonstrated the increasing importance of CE endeavours in the making of VFs by design. In these examples, employing creative CE processes facilitated the envisioning of alternative futures that are contextualised within people's cultural context, therefore leading to SI. We have discussed the *MP* and the *IB* as projects arising from the CIs disciplines to indicate how different actors can be involved to establish shared knowledge and cultural awareness. The discussion of the cases demonstrates how technology ceased to be a determinant of progress for the traditional separation between countries with or without economic power. At the same time, the presence of culture as a filter for the application of SI process calls

for a more critical consideration to the ethical aspect of these approaches. We propose that social change can be achieved as a by-product of CE in creative SI processes that involve the sharing of knowledge.

The making of VFs by design through a CIs approach is emerging, it is increasingly taking place in regions that traditionally have been considered as emerging economies. Driven by community groups that are concerned by particular social issues, SI through CE are happening across the globe. If only these efforts were more consciously dedicated to the creation of VFs for human happiness, we would be able to design a better future for all.

Acknowledgements

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PERSPEKTYVI ATEITIS, PASITELKIANT DIZAINĄ: BENDRUOMENĖS TELKIMOSI PATIRTYS KŪRYBINĖSE INDUSTRIJOSE

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Santrauka

Bendruomenės telkimosi projektai, skirti socialinėms inovacijoms, vis dažniau vykdomi visame pasaulyje, atskleidžia tendenciją bendru sutarimu įtraukti bendruomenes, kad jos dalyvautų socialinių poreikių įvairovėje. Vis dėlto nedaug diskutuojama apie tai, kaip šio tipo projektai galėtų atverti perspektyvią ateitį kuriant dizaino inovacijas, bei apie tai, kokią įtaką žmonių telkimuisi ir bendruomenę įtraukiantiems projektams turi socialiniai ir kultūriniai veiksniai. Tvirtiname, kad perspektyviai ateičiai kurti pasitelkiant dizainą reikia metodo „iš apačios į viršų", kurio atveju idėjos kyla iš pačios bendruomenės, o žinios generuojamos bendradarbiavimo, dalyvavimo ir telkimosi proceso metu. Žvelgiant iš šios perspektyvos, straipsnyje aptariame įžvalgas, įgytas studijų turnė projekto metu, kai buvo tyrinėjami įvairūs telkimosi, kaip pagrindinio dizaino inovacijų komponento žmonių kasdienėje veikloje, koncepcijos aspektai. Studijų turnė projektas vyko Kūrybinių industrijų fakultete

Australijoje, o jį sudarė du skirtingi kūrybiniai dizaino tyrimai – studentų projektas *Kiaulytė mutantė*, kuriame dalyvavo studentai iš Australijos, Kinijos ir Peru, bei tyrimų projektas *InstaBooth*, įtraukęs Brisbeno (Australija) bendruomenę. Remdamiesi mūsų patirtimis, pateikiame perspektyvios ateities pasitelkiant dizainą koncepciją, sudarančią galimybes imtis naujų veiklų. Perspektyvios ateities pasitelkiant dizainą kūrimas – tai telkimosi procesas, reikalaujantis bendrai generuojamų žinių ir tinkamų priemonių, siekiant palengvinti demokratišką ir nuoširdų dalyvavimą bei tai, kad šis procesas gali paskatinti socialinius pokyčius kaip šių bendruomenės telkimosi patirčių šalutinį produktą.

Reikšminiai žodžiai: bendruomenės dalyvavimas, kūrybinės industrijos, dizainas, dalyvavimo dizainas, socialinė inovacija, perspektyvi ateitis.