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Multidisciplinary Aspects of Design

Objects, Processes, Experiences and
Narratives

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EXPERIENCES. Transitions



Communication Design for Welfare, the Challenge of Preserving Human Interactions in Remote Participation. Rethinking and Redefining Collaborative Activities for a Virtual Environment

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Abstract. The unprecedented situation of the COVID-19 emergency has challenged traditional in-person interaction, forcing researchers to rethink participatory experiences, designing new tools, and readjusting the existing ones in order to adapt them to a virtual environment.

This paper delves into tools and methods of remote inclusion and participation to foster the exchange of opinions among people and the construction of a shared imagery that represents the viewpoints of the community involved. In particular, it examines the dynamics implemented within the European initiative UIA-Urban Innovative Actions for the project WISH MI-Wellbeing Integrated System of Milan that deals specifically with actions to contrast juvenile poverty in Milan, and it involves the DCXW research group (Communication Design for Welfare) of the Politecnico di Milano Design Department and the Municipality of Milan as the lead partner. Through the case study, a series of tools and communication design techniques for remote participation are presented, highlighting the approaches taken to preserve humanity and closeness in online interactions, and especially emphasizing the new opportunities that the virtual environment can offer.

Keywords: Communication Design · Remote Co-Design · Social Policies

1 Introduction

The spread of Covid-19 has significantly impacted participatory research. Social distancing, quarantine, and restrictions made it essential to rethink the co-design experience in a context of no physical proximity.

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Co-presence, tangible interactions, and physical contact, are proven to have a strong impact on collaborative processes, nurturing and facilitating debate, critical thinking, and the development of creative solutions [11]. It is therefore crucial in the transition to a virtual remote mode to activate a reflection on how to overcome the organizational and social obstacles generated by the lack of proximity and the digital dimension of interaction, especially addressing the issues of platform and devices accessibility and participant engagement and focus [6]. When designing the experience, it is essential to consider the technological requirements, both in terms of hardware and software and skills and knowledge needed, so that participants does not feel excluded or challenged [16]. Engaging and maintaining the attention of those involved is another critical issue, further complicated by the monotony and stillness of screen interaction and the multiplicity of physical environments in which activities take place that can be a source of distraction and are outside the researchers' control and planning action. In terms of the relationship quality, digital leads to another complexity factor, as it limits nonverbal interaction and precludes the entertainment of small one-on-one 'aside' conversations, making it more difficult to build connections between participants and with researchers [5]. In online research it is also harder to gauge individuals' reactions, judge if someone feels distressed by a task or a specific question and properly analyze group dynamics [7].

This paper aims to contribute to the ongoing debate on planning and conducting remote participatory activities by presenting a critical reading of tools and methods to identify coordinates for the design of a visual identity system, tested and implemented as part of the European project "WishMi. Wellbeing Integrated System of Milan¹". Funded by the European initiative Urban Innovative Actions, the project aims at the well-being of under-age children in the city of Milan, promoting innovative solutions to address the challenges of child poverty, inequality, and segregation. Specifically, with the aim of activating and stimulating a collective reasoning on WishMi's identity, a multi-session process was designed involving different actors with complementary goals. Through the contributions of those involved, it was possible to draw a common identikit of what the system is and aspires to be, and to define its *semionarrative* and *discursive structures*, agreeing on the system values and the most appropriate ways to narrate it [8].

2 Communication Design and Remote Participation

The transition of participatory activities to a digital dimension, necessitated by the unprecedented historical circumstances, poses a significant challenge in terms of preserving the quality of human interactions and relations and requires envisioning how the new context might affect the experience [13]. Design choices are even more crucial in this instance to ensure a positive and successful engagement of the participants. The

¹ Project lead partner: Comune di Milano. Project partners: Abcittà, Actionaid, Fondazione Politecnico di Milano, Design Department – Politecnico di Milano, Università Cattolica. The participatory experience was designed and conducted by the DCXW research group (Communication Design for Welfare) – Design Department, Politecnico di Milano (Valeria Bucchetti, Research Coordinator; Umberto Tolino, WP Leader; Pamela Visconti, Project Manager; Team work: Michela Rossi and Benedetta Verrotti di Pianella).

accurate selection of the collaborative platforms, the customization of the activities' visual layout, the careful definition of flows and the directing action allow to counter and mitigate physical non-proximity, and to create a context that facilitates and sustains human relations, collective thinking, and open dialogue [14].

In particular, when selecting environments in a virtual dimension, it is important to maintain both verbal and visual collaboration to allow for nonverbal interaction among participants, even if limited, and higher involvement on an emotional level. It therefore becomes essential to determine the number of platforms and the features needed to support the planned cooperation modes, maintain a dynamic environment and at the same time have fluent media management without raising the technological requirements for participation and causing accessibility problems. Configuration and customization of the graphic layout of digital environment and participation tools, on the other hand, allow content to stand out and simplify the understanding of the flows, enabling immediate independent and guided interaction [9]. Making tools and environments more appealing in addition favors involvement and engagement.

Placing the focus on the participants, the quality of their interactions and feelings also implies designing experiences by carefully envisioning and planning not only individual activities, but the entire process, studying the timing and providing for variations in pace by alternating between different tasks and breaks to maintain interest and commitment. In addition, acting remotely requires anticipating and facing potential issues of technology "hiccups" such as problems with audio, connection, video, or distracting elements in the physical context, to prevent these from compromising the experience [5]. Therefore, it is essential to provide for a certain degree of flexibility within the planning, envisaging the possibility of reshaping the intended route and activities by incorporating contributions and inputs from previous actions and from interaction patterns observed among participants [17]. Crucial in the design and the conduction of the activities is also the directing role played by the researchers, who act as "silent strategic navigators" handling in the background timing, access to and interaction with the tools, and switching between different environments [15], managing to minimize the need for participants to interact with the software interface, thus removing most of the access barriers.

3 Characteristics and Aims of Participatory Settings

Within the framework of the European WishMi project, in designing the participatory activities, physical and digital space were conceived as a single fluid entity through which navigate and explore, adopting different degrees of transposition, from the use of hybrid tools, combining physical and digital, going through a direct or enhanced transposition of physical tools into digital ones, to the use of entirely digital tools and devices. In this translation effort [2] aimed at combining the potential of both environments, each level of transposition met different needs, such as familiarity, immediacy, speed and emotional impact, and characterized the outcomes of the activities. Each tool was also designed to respond to a specific research purpose. Through the discussion, mediated via interactive digital devices, it was possible to look at the Wishmi system from different perspectives, providing divergent moments to explore core concepts by identifying all their possible ramifications and convergent moments to build collective syntheses from

individual contributions. It also allowed abstract arguments to be concretized through representational exercises and permitted to simulate the implementation of the system to foresee its qualities and languages and to exceed the level of immediate viability to stimulate anticipatory visions (see Fig. 1).

MATRIX SYSTEMATIZATION OF TOOLS

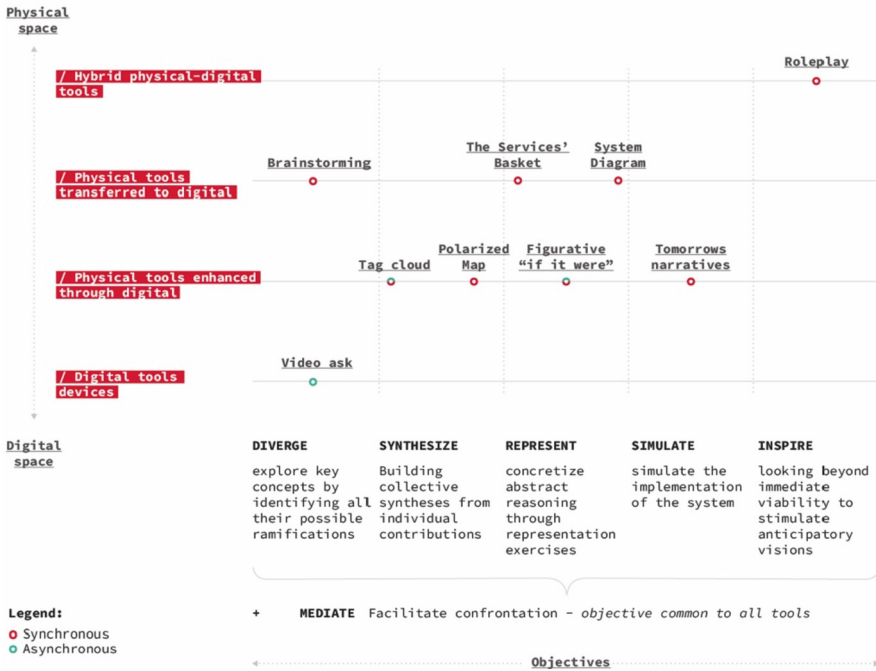


Fig. 1. A schematic overview of the research tools presented in this paper focused on the transposition methods used and the specific research objectives.

3.1 Hybrid Physical-Digital Tools

Considering physical and digital space as one seamless reality allows the creation of a blended space [3] in which boundaries are constantly crossable, and it opens an opportunity to rethink some participatory activities by incorporating phases to be performed in the physical dimension and moments to be carried out digitally. Exploiting the characteristics of both spaces, this approach helps reduce, if not entirely remove, barriers to accessing software and platforms. Moreover, during a period in history when most daily activities are inevitably carried out online, it helps to add memorability to the actions, breaking the monotony of the relationship with the screen.

Role-Playing. The activity is an example of the use of a hybrid physical-digital tool and consists of an identification exercise to encourage discussion on the level of aspirations and expectations. The technique employed was inspired by the *Round Robin*

brainstorming approach [1]: each person was asked to write down thoughts on paper cards with the tools available in their own physical space and use the digital medium to share with the group and further argue their statements. This collaborative and iterative approach allowed all voices to be heard, receive equal consideration, and be improved by additional inputs.

The strategy of opening the session with a hybrid-mode activity permitted the reflection to begin by circumventing the constraints and limitations of the platform. The direction activity, in this case, was crucial in transferring the concepts that emerged to the platform in real time. It also managed to invisibilize the digital interface, providing the participants with greater freedom in the debate and, at the same time, allowing them to observe an early form of interaction with the platform and to become more familiar with the digital environment.

3.2 Physical Tools Transferred to Digital

The most straightforward way to migrate tools and activities from a physical to a digital environment is to perform a direct transposition of physical elements into digital ones, enabling the usage of well-known and established tools that preserve their recognizability despite being mediated through a digital interface. Empirical studies have determined that prior knowledge and the ability to relate one's experience with a product play a role in the speed, efficiency, and accuracy of the interaction [4]. The digital environment is therefore made more accessible and intuitive by leveraging the familiarity of the tools' appearance to induce replicating gestures recognized and codified for the physical element. The following are some examples of physical tools transferred to digital employed in the designed participatory activities.

Brainstorming. Throughout this activity, post-it notes and voting dots were used in their digital versions to describe and articulate key concepts, and to assign value and shift attention to certain ideas. The intuitive use of digital devices facilitated the exploration of ideas, the expansion of knowledge, and the identification of possible developments and integrations.

The Services' Basket. The tool is based on the inside-outside dichotomy translated visually through the image of the basket. The digital representation of the object-basket made it possible to identify, even within a shared artboard, an inside and an outside, making the activity request intuitively immediate. Participants were asked to replicate the gesture of putting in or out of the basket to achieve a concrete definition of which services are part of the system and which are not.

System Diagram. The tool allowed the identification of the relationship between the services proposed by the WishMi system and those offered by the specific areas and departments of the Municipality of Milan. The task simulates in most aspects the same type of interaction required in presence, relying on basic equipment, such as markers, pens, pencils, and cards in their digital versions. In this instance, the design strategy of synthetically prefiguring and visualizing some of the possible configurations of the system made them concrete and immediately comprehensible, serving as an example to stimulate the participants to propose and integrate with new scenarios.

3.3 Physical Tools Enhanced Through Digital

The transition to the digital environment not only allows direct translation of tools but also creates the opportunity to enhance some of them by activating diverse dynamics and adding extra features.

For example, by conducting participatory activities remotely, it is possible to multiply digital environments, creating potentially countless virtual rooms where participants' access can be regulated to engage in different activities simultaneously. In addition, by logging in from their device, participants can have access to both personal content and web-based materials. Examples of tool enhancement through digital are presented hereafter.

Polarized Map and Figurative “if it were”. The polarized map was functional to the individuation of highly expressive and representative images and visual languages to promote the WishMi system, synthesizing individual contributions into a unified visualization. The figurative “if it were” instead allowed for the metaphorical representation of the system, isolating its qualities through the association with real-world objects' features. Having access to both the network and the personal archives to select images has enhanced these tools. The same activities conducted in presence in fact require images to be pre-selected by the researchers and participants are usually only allowed to organize them on the map, the digital instead permitted complete freedom, removing any form of influence and opening to even unexpected results.

Tag Cloud. The tool permitted to synthesize concepts and insights that emerged from previous discussions and further stimulate dialogue and critique of what emerged. The digital environment facilitated a dynamic and expandable visualization, allowing participants to integrate and to reposition terms and concepts until they obtained a satisfactory outcome. In conducting the activity, it was observed that the digital synthesis, compared to the in-presence one, encouraged the development of individual rather than collective reasoning since each participant accesses and interacts separately within the platform. Hence, the researchers need to plan and promote confrontation to restore the collaborative aspect of the synthesis and stimulate new thoughts.

Tomorrow Narratives. The tool was functional to develop collective definitions that stem from the synthesis of a plurality of individual inputs acquired through short interviews.

Multiplying virtual spaces made it possible to conduct the interviews simultaneously with the other collective actions, providing an opportunity for the interviewees to detach from the main activity, and helping to maintain them engaged. In addition, the invisibility of the recording equipment contributed to the ease of the participants, fostering spontaneous interactions. Direction here played a crucial role in the transition between the various virtual environments.

3.4 Digital Tools and Devices

In addition to methods and mechanisms derived from in-presence experiences, a large selection of interactive digital tools is now available on the internet, each endowed with

specific features. Whether born for research purposes or adapted for scientific use, online software packages represent an additional opportunity for experimentation in the field of participatory design.

The advantages offered by digital tools include wider reach, better cost and time efficiency, ease of dissemination, automatic data processing features, multimedia inputs, higher immediacy of interaction, higher levels of honesty and self-disclosure due to perceived anonymity and privacy [10] and the potential for content with a powerful emotional impact.

Video Ask (www.videoask.com). Video ask is an example of a digital native tool. It is a platform for creating and disseminating web-based surveys, which relies on conveying a question through video input and selecting a specific medium to submit the responses. This platform enabled the collection of a substantial amount of vocal contributions in a short time frame by directly involving Milan-based children and adolescents to reflect on and explore the expressive and evocative potential of the WishMi name. Video ask made it possible to dispose of highly emotional content that emphasized the level of involvement and compliance of participants in the workshops (see Fig. 2).

4 Considerations

The complete transition of the workshop activities held within the WishMi project to a digital environment was a necessity due to the unique circumstance of the Covid-19 pandemic outbreak, nevertheless, it provided an opportunity to increase reflections on the potential of digital for conducting participatory experiences.

The confined interaction, limited by the screen, for example, permits thorough and detailed traceability of the unfolding activities. Recording video calls and collaborative artboards in fact allows the reconstruction of individual paths in retrospect, thus granting higher accuracy and depth in research. Moreover, the almost invisible digital recording equipment does not interfere with ongoing activities, facilitating the acquisition of less biased materials.

The transition to digital also represents an opportunity for experimentation, expanding research mechanisms by tapping into digital-native devices and rethinking and enhancing some traditional tools. The virtual dimension and the remote implementation of activities increase the flexibility in considering the variables of space and time, allowing the removal of physical, geographic, and temporal constraints of co-presence. From the space standpoint, it becomes technically feasible to involve people from different backgrounds and countries in the same activity and have access to multiple virtual spaces for conducting several actions simultaneously. In addition, familiarity with one's home environment allows for a higher sense of tranquillity, encouraging more spontaneity and freedom of expression [11]. From the time-related perspective, on the other hand, it is possible to increase the flexibility of participation, as well as to carry out some activities asynchronously, allowing participants to determine how, when and where to get involved. In the WishMi project, for example, the higher autonomy in time management allowed directors from different areas of the Municipality of Milan to participate in selected activities according to their agendas. The removal of spatial and temporal constraints also broadens the scale of the research, allowing it to reach and potentially

TOOLS FOR REMOTE PARTICIPATION

/ Hybrid physical-digital tools



Roleplay

/ Physical tools transferred to digital



Brainstorming



The Services' Basket

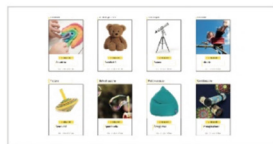


System Diagram

/ Physical tools enhanced through digital



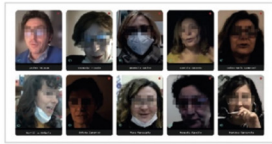
Polarized Map



Figurative "if it were"

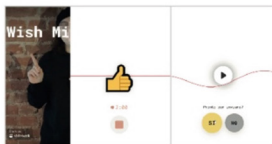


Tag cloud



Tomorrow narratives

/ Digital tools and devices



Video_ask

Fig. 2. A selection of significant images aimed at conveying a visual understanding of the remote participation tools.

involve a higher number of people, even simultaneously, creating heterogeneous groups and amplifying the impact by bringing together more and diverse viewpoints [12].

The reflections presented aim at fostering the debate that in recent years has interested an increasing number of fields, from education to labour, to services, questioning the physical-digital relationship in pursuit of a proper balance between these two polarities. Even though these reflections arise from an unprecedented condition, they are not intended as a response to the Covid-19 pandemic, in the same way the tools presented are not meant to be an exhaustive list of approaches, they rather represent a contribution and a stimulus to broaden the discussion on the emerging possibilities to create more inclusive and diverse participatory design experiences and on the role of communication design. Especially since the struggle to design online participatory activities led to a new awareness of the potential of envisioning collaborative experiences in which there is an ever-increasing synergy between physical and digital and where the strengths of both contexts are better enhanced.

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