

CREATIVITY AND PARTICIPATORY ARTWORK FOR CIVIC AWARENESS

TERESA MACCHIA
UNIVERSITY OF TRENTO
TERESA.MACCHIA@UNITN.IT

CRISTHIAN PARRA
INRIA, FRANCE
CRISTHIAN.PARRA@INRIA.FR

PAULA MATE
INDIANA UNIVERSITY
PMATE@INDIANA.EDU

VINCENZO D'ANDREA
UNIVERSITY OF TRENTO
VINCENZO.DANDREA@UNITN.IT

ADRIANO SIESSER
UNIVERSITY OF TRENTO
ADRIANO.SIESSER@UNITN.IT

ZODIDI JEWEL GASEB
POLYTECHNIC OF NAMIBIA
ZGASEB@POLYTECHNIC.EDU.NA

DAVID HAKKEN
INDIANA UNIVERSITY
DHAKKEN@INDIANA.EDU

ANTONELLA DE ANGELI
UNIVERSITY OF TRENTO
ANTONELLA.DEANGELI@UNITN.IT

ABSTRACT

This paper discusses our reflections on the potential of creativity as an enabler of cross-cultural conversation and collaboration, within a Participatory Design experience. We build reflections upon our own experience in organizing and facilitating ConstellACTION, a two days design workshop for the creation of a participatory artwork, during the 2014 edition of the Participatory Design Conference, held in Windhoek, Namibia. The goal was two-fold: raising awareness on civic participation in Namibia, and facilitating participation in generating ideas to tackle those challenges. The ConstellACTION experience enabled participation and awareness on social issues, showing features and fruitful potential of an art-combined participatory workshop. We discuss the dynamics that follow our considerations of how civic awareness arise in a mixed setting.

INTRODUCTION

Design challenges happen universally and respond differently to different needs. Design is about changing perspectives, looking to a situation through a different angle; finding accommodation between people's needs; solving problems, and discovering new possibilities and solutions. However, design also implies changes that influence everyday people's life. Thus, design processes need a consistent and general vision that touch and consider multiple voices, specifically, in the context of social and public design agenda, and in respect to civic participation. For facing the need to hear and listen at multiple agents, designers adopt and refine techniques for involving citizens, also in relation to the kind of services and public designs they are considering (Simonsen and Hertzum, 2011). Thus, we take into account the need for developing methods for involving citizens in public design. In this context, we rather prefer to use the term citizens instead of users, since we base our research interest on civic participation and public design agenda. The discussion around citizens and users has been debated from different perspectives and through different tones, and still it is matter of interest regarding the involvement in the design process and practices. Moreover, this is a sensitive theme when design is described as a relational practice (McHardy et al., 2011) that implies many actors held together by these practices and linking artifacts more than by a common point of view.

With the goal to bring attention on a participative method for civic awareness, this paper describes a

participatory workshop meant to create rooms for communicating and for enabling conversation on civic issues between people with different perspectives on things and different needs.

Very often, design challenge requires techniques for stimulating and supporting conversation and mutual understanding in relation to delicate and critical topics such as social issues and policymaking discussions. Participatory Design (PD) literature offers useful and flexible toolkits that allow designer and citizens to depict a complete image about the circumstance and for creating solutions. Still, in complex design conditions, designers need toolkits, techniques and practices for supporting and stimulating dialogue between citizens with different backgrounds, providing at the same time spaces for everyone to have a voice. Following this line, we had an interesting experience in organizing and running a two days workshop on design challenges at the 13th Participatory Design Conference, held in Windhoek, Namibia. The workshop was about stimulating conversation between Namibian citizens and people from all over the world. Participants discussed about civic participation, social activism, and participated all together in the design of a participatory installation. We called the installation ConstellACTION as a reminder that participating all together can make the difference in solving social issues, and as a reminder that the night sky of Namibia is one of the best of the world, astronomers say.

We construct this paper reflecting on the potential of fostering creative activity to stimulate dialogue and collaboration. The following section focuses on the theoretical aspects that stimulated the creation of the workshop. We combine together three main areas of study: gender studies provide a theoretical framework for looking at cultural, social and attitudinal differences; and, literature on creativity and on PD offers practical information for organizing the workshop. The third section of the paper describes ConstellACTION: the process of organizing and running it. The fourth section examines data we collected in the process of running the workshop. We conclude the body of the paper discussing the meaning and the value of ConstellACTION.

THEORETICAL AND CONCEPTUAL FRAMEWORK

The workshop we organized has roots on civic critiques and on inclusion of ideas. Moreover, we drew the structure of the workshop throw: gender traditions, Participatory Design and creativeness. In this paragraph we discuss the three studies traditions separately in order to clarify the starting point behind the workshop experience of ConstellACTION.

The next subsection focuses on gender studies, while the second subsection describes the research tradition on creativity. We conclude the section unfolding the potential of workshops techniques for converging different perspectives and stimulating creativity.

GENDER STUDIES: INCLUDING PERSPECTIVES

How to deal with different culture and needs is an important issue in contemporary participatory projects. Thus, this section illustrates an way of doing so. We draw from our workshop experience in Windhoek, on the particular aspect of attitudes towards participation. The context and the history of Namibia that includes issues such as colonization, ethnic conflicts, gender dynamics and political instability stimulated and encouraged the adoption of participation and collaboration through creativity; as we look at creativity as a stimulus for dialogue and collaboration across different cultures. Thus, we explore PD principles for crossing cultural differences. Moreover, PD actors can develop culturally appropriate senses of both creativity and collaboration by learning to detach preconceived notions of culture.

If culture is important, how should it be addressed in PD projects, particularly in the case of Namibia? We argue for the need to decompose socio-cultural aspects into different perspectives most relevant to any particular case and, then studying each perspective in relevance to such cases and so on. Nevertheless, such kind of approach has limitations and is unrealistic in the context of a multicultural workshop. However, we believe it to be a good way to address culture in a participatory context.

There are several reasons to view participatory experience through cultural narratives. We begin by placing participation in context of Namibian national policies within which participation is applied. For example, in terms of gender equity, SchoolNet Namibia an Information Communications and Technologies (ICTs) initiative employed to provide access and support Namibian civilian has recognized female heroes and role models in promotion of gender equality and empowerment. To be highlighted is that 75% of Namibian teachers are women (SchoolNet.org).

We posit that a complete understanding of participatory collaboration as an agent for dialogue would mean attending to other cultural dimensions. As we learned from the civic participation workshop in Windhoek, the population includes many different ethnic groups. The economic culture is stratified. Rural areas, where most people live have strictly complex gender roles. Women are less educated thus; women and children tend to depend on the male “chief of the household” as the main source of income. In addition to these issues, Namibians expressed their mistrust on the government. Hence cultural, socio-economic and political aspects need to be taken in consideration in participatory collaboration projects particularly in countries such as Namibia.

LET PEOPLE TO BE CREATIVE

In many different ways art has been considered an occasion for communicating through unconventional channel and for stimulating a creative process that leads to novelty and innovation.

Research on creativity describes the process of being creative in four steps: *preparation, incubation, aha moment, verification* (Kneller 1965, MacKinnon 1976, May 1975). First it is about becoming aware of existing problems. The incubation step, differently, is about forgetting the problem. Then, the *aha! moment* is when a new idea suddenly comes up. Finally the creative process ends verifying and testing the idea.

Nevertheless, the creative process is also about improvisation (Hallam and Ingold, 2007) and about making relations throughout an informative process (Ingold, 2010). Additionally, creativity refers to reflection-in-action (Schön 1987), when changes and innovations arise by experimenting and performing in everyday context. Thus, also relating to the work of Sarkar and Chakrabarti (2008), creativity is about having ideas and solutions that are novel and valuable – namely useful – for the context.

Looking at the creative process as a tool for stimulating novelty and new value, Participatory Art is a vehicle for stimulating and activating creativity in the community, pursuing an egalitarian production of art (Bishop, 2006). Additionally, McHardy et al. (2011) describe art and design as relational practices (McHardy et al., 2011) that stimulate collective and participative reaction. Moreover, Participatory Art defines a collective action for looking to the future introducing artifacts and tools that encourage people interrelation and participation.

In this context we emphasize the role that artifacts and tools can play in the creation of relationship and for connecting people together. Over the last twenty years, several authors discuss the effect and impact of the interrelation between people and things (Belfiore and Bennet, 2010; McHardy et al., 2011). Moreover, this tie and growing interrelation affect research in different fields including art and design, and influence overall cultural and policy agenda (Belfiore and Bennet, 2010; McHardy et al., 2011). And, art has been promoted as a tool for participating to the civic life through practical activities (McHardy et al., 2011). In this respect, Participatory Art is explained as a way for understanding everyday life and for addressing policymaking (Matarasso, 2003; Belfiore, 2006). Bishop (2006) explains Participatory Art as a desire for engaging and empowering citizens through a subject for facing commons issues and problems. Thus Participatory Art, through tools and subjects, engages and stimulates citizens' creativity changing and/or improving their point of view and perspectives on specific themes, like public services and civic agendas might be.

USING THE WORKSHOP AS A PARTICIPATORY TOOL

The tradition of PD discusses different options, techniques and tools for engaging citizens in the participation to the design process of services and product. For example, workshops occupy a privileged place in the practices of PD and Innovation Communities. They facilitate communication between

diverse parties, helping them to share goals, strategies, and outcomes (Muller, 1996). In Muller's taxonomy of PD practices, diverse forms of workshops are used in across all the cycles of design (early and late) and within all contexts (Muller, 1993), both in real life and laboratory contexts. Additionally, Muller (1996) suggests that they take place in neutral sites - i.e., places that are neither part of the designers' workplace nor of the users' workplace.

Workshops might introduce unconventional practices not necessarily documented, even though literature recognizes some distinct categories: Future Workshops (Jungk, 1987), Metaphorical Design Workshops (Madsen, 1994), Interaction Relabeling (Djajadiningrat, 2000) and Inspiration Cards Workshops (Halskov, 2006). These participative activities are ideal for co-design activities to occur (Sanders et. al. 2010) and are beneficial for the design process for (Muller, 1996): (1) facilitating the development of new concepts; (2) engaging interested parties in the design process; (3) combining and converging people's ideas to realize new concepts; (4) facilitating the production of input and/or artifacts that can serve the next stage on the design process.

In the following, we present and discuss our workshops, emphasizing the fact that we did not know the potential participants, who were from different countries and had different backgrounds.

METHOD: THE CONSTELLATION WORKSHOPS

In this section, we describe the context of the Constellation, how the workshop happens and materializes; second, we describes on the activities and the phases of Constellation workshop; third, we conclude presenting the qualitative data we collected during Constellation.

CONTEXT

The experience we describe in these pages starts with a design challenge, posed by the PD conference organizing committee, and summarized in the following overarching question:

"How can Namibian citizens get involved in decision and policy making along with the promotion of social activism?" (PDC2014)

Aware that this was a challenge of impossible resolution within the time-frame of a conference, and which further required the understanding and active participation of the local community, we started conversations and brainstorming for creating a network of people between countries all over the world, including Italy, Mozambique, Namibia, Paraguay, USA. The goal of this multicultural collaboration was to create a participatory experience for facilitating collaboration and communication, between conference participants and the local community, in proposing participative methods for design challenges in civic

participation. The multinational collaboration process that followed lasted over half a year and led to the Constellation workshop and participatory installation during the PD Conference.



Figure 1: Examples of Challenge Cards

The participatory workshop included two sessions of two hours workshops for creating Challenge Cards (see Figure 1). The design and the creation of the Challenge Cards linked the participatory artwork experience (see Figure 2). These activities can be divided in four moments that started with a discussion in the pleasant context of the Namibian Business Innovation Centre in connection with the Polytechnic of Namibia, in Windhoek. Participants to the workshop, organized by groups and provided by exemplary discussion themes, explored the many faces of the design challenge question. In order to ground the group activities to the Namibian context as much as possible, at least one person in each group was from Namibia. A moment aimed to create the Constellation artwork, interweaved a third moment intended for designing and actually creating the Challenge Cards (see Figure 2) that have to be placed on the installation (see Figure 3).



Figure 2: One of the group is participating in the creation of the artwork through the use of the drip colour technique

Finally, the installation has been exposed in a public environment for raising awareness about the challenge and possibly gathers new ideas from the community related to each Challenge Card.

In the following, we explained how these moments were organized and took place as part of each session of the workshops during the conference.



Figure 3: The Challenge Cards are placed on the canvas with a quote from Sagan

FIRST CONSTELLATION SESSION: DISCUSSION AND THE FIRST STARS OF CONSTELLATION

During the first session workshop, groups of participants discussed about multiple themes related to the general question proposed as challenge by the conference committee. In order to stimulate the conversation and avoiding unpleasant embarrassment, participants were provided with a prototypical list of seven possible themes.

After the presentation of the guidelines and the purpose of the workshop, participants actively began discussions on several themes among those proposed in the provided list (see Appendix A) and other related to the perceptions and the interests of participants themselves. For example, some groups discussed gender violence; some other discussed policies for allowing young to have a future; or about the high number of languages spoken by Namibians that reduce public participation.

For stimulating the creative process in relation to the discussion, participants were invited to create their own stars (see Figure 1). As you can see in the Figure 2, participants painted together the Namibian starry night on a dark canvas, by adopting the dripping painting technique. Using this technique, also known as Pollock's technique, the participants informally and casually dropped colours on a canvas that lay on the ground. This painting activity was a core moment for the workshop: first, for creating a trustful and informal atmosphere, and second, for take a breath from passionate discussions. Since this moment is central to break the ice between participants who do not know each other, we emphasize this activity through the name of the workshops. The choice of the starry night follows two ideas: on one hand, it underlines the local context (i.e., the Namibian desert is renowned by featuring one of the best views of a starry sky); on the other hand, it expresses how the contribution of every one results in a wonderful artwork. To highlight the importance of collaboration, another canvas has been prepared before

hand with an inspirational phrase “*Consider again that dot. That's here. That's home. That's us. (Carl Sagan)*”.

SECOND CONSTELLATION SESSION: CREATING THE CHALLENGE CARDS

The second session of the workshop was held two days after the first, still during the conference. The groups were asked to summarize their previous discussions in the form of Challenge Cards. To do so, participants received sketching and collage materials for creating visual representation of the challenges they discussed and wrote in the cards (See Figure 2).

Each card has two parts: on the left side the groups visually represented the challenge and on the right side the groups wrote a question summarizing the challenge, leaving a blank space for someone to provide an answer to it (See Figure 1). At the end of the session of the workshop, participants placed their cards in the canvas with the sentence from Sagan, in such a way that it would cover the inspirational phrase. During the following days, the installation was exposed in a public place. Thus, anyone could provide an answer to the challenges on the cards, placing their answer on the canvas with the sky and taking the visual representation of the challenge as a gift. We emphasize the concept of the *gift* since it is useful for creating and maintaining relationship (Mauss, 1923; Aime, 2010). Thus, in order to stimulate an enduring discussion about challenges and on civic issues, we decided to highlight this element, creating online channels for supporting possible and desirable dialogue between the Constellation participants. We collect in a web platform direct and indirect pictures tagged in twitter and/or instagram with the hash-tag #Constellation and directed to the twitter account of @aConstellation and to the instagram account of @Constellation. The main purpose was to create an-online space for collecting and reading at the answers to questions and challenges posed in the Challenge Cards. The artwork has been exposed and some people stopped by to look at the cards. Even though a couple of people autonomously interact and participate to the installation, only two people contributed with an answer, and a couple of friends shared a new question.

COLLECTED DATA

The present work serves to understand and describe which dynamics might support, stimulate and facilitate sharing views, ideas and opinion, among people with different needs, overall in relation to civic participation and consciousness.

The semi-protected environment of the PD conference lets us to observe the successful activities and dynamics during the Constellation workshop.

The workshop was opened for everyone. Everybody was welcomed to join the activities and 33 people

created 6 groups. Each group created an average of 5 cards (see Figure 3).

We documented the workshop sessions through pictures, short videos, notes, and a questionnaire for an overall image about the participant's perception. Additionally, informal discussions completed the general understanding about the dynamics that stimulate discussions and each other understanding. Thus, the following results are based on the qualitative analysis of the workshop data.

AN OVERVIEW ON THE WORKSHOP

Usually, the Business Innovation Centre that hosted the workshop adopts questionnaires for receiving feedbacks about the activities proposed. Thus, following this practice we distributed a nameless questionnaire for depicting an overview about the workshop that expresses a general trait we wished to stimulate: communication and empathy between participants. In fact even though the time for preparing the Challenges Cards was considered too short by the 40% of participants who gave detailed about aspects they liked or not, the 70% of people was satisfied in different manners by the kind of relationship and communication engaged with the participants. For example, in half of the descriptions, participants stated that they were satisfied by the combination of people with different competences and expertise, and from different countries. In addition, some participants underline the connection between the conference and the local community. Besides, one participant wrote that one of the most admirable aspects was about the engagement between locals and foreigners for discussing real issues. Following this line, some of the participants suggested:

“Invite or put posters in the streets to invite people. I feel a lot of people maybe didn't hear about the workshop”

And some other suggested to switch between the groups in order to stimulate the connections and the dialogue even more. At the same time, we encountered participants who wished more emphasis on the local community since there is the

“[...] need to do workshops when local people are available. Not when foreigners are available”.

The questionnaire give us a general picture about the level of interest and inclination in participating to this form of workshop, which invites people to produce and represent a concept, instead of prototyping a technological tool. Thus, this form of participation and activities engage people in discussing and participation between people who have different backgrounds.

PICTURES AND VIDEO

During the workshops we took pictures and made video for documenting the activities. The analysis of this documentation confirmed some details that have been also pencilled through field-notes during the workshops. For instance, we observed that each group needed in the

beginning ten minutes for creating the relations and balance between participants. The balance identified in the beginning of the workshop continued over the two sessions and left the space to participants to introduce themselves and feel free to express their mood. We could observe in multiple cases participants laughing and having fun together, bonding moments of seriousness and overwrought discussion. In this respect, each group was fully absorbed by the discussions and by the topics. For example, one of the group had a very good time in discussing their topic about the future for young people, in fact, until the last second, they cut papers and discussed how to better represent the stress of younger's condition in Namibia.

Following the balance between fun-seriousness, in many cases we could observe local participants explaining their point of view, as if there would have the wish to find a place to tell about personal perspectives and opinion. While local participants were presenting and telling about local conditions, other participants were genuinely listening at their words until the situation was ready for questions and for details, leaving spaces for fun and for laughter in order to balance the, sometime, intense rhythm of the discussion. Even though this game happened during both sessions, these dynamics were stronger in the second session when, while creating the Challenge Card, participants needed for additional details.

Analysing the videos we observed that the use of the collage for the representations in the cards has specific dynamics and reasons. For example we observed that a table with a good range of stationary material (e.g.: magazines, colors, glue, papers) on the top stimulates and encourages participants' involvement and discussion. We might describe these material as "*prompting package*" that is useful for two main reasons: first, the objects can be an occasions for participants to connect each other. For example, an easy question like "can I use the glue?" triggered and influenced the relationship and the collaboration; as well, looking together for images in a newspaper stimulated the debate during the selection of images themselves. Second, the materials on the table might stimulate some insights. At the same time, during the discussion, the table is a material support for linking participants and supporting the creation of a group. The stationary materials *become visible* when the discussion ends. In this sense, the discussion and the representation, no matter if talking about a collage or a draw, interlace each other. While the discussion stimulates the production of the cards, the production of the cards stimulates additional discussion.

DISCUSSION

Since creativity is a core feature for stimulating changes and fostering innovation, we adopted a traditional scheme for engaging people in discussion on civic issues and for stimulating the creative process for expressing their concerns. We organized the

ConstellACTION workshop in three rough sections: discussion, pause and distraction, creation. Through this workshop we expected to stimulate crafting and practical activities, while raising awareness and reflections on complex and sensitive civic topics.

The environment and the objects provided for the activities stimulate and encourage creativity, as well as mutual understandings between people who have different interests and look at the same subject from divers angles. Through this specific format of workshop/artwork people engaged in discussions related to civic participation in the context of Namibia, sharing interests, opinions and understanding. Moreover, people from various countries joined fruitful dialogue for developing awareness about local issues. Thus, through the Challenge Cards, which are the tangible outcomes of the discussions at the workshop, participants to the workshop express what they are concerned on and what they care about. Still, conscious of the fact that find actual solutions to civic issues need incomparable amount of time than a double session workshop, we focused on the kind of dynamics that let people to encounter each other and to connect together without (or reducing) boundaries. In this respect, we look at participatory methods that let a heterogeneous group of people to define a new perspective on potential civic challenges. In other words ConstellACTION encouraged participants to identify an aspect of broad social issue that matter for them without setting answers and improbable solutions, but through the definition of a common and novel way to consider the issue. We indeed observed two different steps of discussion: a first one serves to set the political direction of the group, while a second one serves to identify their main concerns, on both an individual or collective level. The second step of discussion that focuses on identifying issues and opinions and occurs after the painting activity.

Even though for logistic reasons we had to split up the workshop in two sessions, we can assume that one session would have been more successful in terms of discussion dynamics. In both sessions, participants continued their activities as much as they could even though there was no light any more. Thus, a longer period for setting the directions of interest of the group followed by an interrupting activity, useful for resting the first discussion and for breaking the ice, would have open to deeper discussions about the objectives identifies in the first step of debates. Moreover, even though deeper and successful discussions happened during the second session, participants had to spend time to recall the discussion they had during the first session and they had to physically re-set the material for the workshop.

CONSTELLACTION: TODAY'S CHALLENGE FOR THE FUTURE

This format of workshop stimulates a direct participation during traditional workshop sessions and

uses a participatory artwork for connecting with everyday life issues and civic awareness. When we set up the ConstellACTION, we expect to stimulate awareness and consciousness over the themes represented on the Challenge Cards, stimulating a positive and sympathetic context. Opening up about critical issues and conditions might be difficult or not broadly accepted and shared, and through a pleasant and artful environment we are willing to stimulate further and grounded discussions. Through the ConstellACTION activities, we understood that the backward meaning was about to create a first step for civic awareness and discussion, a space for communicating about future willing for changes. Thus, even though we do not have any tangible answers to solve challenges proposed by participants, we know that ideas and changes transpire by word of mouth (Marshall, 1920) and whoever encountered the artwork and stopped by, participates to the discussion through different forms. In other words, this workshop seeks to stimulate discussion and awareness of today's issues since changes and innovation interlink knowledge. In this respect, the manner in which citizens participate to the discussion can take place in many different ways. Thus, reconnecting to Bishop (2006) the artwork is a tool for creating a potential space for improving citizens' point of view and perspectives on specific civic and collective themes.

CONCLUSION: WHEN ARTWORKS SUPPORT CREATIVITY FOR CIVIC AWARENESS

ConstellACTION did facilitate the discussion between participants, and helped to raise awareness on the issues discussed during the workshops, but failed in attracting others in participating of the subsequent installation. The challenge for future installations, is then how to better attract people to interact with the installation and how to facilitate a continuous conversation around the created cards?

As we could observe, the workshops facilitated cross-cultural face-to-face collaborations because of their focus on a creative experience by which participants felt engaged at all moments, and where everyone could contribute through diverse levels of effort. Moreover, creating the installation together helped to break the ice and set a conversation mood for empowering the collaborative actions. The combination of compelling discussion on triggering themes, with contextual material (newspapers, magazines, colours, glue, paint), allowed participants to fully immerse in the discussion topics and limit the superficiality of the discussion themes (formulated a-priori). Additionally, linking together local citizens and participants to the conference was fundamental. Locals provided a rich picture of the context in order to stimulate a grounded discussion on the design challenges. And, the PD Conference setting, with participatory and design experiences and expertise, was a nice match to create challenge cards with powerful, visually impacting and

relevant messages. The ConstellACTION stimulated a lively and vibrant context.

Thus, even though "civic awareness" is matter of interest over the all ConstellACTION activity, we observed a higher level of civic power embeds in the workshop activities in terms of mutual understanding and consciousness about social issues. The combination of dripping painting, for creating a participatory installation, and the traditional PD techniques, for the discussion, has been central for rising awareness, which means for engage participants in an equal discussion. Together, we all drew a space for stimulating public consciousness, which is at the base for looking at the future and for a public design process. And, awareness is a first step for stimulate public discussions and policies related to *real* needs.

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BIBLIOGRAPHY

- Hallam, E. and Ingold, T. (2007) *Creativity and Cultural Improvisation*, ASA Monographs. Oxford: Berg.
- Aime, M. (2010) *Il dono al tempo di Internet*, Einaudi.
- Anderson, B. (2006) *Imagined Communities: Reflections on the origin and spread of nationalism*. Verso/London.
- Belfiore, E. (2006) The social impacts of the arts – myth or reality? In: Mirza, M., ed. (2006). *Culture Vultures: is UK arts policy damaging the arts?*. London: Policy Exchange Limited.
- Bishop, C. (ed.) *Participation*, MIT Press and Whitechapel, Cambridge, MA and London, 2006
- Bohrer, S., Zielke, T. and Freiburg, V. 1995, 'Integrated obstacle detection framework for intelligent cruise control on motorways', *IEEE Intelligent Vehicles Symposium*, Detroit, MI: Piscataway, pp. 276-281
- Central Intelligence Agency. 2014. *The world factbook*. [ONLINE] Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/wa.html>. [Accessed 03 February 15].
- Djajadiningrat, J.P., Gaver, W.W. & Frens, J.W. (2000): Interaction Relabelling and Extreme Characters: Methods for Exploring Aesthetic Interaction. *Proceedings of DIS 2000*. Brooklyn, New York: ACM Press (66-71).
- Hakken, David, and Paula Mate. "The culture question in participatory design." *Proceedings of the 13th*

Participatory Design Conference: Short Papers, Industry Cases, Workshop Descriptions, Doctoral Consortium papers, and Keynote abstracts-Volume 2. ACM, 2014.

Halskov, K., & Dalsgård, P. (2006). Inspiration card workshops. *Proceedings of the 6th ACM Conference on Designing Interactive Systems - DIS '06*, 2. doi:10.1145/1142405.1142409

infoDev. 2013. *infoDev Growing Innovation*. [ONLINE] Available at: http://www.infodev.org/infodevfiles/resource/InfodevDocuments_420.pdf. [Accessed 03 February 15].

Ingold, T. (2010) Bringing Things Back to Life: Creative Entanglements in a World of Materials. *NCRM Working Paper*. Realities / Morgan Centre, University of Manchester.

Jungk, R. and Müllert, N. (1987): Future Workshops: How to create desirable futures. *London: Institute for Social Inventions*.

Madsen, K.H. (1994): A Guide to Metaphorical Design. *In The Communications of the ACM*, vol 37 no 12 (57-62) 1994.

Marshall, A. (1920) *Principles of Economics*, 8th edition, London, Macmillan.

Matarasso F. 2002 Smoke and mirrors: a response to Paola Merli's "Evaluating the social impact of participation in arts activities", *IJCP*, 2002, VOL. 8(1)

Mauss, M. Essai sur le don. Forme et raison de l'échange dans les sociétés primitives. *L'Année Sociologique, seconde série, 1923-1924*.

McHardy, J. Olsen, J. Southern, J. and Shove E. (2011) Makeshift users. In J. Simonsen, J. O. Bærenholdt, M. Büscher and J. D. Scheur (Ed.), *Design Research Synergies from interdisciplinary perspectives*. Routledge, London and New York.

Muller, M. J. (1996). Participatory Design : The Third Space in HCI, 4235, 1–32.

Muller, M.J., White, E.A., and Wildman, D.M. (1993). Taxonomy of PD practices: A brief practitioner's guide. *Communications of the ACM* 36(6), 26-28 (June 1993).

Olatokun, Wole Michael. "Gender and national ICT policy in Africa: issues, strategies, and policy options." *Information Development* 24.1 (2008): 53-65.

PDC2014. 2014. *13th Participatory Design Conference*. [ONLINE] Available at: <http://www.pdc2014.org/index.php/design-challenges>. [Accessed 06 February 15]

Rizzo, F. 2009. Strategie di co-design. Teorie, metodi e strumenti per progettare con gli utenti. Milano: FrancoAngeli.

Rufaro T. Chiware, E. and Archie L. Dick. "The use of ICTs in Namibia's SME sector to access business information services." *The electronic library* 26.2 (2008): 145-157.

Sarkar, P., & Chakrabarti, A. (2008). Studying engineering design creativity and developing a common definition and associated measures. In J. Gero (Ed.), *Studying design creativity*. Springer Verlag.

SchoolNet Namibia. 2010. *SchoolNet Namibia*. [ONLINE] Available at: <http://schoolnet.edunet-namibia.org>. [Accessed 03 February 15].

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APPENDIX A

CONSTELLATION WORKSHOPS - DISCUSSION THEMES

<p>Structural barriers, ICT Access and related technical infrastructure (electricity, internet connectivity in remote areas, connected computers and other devices, etc). According to the <i>CIA Factbook</i>, 60% of Namibians live in rural areas. One might argue that, in order to participate, Namibian citizens need infrastructure to communicate. Lacking this would create structural barriers for participation, which might affect even more to marginalize communities, lacking electricity and with little to no access to internet (e.g., rural communities).</p> <p>What forms of access are in place now and how can we make these tools accessible/available to all Namibians? Who has access information/technology and who does not? What shall be done to increase this access and reach? What have other countries done? What have they done that Namibia should and should not imitate? What participation tools if any are available in rural areas?</p>
<p>Sustainability of participation initiatives. One challenge for namibians citizens lies on the limited resources to sustain, in the long term, social activism campaign and other participation initiatives.</p> <p>How can short and long-term maintenance/availability/durability be achieved? Where can resources come from?</p>
<p>What about democracy? Some Namibian citizens may see their government as not inclusive enough, or feel that freedom of speech is limited or purposefully thwarted. For this reason, citizens may not feel motivated or encouraged enough to participate in policy decision-making and social activism.</p> <p>How do Namibians feel about their democracy? How healthy do they think it is? What can be done to strengthen it? How can Namibians find motivation to participate more, even when circumstances might not be motivating enough?</p>
<p>Trust. One reason why people might choose not to participate is because they do not trust the authorities in charge of taking action base on this participation.</p> <p>Is there cynicism towards government that hinders civic participation? Do Namibians trust their government?</p>
<p>Right of Information. The government may not be supportive of the right to information, making it a closed government that do not provide enough information about its activities (public expenditures, contracts, budgets, government officials nominations, etc.).</p> <p>Is this situation also a reality in Namibia? How much is Namibian public information accessible and available? What's the influence of this in citizens' commitment with public issues?</p>
<p>Civic Awareness. Many citizens may not be aware of their legal right to participation. Or, in some cases people may be reluctant to participate due to fear of a repressive regime. Some governments govern by fear and in such governments there is a culture of not questioning authority.</p> <p>How can Namibians gain awareness of their rights and overcome fears of participation?</p>
<p>Conventional and unconventional forms of participation. Another challenge to participation is the limited number of "official" ways to do so available in the country. Some countries only rely on general elections to call citizens to participate, while others might have other additional participatory instruments. Moreover, citizens of some democratic countries might participate in unconventional forms participation when they develop distrust on their government.</p> <p>What types of participation platforms are available to Namibians? What forms of unconventional means of participation have they developed?</p>
<p>Social-cultural context. In some African countries, socio-cultural structures can make it difficult for participants to participate in an equal level.</p> <p>Are social hierarchy structures such as sex, age, birth order, family background, occupation, social class, education a barrier to Namibian's participation in decision making?</p>