Lima 2100: Collective Resilience Through Adaptive Urbanism

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INTRODUCTION

Lima 2100: Collective Resilience through Adaptive Urbanism is a transdisciplinary project addressing issues of climate change, social equity, and urban health in Lima, Peru. The project was funded by the U.S. Department of State's Bureau of Educational and Cultural Affairs as part of their American Arts Incubator, an international creative exchange program. Assistant Professor of Architecture Gabriel Kaprielian was selected as the Lead Artist and tasked with developing a month-long program through international collaboration and partnership of the ZERO1, the U.S. Embassy in Peru, the Contemporary Art Museum (MAC Lima), the University of Engineering and Technology (UTEC), along with 25 participating artist, architects, and activists. Focusing on the challenge of urban development in Lima, the primary goal was to empower local residents with new skills and a framework to understand and respond to their built environment past, present, and future. This was expressed through personal works of adaptive urbanism to create collective resilience, drawing inspiration from global movements such as Black Lives Matter to a history of Peruvian activism rooted in indigenous culture and female leadership. The project describes a method of utilizing art and technology as platforms for discourse to envision speculative futures of urban environments that are inclusive, healthy, and sustainable.

PROGRAM STRUCTURE AND GOALS

At the onset of the program, the collaborative group established goals that included selecting underrepresented voices in Lima as participants such as women, indigenous, and those without university education. Additional goals included exposing participants to new technology, contemporary practitioners in Peru and abroad, amplifying their voices through a public exhibition, and creating a sustainability plan for future project development. The program developed by Lead Artist Gabriel Kaprielian was structured around theoretical group discussions, an international symposium, and technology workshops to empower the participants with tools to create their own worlds. The multidisciplinary team of collaborators included architects and artists from the U.S. and Peru who's work focuses on inclusive
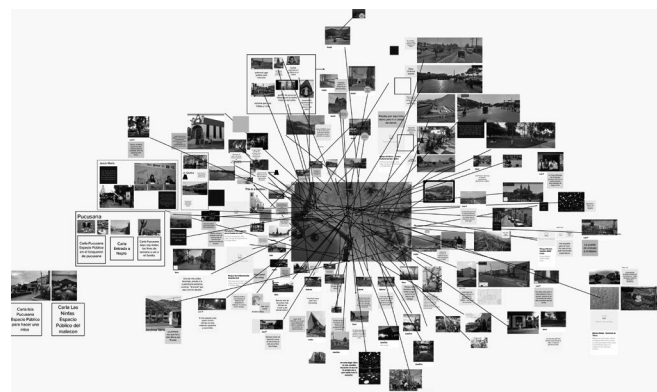

Figure 1. Workshop 1: Collective Pyscho-geographic Mapping of Lima. Gabriel Kaprielian.

and participatory design of public spaces developed collaboratively with community members. This included members of the organizations Ocupa tu Calle, Gehl Architects, Monument Lab, and various artists, architects, and academics in Lima. These collaborators shared their work with the program participants, while also giving them feedback on their projects, establishing an international and transdisciplinary exchange of ideas.

Originally conceived of as a physical exchange in Lima, the project was reconstructed as a month-long virtual exchange due to the COVID pandemic and a strict stay-at-home order by the government of Peru. This early challenge ended up being an opportunity to create a more sustainable model of creative practice for local participants. Rather than relying on the wealth of digital tools and resources at the host institution UTEC, technology introduced to the participants was adapted to use open-source and web-based software that was accessible to a larger base of participants in Lima. The workshops included collective "Psycho-geographic Mapping" of Lima (Figure 1) using digital canvas *Mural*; "Postcards from the Future" (Figure 2) creating speculative visions of Lima in the year 2100; "Monument to the Pandemic" (Figure 3) introducing digital modeling, 3D scanning with photogrammetry, Augmented Reality with Sketchfab, and Virtual Reality with Google Cardboard. The digital workshops
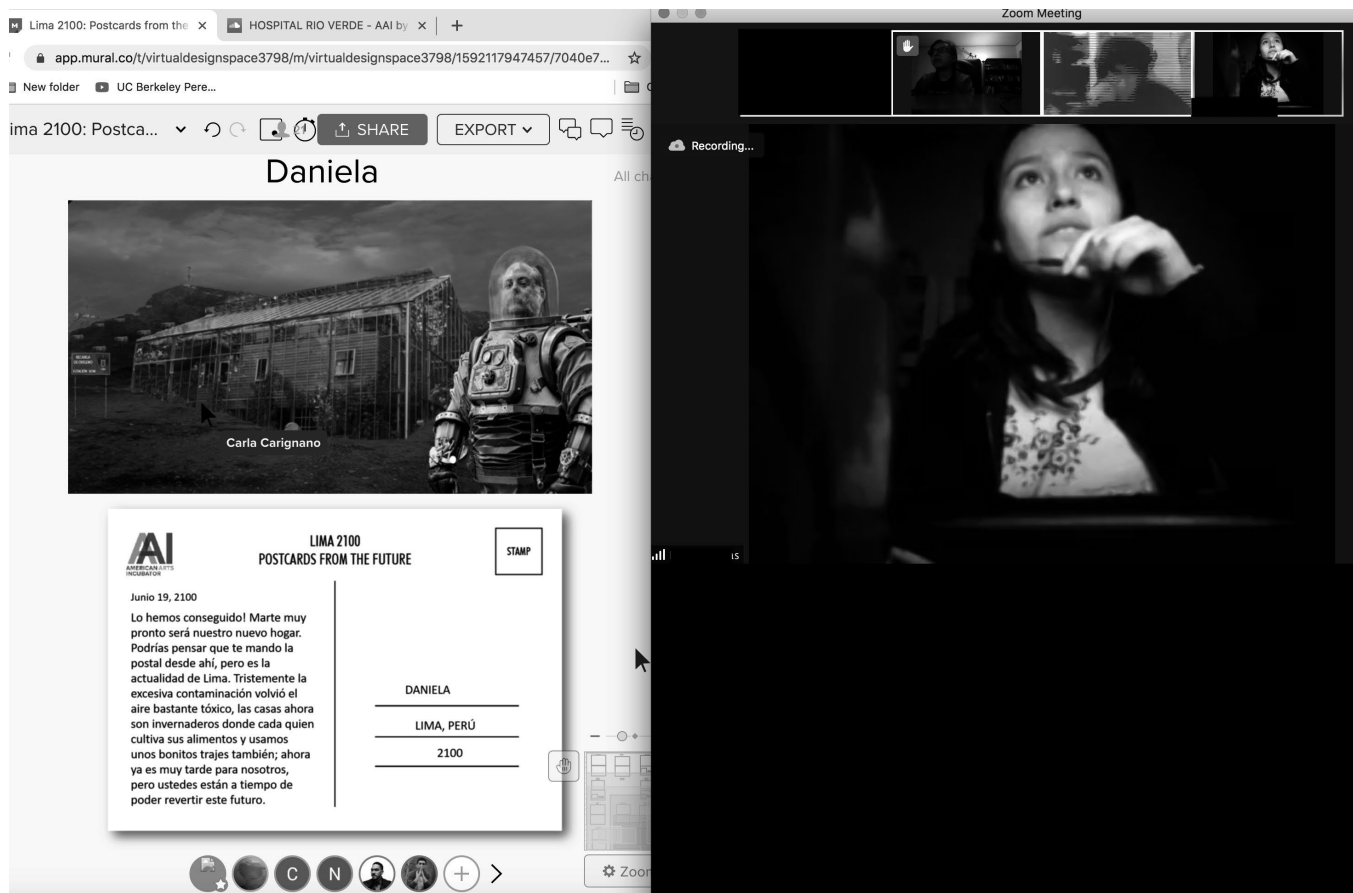
Figure 2. Workshop 2: Postcards from the Future. Daniela Rojas.

Figure 3. Workshop 3: Monument to the Pandemic - Augmented Reality. Various participating artists - screenshot by Gabriel Kaprielian.

PROJECT

Figure 4. "Ancestors and Future," video still. Giovanna Pillaca Morote.

served to teach new skills, create a forum for conversations, and develop community within the cohort of participants, while seeking to empower them to create and build the world they want to see in Lima.

EXHIBITION: AMPLIFYING LOCAL VOICES

In the last 10 days of the program, a final body of work was developed individually by each participant illustrating their visions of a resilient Lima in the year 2100 based on their own personal interests and media of choice. Individual consultations by Lead Artist Gabriel Kaprielian helped guide the participants in the development and production of their projects. This final body of work produced includes themes of reclaiming historical narratives from colonial monuments, inclusivity of the indigenous population within the urban environment, climate fictions that draw awareness to the relationship between the city and surrounding ecosystem, and many more.

Examples include: "Decolo-augmented Reality" by Jesed Mateo Montejo situated her work at a monument of Columbus where augmented reality illustrates the "women's struggle, representing (our) America and Columbus, insisting on imposing... a colonial heritage" that the future much break free from; "Sonqo Go" by Claudia La Hoz addresses the "invisible presence" of

Quechua communities in Lima through a virtual game of augmented reality that places Quechua words in the landscape; "The Secret of the Tree" by Elsa Bustamante Romero is a multimedia video that describes the importance between nature and humanity through myth and storytelling from Andean, colonial, and futurists perspectives; "Ancestors and Future," (Figure 4) by Giovanna Pillaca Morote combines virtual and augmented reality with video to describe the indigenous Ayacuchana ceremony to remember the dead, applying this to the passing of her grandmother and those lost by the COVID pandemic.

A public exhibition of the participant projects was curated and displayed in a virtual reality gallery (Figures 5-7) for the MAC Lima created by Gabriel Kaprielian and modeled after the physical space in the museum where the show was originally planned. This was the first time that participants, collaborators, and the public were able to co-mingle in the same space, albeit virtual, as avatars walking around, talking, and viewing the multimedia exhibition. It was such a success that the MAC Lima decided to use the virtual reality gallery as a permanent exhibition space for the museum and further develop a digital gallery. The second virtual show hosted by the MAC six months later was with three of the originally participants who were selected for additional sustainability funding to continue their work. The exhibition,

Figure 5. Mac Lima Virtual Reality Gallery Exhibition "Lima 2100: Collective Resilience through Adaptive Urbanism." Gabriel Kaprielian.

Figure 6. Virtual Reality Gallery Exhibition. Gabriel Kaprielian.

Figure 7. Virtual Reality Gallery Exhibition. Gabriel Kaprielian.

titled "Myths, Voices, and Fabrics: Building Digital Identities to the Bicentennial," (Figures 8-10) represents the work of three indigenous women based in Lima sharing their unique perspectives of Peruvian identity as the country commemorates the Bicentennial and looks toward the future.

REFLECTIONS

The Lima 2100: Collective Resilience through Adaptive Urbanism project serves as a model of international collaboration between government, non-profit, arts, and academia that seeks to amplify the voices of underserved and marginalized communities to envision adaptive urbanism that reflects a just environment. It illustrates the potential for architecture to utilize emerging

digital tools to foster transdisciplinary partnerships and build community worldwide.

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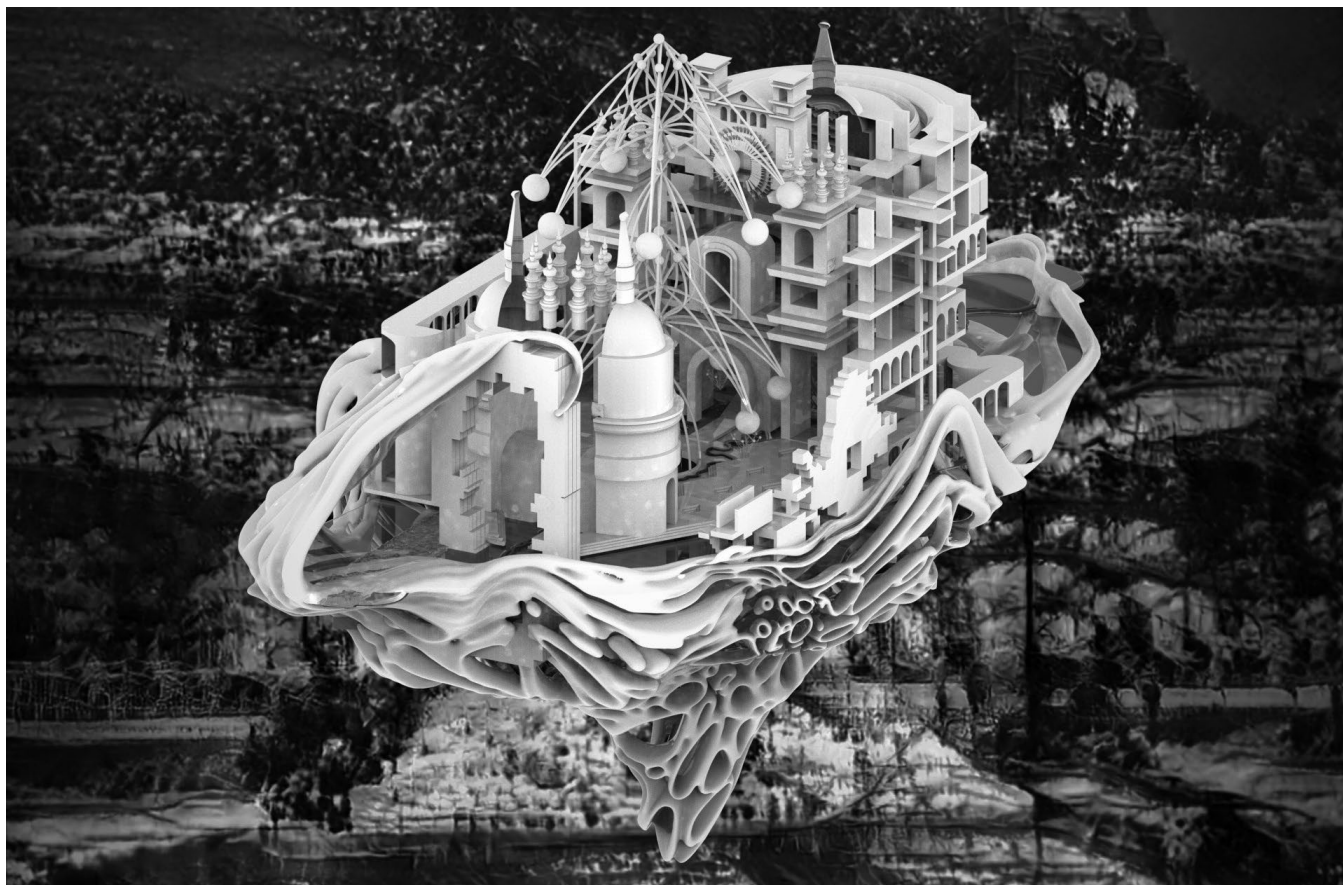
PROJECT

Figure 8. "The Digital Altarpiece, transmuted hybrid restoration." Giovanna Pillaca Morote.
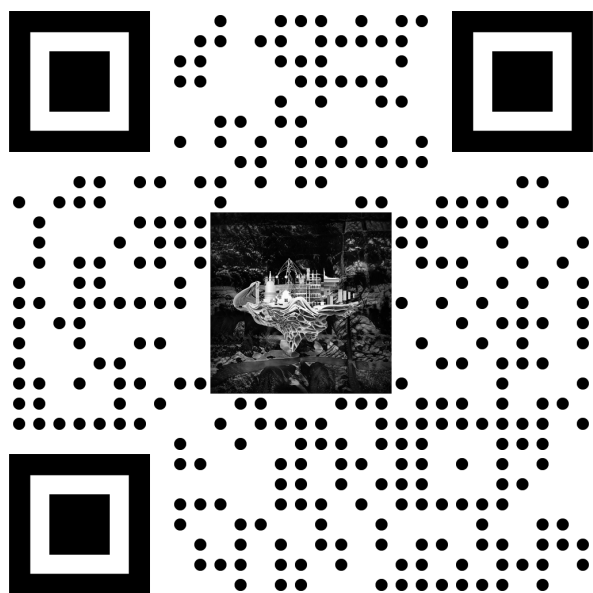

Figure 9. "The Digital Altarpiece" QR Code. Giovanna Pillaca Morote.

Figure 10. "The Digital Altarpiece - Colset." Giovanna Pillaca Morote.