AR Poensgenpark: Multiperspective Storytelling with Augmented Reality as an Attempt of Dialogue Facilitation in a Multifaceted Dispute

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Abstract

By presenting the process of developing an augmented reality (AR) installation, the paper explores the transformative potential of AR as a mediation tool in the context of a multifaceted socio-cultural issue. Focused on the removal of a 120-year-old Atlas cedar from a municipal park in the German town of Ratingen, the study employs research through design (RtD) approach, combining qualitative field research and digital documentation. The AR application serves as a platform for location-based storytelling, aiming to foster dialogue among citizens, scientists and city officials through a multi-perspective approach. As the project envisions a future where AR serves as a potent tool for mediating intricate societal challenges, this paper adds to the ongoing discourse regarding the convergence of technology, nature, and public engagement.

Keywords

Place-based Storytelling, Multiperspective, Augmented Reality, Research through Design, Interdisciplinary Exploration

Introduction

Can a place of contention be transformed into a place of connection with digital means? Is it possible to document the conflicting voices or even attempt a mapping of social disputes in a neutral way? Can one carry out an expedition without inflicting a perspective of power? Who is drawing a line between protection and destruction? Does nature need to be saved? (...) These and other questions emerged as we embarked on a project aimed at digitally capturing a discussion about the fate of a heritage tree in a German city park. Although a rather insignificant event in human history, it has interestingly reflected complex social, political and cultural issues in its background. In the form of an installative work at the interface of communication design and mixed reality media, this work was created out of the desire to document and hopefully convey a multi-layered background to this seemingly simple event. What interests us here is more than just technology, more than just nature and more than just human. And as ambitious as this attempt may sound, it merely marks the uncertain and boundless terrain on which we move. It is an experiment informed by research through design (RtD) [1, 2] that combines qualitative field research and digital documentation of the location with personal immersion in the situation, reassembling the final data into an installative digital application.

In the following lines, we are continuing with a short reflection on some of the relevant theoretical fields relating to the topic, upon which we are offering a closer insight in the background story. Before presenting the project in detail, we are discussing the potentials of AR interfaces as a form of mediation. The technical details as well as the outlook of the project are presented in the final sections.

Related theoretical fields and projects

The initial focus of this project was predominantly centered on the collection of both qualitative and quantitative data on the research location. The final analysis and organization of this data culminated in the creation of an interactive digital work, which is being presented and reflected on in this paper. The original research process aligned with the principles of RtD, which served more as an orientation point than a firm methodological ground. This kind of approach resonates with Graver's characterization of RtD as a design practice applied to "situations chosen for their topical and theoretical potential", where the resulting design embodies the designers' judgments on effective approaches to address the possibilities and challenges inherent in such situations. This encompasses a spectrum of insights, including topical, procedural, pragmatic, and conceptual aspects, where borrowed theories or concepts are skillfully translated for practical use by designers. [2]

Subsequent reflection on the completed work and the project's prospects underscored the importance of exploring related theoretical fields and similar projects. We intentionally shift the focus away from AR projects only and rather offer a short insight into the richness and complexity of approaches which deal with the constellation of technology, nature, and human. This overview is far from exhaustive and does not limit our scope of interest, but rather contributes to establishing an informed theoretical background. In the following lines, we present selected works in the domains of digital ecologies, digital conservation, urban studies and sociology.

´Digital ecologies´ is what Turnbull et al. (2023) call an *analytical framework* that combines approaches from more-than-human and digital geographies, to "examine digitally-mediated human–nonhuman relations in diverse situated contexts". In their paper on materiality, encounters and

governance, they investigate how unequal practices of dominance, control, and power are facilitated by digitality and inquire about the governance of these technologies. They also encourage scholars to create *situated accounts* of these processes in different contexts. [3] The authors also offer an overview of different research strands informing digital ecologies, one of them being ´digital conservation´, represented by the work of Arts et al. (2015) and Arts and Van der Wall (2015). An approach especially interesting in our case, as it critically examines the knowledge, techniques, and approaches used in wildlife conservation that are made possible by technology. Starting from a definition of ´digital conservation´ as a wide variety of developments occurring at the nexus of digital technology and environmental conservation [4, 5], Arts et al. define five key dimensions that significantly influence the preservation of nature by digital means - data on nature, data on people, data integration and analysis, communication and experience and participatory governance. Discussing the possibilities and problems associated with each of these dimensions, they stress the importance of considering who gains (or loses) the most from digital conservation, who controls the flow and processing of information, and how democratization might be supported. [5]

Another study that offers an interesting perspective on the topic of digital representation of nature comes from the field of urban studies. In their paper on digital urban nature Moss et al. [6] are focused on answering why the "natural" urban environment is frequently overlooked in the `smart city` initiatives created by businesses and local governments. On the example of digital urban nature projects in Berlin, they identify five general categories of digital nature projects based on their functions: Informative, Motivational, Observatory, Interventionist, and Collective. Along with the critique of the ´smart city´ projects, they warn about the essentially anthropocentric orientation of many of the digital urban nature projects encountered. By being geared towards enhancing the human experience of urban nature, they conceal the social-ecological interdependencies and elusive features of urban nature. [6]

Closely connected in terms of the critical approach and research focus is the project "Smart forests" led by Professor Jennifer Gabrys and based in the Department of Sociology at the University of Cambridge. [7] The key question this project seeks to answer is how the growing use of digital technologies in forest management is making forests "smarter". They explore the relationship between technologies and forests, as well as the reasons behind the technological optimization of forests in response to environmental change. Once more, it is noted as problematic that nature, as a "smart" environment, receives far less attention than smart cities, given the importance of assessing how these technologies support and constrain various forms of participation and governance. Besides its topic, the project is particularly interesting in the context of our research due to similar research methods, such as "inventive digital practices, fieldwork, participatory workshops and mapping". [7]

Background story

*"The old cedar tree in Poensgenpark exists no more.
On November 7, the imposing tree, over 100 years old, was "removed from the park" by order of the city. As is well known, safety concerns on the part of the responsible authorities tipped the scales in favor of this decision. Despite two differently interpreted expert opinions, this is a controversial measure in the Ratingen community.*

We also wanted to keep the Atlas cedar in the park as long as possible.

Not only the members of the association mourn the loss of the beautiful tree." [8] (translated by the authors)

Figure 1. On the left, the Atlas cedar before felling. On the right, a picture of the newly planted tree. ©Patrick Kruse

In November 2017, the city of Ratingen had an Atlas cedar removed from the municipal Poensgenpark. With its unique collection of trees and plants, Poensgenpark enjoys a high reputation in the region and is of great historical significance for the town and its citizens. The 4.5-hectare park area, with its exotic variety of trees and shrubs, has been part of the Garden Art Route between the Rhine and Meuse rivers since 2005 and under the heritage protection since 1997. The origins of the park date back to 1790 when Johann Gottfried Brügelmann, the founder of the Cromford textile factory, had the park laid out by garden architect Maximilian Friedrich Weyhe. Later in its history, the park was run as a private garden by the Poensgen family until the Second World War. The park has been open to the public since 1977 and, alongside the moated castle "Haus zum Haus" and the adjoining Blauer See, is an important part of the Ratingen recreational area. [9]

The Atlas cedar, which was over 120 years old and located in the listed park (Figure 1), had a serious fungal infestation though the Dyer's Polypore, (lat. *Phaeolus schweinitzii*) that causes rotting of the tree trunk, making it weak and unstable. Because of the City of Ratingen´s obligation

to secure and maintain safety of traffic routes, the authorities decided to remove the tree and replace it with a similar one. This decision met with little understanding from the residents and the park visitors. The Poensgenpark had already been hit by the Ela storm in 2014, which had caused heavy damage and numerous fallen trees across Germany. The reconstruction work, which had already been going on for several years at that point, raised awareness among park visitors and increased their sensitivity to the issue. They organized demonstrations and formed a group that spoke out in favor of preserving the tree. During this, an elaborate biological report was also drawn up. This was intended to serve as an independent counterweight to the municipal report on the condition of the tree. Such public reaction put the authorities under so much pressure that the date of the felling was not even made public. The park was closed for seven days and only a small circle of people knew it was supposed to begin on a Tuesday morning at 6:30 am. (Figure 2)

Figure 2. The felling of the tree in November 2017. ©Janna Lichter

In her inspiring investigation on how digital technologies co-constitute and mobilize forests, closely related to the mentioned "Smart Forests" project, Jennifer Gabrys suggests that "Forests are on the move. (...) This restless, often destructive movement in turn informs the movements of multiple organisms and forest dwellers, including where or whether they can move within forest spaces. When forests move, they do so with multiple other entities." [10] On that trace, the project described in this paper emerged from the movement that originated on a microscopic level and then effectively outgrew the perimeter of a tree trunk, concentrically expanding onto its surrounding, changing in its form and effect.

An AR interface as a mediation technique

The shift of storytelling formats from the video and audio-based ones to the realm of mobile and interactive media brought a fundamental change in how we create and experience stories. It affected not only the practice of storytelling but also in turn how such stories affect us and our bodies. In

exploring the ties between the community-storytelling and site-specific narratives in the mobile media age, Jason Farman is elaborating on his theories on embodiment, focusing on how mobile media makes bodies and communities more visible. He points out how mobile media can function as "tactics of spatial storytelling to tell stories that often go untold", allowing multiple stories on possibly "conflicting narratives about what a space means - to be layered onto a single spot" [11]. We believe that immersive media such as augmented reality (AR) goes even further in enabling this type of narrative layering. A considerable amount of research has been conducted on user experience (UX) in the field of immersive technologies [12]. By literally attaching different layers of content to a real object, AR offers opportunities for making underlying information visible and complex issues visually comprehensible, opening new perspectives on content. Through a temporally dynamic layering of content, information and knowledge on a specific object can also be conveyed in a more dramaturgical manner. Viewers can even look "inside an object" or set new relations to other objects. What Farman describes as a virtue of mobile media in general, namely, their focus on "producing ways that the virtual and the material interact in meaningful, embodied ways" instead on digital simulations [11], we consider an advantage inherent to the AR medium.

Despite this, the body's ability to convey a multitude of sensory impressions with and through movement remains underutilized in many media formats. Though they imply communication between the material and the digital, many AR applications in practice isolate users from one another, often lacking an ensuing process of reconnection and the opportunity for discussion that might result through its usage. This stems from ingrained habits shaped by passive consumption in linear media like film or audio, where audience interaction is minimal. Consequently, our body instinctively expects that we must stand still and simply watch and listen, if not encouraged otherwise. In contrast, AR, coupled with mobile devices or wearables, can enable active engagement though choosing viewing angles and positions in space. Emerging from a relation to a real-world object, an interactive and collective relationship can be built not only with an object, but also to other people. This physical involvement facilitates intuitive understanding of media dynamics, hierarchies, and relationships with other users. By producing dynamic content and encouraging its exploration, AR can transform users from passive observers to active participants, allowing for non-linear storytelling and diverse end experiences.

In the following chapter, we describe the development process of the project "AR Poensgenpark". The project aims to visualize the various layers and differing individual perspectives or *situated accounts,* in terms of Turnbull et al. [3], related to the cedar tree falling, while also employing technology to facilitate dialogue among individuals holding opposing viewpoints. The interactive presentation of knowledge through mixed reality technology additionally encourages an interplay between the individuals involved

and their connection to the proxy object, thereby instigating a sustainable transfer of knowledge.

Project and goals

Expedition Poensgenpark

The "AR Poensgenpark" was created as part of a larger design research project conducted by communication design student Patrick Kruse in form of an experimental fieldwork called "Expedition Poensgenpark". The research project was motivated by an approach to communication design as a practice that deals with recognizing complex socio-cultural problems and challenges and creating solutions to them, whereby a way to solution is equally important as the result itself. As such, it simultaneously entails a *design of a process* and *design in process*. The story of the falling of the Atlas cedar and the discussion that emerged around the issue was a fertile ground for such an approach and provided a focal point of the research.

Due to its process-oriented nature, the project required an approach that would offer an insight into the park and its surrounding for a longer period. It was especially interesting to design an approach that would enable an uninterrupted observation and digital documentation of the park for 24 hours. The project was partly inspired by the classic self-sufficient expedition vehicles that can spend days on end in remote areas. For this purpose, a university-owned minibus that can be operated independently of the power grid was stationed inside the park and used as a camping place and a main research base for five days in summer 2018. With its integrated technology - monitors, cameras and Internet

access, the vehicle functioned as a processing and communication platform, where the exchange with park visitors took place and the various data sets were processed.

The design expedition served as a method for collecting data and material on the park, as well as designing a solution-oriented process. For a digital capture of the park premises, a set of digital tools was used - landscape scanner, digital camera, drone and 360° camera. Standard field research practices such as participant observation, field journal and informal interviews were combined with archival research in the adjacent city archive. The primary goal, however, differs significantly from the application of these qualitative methods in social sciences like sociology, urbanism, or ecology. While the latter are concerned with ´how things are´, trying to keep an impartial position, an approach informed though RtD is about ´how things could, should, or might be´, concentrating on the impact that designers have on society. [13] This was primarily reflected in the daily sharing of the research outcomes together with the park visitors, including them in the process and letting them comment and affect the research direction. Since the origin of this project is a conflict between citizens and the city, the designer wanted to enter into an open dialogue with different stakeholders and gain as broad a picture as possible of life in the park. To get a better insight into the conflict, he engaged in conversations where different material on the park was presented and used as incentive for discussion.

In addition to the exchange with park visitors, the expedition served as an exploration of the park. Along with collecting information from botany, ethnology, zoology and geography, the area around the Atlas cedar was measured and scanned, using equipment such as landscape scanners

Figure 3. Expedition set-up in the park. ©Patrick Kruse

and 360° cameras. The collected data were visually processed and presented in a small geodesic pavilion installed directly on site. Its intriguing shape attracted attention and at the same time served as a weatherproof work and exhibition space that provided a daily insight into the data collected and stimulated further exchange with the park visitors. General information on the entire project and written notes about the daily expedition work were displayed for the passers-by. (Figure 3)

The AR application

The extensive information and the stories collected through the fieldwork as well as the digital documentation of the park premises made during the expedition have been combined with existing historical images and archival information and presented in the form of an AR application. The aim of the application is to communicate a complex issue involving citizens, politics, and nature, and to mediate in the conflict between the citizens and the municipality.

The analog "interface" of the AR application to which the image markers are attached is the actual 160 cm wide tree slice of the fallen cedar. After getting familiar with the research, the Ratingen municipality had offered the chance to use one piece of the felled tree for the project purposes. In this way, the piece of the tree not only serves as an imposing memento of a once impressive tree but is at the same time giving it a digital added value. By means of an app for mobile devices (smartphone, tablet), the users can access the digital content. After scanning an image marker, which is embedded in the wooden panel, the content is being projected in an AR form above the tree slice.

The user interface (UI) and user experience (UX) were made as simple and intuitive as possible, considering the target group's limited exposure to the AR medium. The application starts with the project logo, followed by a short introduction text. By clicking on the start button, the AR view opens. The background consists of the live camera image, which is extended with the scan overlay mask (Figure 4).

Figure 4. The UI of the application before choosing a scene. ©Patrick Kruse

The frame where the marker is to be placed resembles the widespread QR code scanners. When the camera is correctly aligned, the software recognizes the marker, and the digital archive opens. At this stage, the user can choose between three layers – the ´Park´ scene, the ´Laboratory´ scene or the ´History´ scene. Upon selecting a layer, various information and media hidden in the individual scenes can be accessed via additional AR buttons.

There are two versions of the UI in the application. In one of them, the user moves within the app via a 3D interface which opens when the marker is successfully scanned. A large control panel with three buttons floats in a fixed position in the camera image. Each button has an icon representing a scene - a tree stands for the park, a magnifying glass for the laboratory and a box for the history. In addition to the AR user interface, the application also has a 2D UI, which is anchored at the bottom of the screen. In addition to the three scene buttons, the UI bar is supplemented by a help button and a menu which serve as a sort of emergency exit. In addition to a classic imprint and a list of contributors, the menu button contains a restart button in the submenu that enables the restarting of the application from the scanning scene in case of tracking problems. The help button on the right-hand side of the UI bar provides the user with brief information about possible functions in the AR scene.

The ´Park´ scene The application is opening up with a 3D model of a section of the park, which shows the condition on the evening before the felling of the cedar. The digital reconstruction was created with the help of laser scanning and photogrammetry though drone photography. By combining photogrammetry and laser-based surveying, a comprehensive image of the felled cedar and the immediate surroundings was created. In this level, the user can once again view the impressive tree virtually. Various information panels draw the user's attention to further historically important objects and places in the park. (Figure 5).

The ´Laboratory´ scene The tree disease is the elementary piece of the app. The installation is intended not only to create a memento of the tree, but also to mediate between the citizenry and the city, since the felling caused such a great controversy. In the laboratory, the user can get an objective and scientific insight into the life of the tree. The Dyer's Polypore fungi is taken here under the magnifying glass. Photogrammetry is also used at this level. In addition to the three-dimensional representations of the fruiting body of the fungus and mycelium, a CT scan provides a view of its cell structure. The user should understand the activity of the fungus and how the tree was attacked. It was precisely this educational aspect that the city had failed to do and had not made the case transparent enough. (Figure 5).

The ´History´ scene A glimpse into the history of the park is created through the experienced time of the tree. For over 120 years, the tree stood in a central location of the park. The Atlas Cedar has survived war, storms, and botanical changes of the park. During World War II, a full 32 bombs

fell in the park and the tree survived with minor damage. This accumulated knowledge and individual events can be accessed by clicking on the years placed on the estimated respective tree-ring. Clickable years open various historical photographs from the immediate surroundings of the cedar and the accompanying informative text. The materials used here come from the local archive. (Figure 5).

To mediate it, a conflict must be viewed in its entirety, and one should understand what the individual points of view are. The three different scenes of the application offer a multi-perspective view, where the individual users are empowered to form an informed opinion and to relate to different positions of the parties involved. The three main stakeholders - nature, the citizens, and the politics - are here represented though scientific, civic and fictional discourse which are, as different types of knowledge, overlaid on reality in both literal and metaphorical sense. At the same time, these discourses are not each supporting only one stakeholder, nor can they be completely separated as represented through different scenes but are in themselves layered. While the laboratory scene can, on one side, represent nature through the argument of its factuality, on the other side, it can also represent politics through the argument of scientific discourse that supported the political decision of the tree falling. The history scene emphasizes the importance of the citizens' voices through the multitude of stories and events that took place in the vicinity of the tree throughout the years. Simultaneously, the positioning of the events on the tree-ring personifies the tree as a witness that is worth saving, speaking also in favor of nature. The park scene can be seen as a lamentation of the once existing tree, creating its virtual monument, but it can also represent a form of ´digital conservation´ [4, 5] for those who have accepted the felling as its only possible fate.

Even if the tree is at its center, it would be an exaggeration to claim that the application represents a non-anthropocentric point of view. In terms of Moss et al. [6], the project could be easily categorized as anthropocentrically oriented due to the strong focus on its social situatedness and historical and biological facts. However, the application does not claim to focus on urban nature, but rather uses technology in representing the human discourse and dispute on nature in order to encourage conversation and mutual understanding. Besides giving space for different layers of information to be represented in the three scenes, the tree, as the object of dispute in the first place, brings the actors into conversation at a round table made of this very same object. There is no side to stand on here. The actors stand around the tree slice which serves as a proxy for the facts. At this moment, the conflicted sides are not only brought into conversation though arguments and facts but also through the proximity that is facilitated by the application. As Farman argues, the body emerges from the collaborative interaction between the virtual and the material. Instead of being distinct realms necessitating the body to navigate between them, the virtual and the material are here cooperative spaces that collectively contribute to the process of embodiment. [11]

Digital processing of the data and technical implementation

For archiving parts of the park, a landscape scanner, a digital camera, a drone and a 360° camera were used. A laser scan was first created at ground level using a combination of
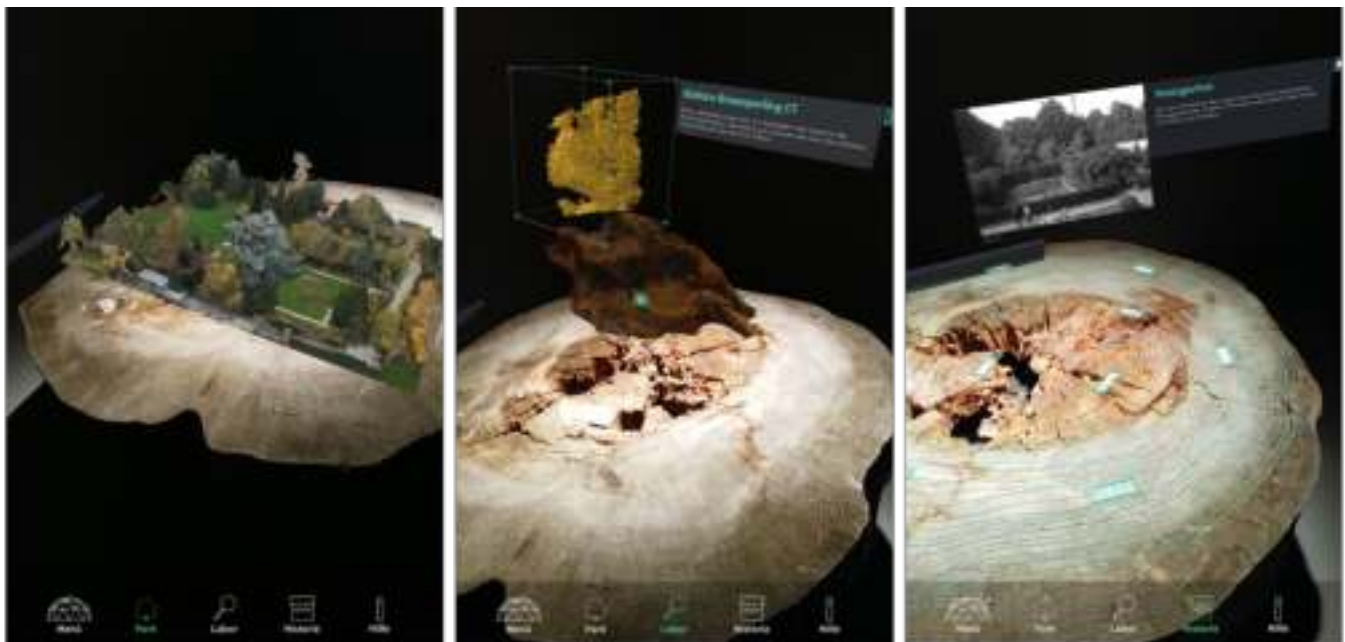

Figure 5. In-app view of the three scenes - ´Park´, ´Laboratory´ and ´History´. ©Patrick Kruse

different reconstruction software. To achieve a higher level of detail, this was expanded with standard photographs and 360° photographs. The exact reconstruction of the approx. 20-meter-high Atlas cedar was achieved by combining aerial video recording with photos of a GPS grid flight of a drone. The video data was converted into single frames and combined with the photographs from the GPS grid flight in a photogrammetry system.

The 3D-reconstructions of the mushroom fruiting body were created using photogrammetry and a CT scan. The photogrammetry was calculated from 40 photos of the fruiting body, while, for the interior view, a 1-cubic-centimeter piece of it was scanned in a CT scanner specially designed for miniature images. All the 3D data collected was further processed using Blender and Unity.

The application was developed using Unity engine. The AR framework used was Google's ARCore, whose "Augmented Images" function was primarily used to place the virtual objects. ARCore's spatial tracking is based on many tracking points that are generated virtually at runtime. The objects are then created in the virtual world as soon as an image marker is recognized. Tracking is then still linked to the environment. We opted for an image marker because the tree trunk was a fixed object in the room to which the image markers could be attached. The manual modeling of the objects was created in Blender. The visualization was done using the standard Unity shader.

User feedback and future directions

The project was viewed and used by different user groups at various prototype test events in Ratingen Town Hall and at the first exhibition of the project at Peter Berners School of Art show in Düsseldorf, Germany.

The first exhibition at the University quickly showed how the involved as well as uninvolved parties enter a conversation based on elementary knowledge on the topic. The exhibition scenario demonstrated the potential for supporting networking between the stakeholders. Citizens, people with scientific background and official representatives of the city of Ratingen came together. The interplay between the physical installation and the AR application-initiated discussion on various topics such as sustainability and urban planning as well as the exchange of personal experiences and stories made at the actual location of the tree.

The Ratingen Town Hall is interested in a permanent presentation of the installation in the park. Negotiations are presently underway regarding the potential acquisition scenario. Such a development of the project is especially important for us, as it proves the success of the project through recognizing its potential by and for the local community.

Conclusion

The digital installation "AR Poensgenpark" took on the challenge to mediate in a complex interplay of environmental, social, and political dimensions surrounding the removal of a 120-year-old Atlas cedar from the Poensgenpark. By employing augmented reality (AR) in a communication design project, the aim was to transform the site of contention into one of connection, where diverse perspectives could coexist, and dialogue could flourish. Though the AR experience scientific, civic, and historical perspectives were layered onto the physical reality, aiming to create a collaborative space for dialogue. The three distinct AR scenes served as a platform for storytelling, offering users an opportunity to explore the scientific aspects of the case, delve into the historical context of the park, and engage with civic perspectives. By intertwining these diverse narratives, the application aimed to break down social barriers and foster connections among citizens, academics, and city officials.

The project's user testing events provided valuable insights into the potential impact of the AR application, highlighting its connectivity potential among stakeholders. The project also serves as a proof of potential that augmented reality and digital mediation in general have in the context of democratization and communication facilitation when combined with experimental design approaches.

Returning to the initial questions that accompanied us on our journey - *Can a place of contention be transformed into a place of connection with digital means? Is it possible to document the conflicting voices or even attempt a mapping of social disputes in a neutral way? Can one carry out an expedition without inflicting a perspective of power? Who is drawing a line between protection and destruction? Does nature need to be saved? (...)*, we wish to reach to Friedrich von Borries' meaningful elaboration of design effects as always essentially political. For him, design, as an *intentional* and *goal-oriented* ´shaping of physical and virtual objects, of interior and exterior spaces, of information and of social relationships´ implies a dichotomy at its very core - ´Design creates freedom, the possibility of actions that were either impossible or inconceivable previously. But in doing so, it also delimits a space of possibilities, creating new restrictive conditions. (...) It is the political essence of design.´ [14] We like to believe that the new conditions created through this design experiment will be ones that work in favor of local community and its future challenges.

Acknowledgments

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Authors Biographies

Patrick Kruse is a communication designer, currently working as a researcher in MIREVI team (Mixed Reality and Visualization) at the University of Applied Sciences Düsseldorf in Germany, where he contributes to advancements in Human-Computer Interaction, particularly in UX design for mixed reality applications. With a background in motion graphics, he is adept at conveying knowledge through storytelling, focusing on making complex topics easily understandable. Patrick works at the intersection of virtual and real space, where he tackles technically savvy and user-oriented problem-solving. Additionally, he freelances on projects related to visual storytelling and content creation, using his expertise in communication design. https://www.patrick-kruse.com/

Ivana Druzetic-Vogel is a cultural anthropologist and museologist with 15 years of experience in cultural project management and creative industries on international scale. She is currently a member of the MIREVI team at the University of Applied Sciences Düsseldorf in Germany. She conducts interdisciplinary research at the interface between art, culture and mixed reality technologies and has led various digital projects in this field. Her particular interest lies in exploring the effects and potentials of the digital turn in the cultural and artistic sphere. She is dedicated to leveraging her anthropological background to facilitate exchange and understanding between cultural actors and the technical field, thereby driving innovation and collaboration.

Anja Vormann is a professor for audiovisual media in the department of Design at the University of Applied Sciences Düsseldorf. Working as a media artist she received the NRW scholarship "Arts and Science", the scholarshop "Goldrausch Künstlerinnenstipendium", given by the Senate of Berlin, the "Bergische Kunstpreis" art award, as well as a travelling scholarship of the Cultural Department Düsseldorf to Chongqing, China. Together with Gunnar Friel, she received the german videoart award "12th Deutscher Videokunstpreis Marl" as a special award of the Academy of Media Arts Cologne, the sponsorship award for fine arts of Düsseldorf "Förderpreis für Bildende Kunst der Landeshauptstadt Düsseldorf" and the sponsorship award "H.W. & J. Hector" of the Kunsthalle Mannheim.

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