



Designing the Exhibition Modus of Virtual Experiences: Virtual Reality Installations at Film Festivals

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Abstract. We are currently witnessing an increase of virtual reality sections at several major film festivals exhibiting a growing number of experiences combining cinema and VR (this field is also known as cinematic virtual reality (CVR)). However, we are still lacking a homogeneous exhibition modus for these hybrid experiences. Moreover, the installation's context is further complicated when some CVR experiences make use of additional media including scenography, spatial sound, and live performance to transition their audience into the virtual experience. As such, special attention is given to the exhibition modus of the work, and therefore the installation must be considered part of the experience design. This paper investigates some trends within installation design at film festivals exemplified by a selection of six works exhibited at the Venice 2019 VR selection. These works are initially divided according to the design strategies of 'the story room', 'the attraction window' and 'the performance space'. Through interviews with industry professionals about their retrospective thoughts on the installation design for the experiences, the paper uncovers some design considerations and strategies, including consideration of installations as a transitional element of the audience experience design, how to approach audience put-through and spectatorship, ways to ensure transportability and distribution of design, and dealing with venue specificity and adaptability of the installation, among others.

Keywords: Cinematic virtual reality · Film festivals · Exhibition design

1 Introduction

Throughout its history, once commercialized and institutionalized, film has done well in describing its exhibition and viewing modus. When films were increas-

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ingly found in venues specifically built to screen them, the exhibition practice of cinema started to gain special attention from theorists including Baudry and Williams [1], Metz and Guzzetti [14], Deleuze [8], and Bellour [2] who sought to explore the combinatory effect of film viewing technologies and spatial architecture creating a homogenous relationship between the spectator and the film. Today, as we are noticing an increase of virtual reality sections emerging at several major film festivals showcasing a growing number of experiences combining cinema and VR, it becomes evident that we still lack a homogenous exhibition modus for these hybrid experiences and that discussions of CVR spectatorship are only at their infancy. To the present, a formal definition of CVR is still being developed, but several studies, e.g. [9,10], adhere to the definition formulated by John Mateer. According to Mateer, CVR refers to “(...) a type of immersive VR experience where individual users can look around synthetic worlds in 360 degrees, often with stereoscopic views, and hear spatialized audio specifically designed to reinforce the veracity of the virtual environment” ([13] p. 15). However, it remains unknown what will become the future venues of CVR and how virtual technologies and spatial architecture may be combined in these venues. A common approach among festivals has been to install so-called ‘VR theatres’ consisting of a number of seats in a neutral room in which people experience either the same or a number of different works through HMDs.



Fig. 1. Traditional ‘VR theatre’ exhibition modus at Venice Film Festival 2017. Photo copyright by Venice Film Festival.

We are, however, starting to see other potential solutions to the challenge of facilitating virtual experiences in physical space by designers in the industry. In installation contexts, including that of film festivals, some CVR experiences are making use of additional media including scenography, spatial sound, and live performance to transition their audience into the virtual experience. As such, special attention is given to the exhibition modus of the work, and therefore the installation must be considered part of the experience design although it may vary and change across venues during the touring life of the experience.

This design focus on the exhibition modus of virtual experiences has been largely overlooked within academia but contributes with some important perspectives at the intersections of film theory, human-computer interaction research, and industrial design training. Focusing on this specific viewing context as one possible exhibition outlet for CVR experiences will provide the fields with a stronger conceptual approach to the connection between CVR productions and their exhibition contexts leading towards future discussions of CVR spectatorship. Furthermore, documenting and discussing current design solutions in the industry will aid designers in their future development for particular channels of semi-public distribution (e.g. festivals and museums) but will also prove valuable to the work of the venues themselves in their continued curatorial work of facilitating audience engagement helped by spatial design. Furthermore, contributing to the larger notion of media in ‘attraction phases’ [18] with the characteristics of unassimilated, interdisciplinary, seamed, and participatory works, focusing on CVR installations will help illuminate design approaches and document works in such an early phase. As a result, the works and their installation designs will be taken seriously and not be understood as “naive or embryonic forms of some forthcoming standardized form” [18], which tends to be the norm when framing emerging media experience design.

Therefore, this paper aims to investigate three trends within installation design at film festivals exemplified by a selection of works exhibited at the Venice 2019 VR selection. Through several interviews with industry professionals about their retrospective thoughts on installation development and design, the paper will uncover a number of design strategies that answer the question: how are virtual experiences facilitated in a physical space?

2 Materials and Methods

2.1 Materials

This paper analyzes a small selection of works exhibited at the Venice 2019 VR selection (see Fig. 2). All experiences were selected since they had a distinctive installation part but varied in design strategies for audience and spectator approach across three initial categories with different characteristics that will now be briefly defined.

The first design strategy is termed the “story room”. This installation space is completely enclosed and allows no clues for passing spectators on what might be happening behind the white walls. However, once inside the room, the space

	The story room		The attraction window		The performance space	
Name of the work	Battlescar: Punk was invented by girls	The Key	Porton Down	A Life in Flowers	Cosmos Within Us	The Collider
Interviewee(s)	Director Nico Casavecchia & Installation designer Mercedes Arturo	Producer Gloria Bradbury	Director Callum Cooper	Creative director Armando Kirwin	Creative director Tupac Martir	Director Amy Rose
Venice category	Competition - Linear	Competition – Interactive (Winner of the Grand Jury Prize for Best VR immersive Work)	Competition - Interactive	Competition - Interactive	Competition - Interactive	Best of VR - out of competition

Fig. 2. Overview of the chosen experiences from Venice 2019 and their initial categorization.

starts transitioning its audience into the narrative even before entering the HMD. This is done through extensive use of set-design through additional media often in a way that corresponds with the mood and aesthetic of the VR world but not necessarily represented 1:1 or with tracked surfaces and objects. In some cases, this set-design furthermore includes the use of human performers to ensure this narrative transition into and out of the experience.

The second design strategy is termed the “attraction window”. Similarly, to the “story room”, this type of experience is characterized by having an installation space with a distinctive design often including physical props (e.g. furniture, decorations, etc.). However, whereas the “story room” is a singular experience with only one audience member attending at a time on a scheduled time slot, the “attraction window” provides an additional layer of experience. The spatial design includes a big window towards the general audience area (which mainly consisted of hallways where people pass by) and thus allows spectators to catch a glimpse of what the experience might entail. As such, this window might even be described as a ‘suspenseful interface’ strategy [15] aiming at anticipation and excitement before trying the experience yourself.

The third design strategy is termed “the performance space”. Here, the installation space itself consists of several “parts”. In some cases, these parts do not refer to something physical but to differing experiential qualities within the same space. In one of the cases, this results in two different audience experiences, where one person enters the enclosed room and experiences the work from inside the HMD, whereas another four persons enter the room as audience members to watch the experience of the person that interacts. In another case, the “parts” refer to a series of adjacent rooms with different experiential qualities; a preparation room, an experience room, and a debriefing room. A shared characteristic for these types of works is that the audience is considered somehow performative

in that they are supposed to do something and to enact the story themselves, either with or without an audience.

2.2 Method

Through retrospective interviews with the industry professionals involved in the conceptualization and design of the installations, the paper will illuminate a diverse range of design approaches to the challenge of facilitating virtual experiences in a physical space. The reason for focusing on the design process and asking the designers is twofold. Firstly, there has already been a heavy focus on the user experience within the area of experiences mixing real and physical spaces, such as the trajectory framework [3–5], the notion of blended spaces [6, 7], spectator interfaces [15], and performative ‘frictions’ [16].

Secondly, the immersive technologies themselves have also had the center of attention. This attention has mainly been divided into two categories, according to Rouse et al. (2015, p. 176) [17]: “(1) research on the development of the enabling technologies, computer graphics, and tracking, and (2) evaluation of users’ abilities to accomplish discrete tasks in various applications, which are often specifically designed to test the effectiveness of AR/MR tools ([11, 20].” Both categories do, however, tend to be rather medium-centric where especially immersion is regarded as an inherent quality of a medium resulting from its technical properties.

This means, that the voice of the mixed reality designer or creator is still rather unexplored. One important exception includes Rouse and Barba, who in their paper “Design for Emerging Media: How MR Designers Think About Storytelling, Process, and Defining the Field.” (2017) conducted semi-structured interviews with fifteen designers in the field on their design processes and the medium of MR. Their motivation for conducting this study stems from their argument that “Despite a wealth of scholarship on mixed reality (MR) from many disciplinary perspectives, a comprehensive account of design practices for MR remains elusive. The choice to focus on the MR design process sets this study apart from the majority of work in the field, which commonly analyzes these experiences as discrete artifacts and discusses the effects of design choices in summative evaluations that sometimes obscure the pathways that led to those final results.” ([19] p. 245). Therefore, this paper intends to add to this work and to do so in the specific design context of film festivals as exhibition and distribution venues.

For this paper, a total of six experiences from Venice 2019 were chosen because of their distinctive spatial design compared to the more traditional exhibition modus of the ‘VR theatre’. Individuals or teams involved in the design process of these experiences were contacted and invited for online interviews conducted via Zoom. A total of six semi-structured interviews were conducted, and before the start, all interviewees were provided a consent form allowing for the interviews to be filmed and transcribed. Furthermore, all interviewees were asked specifically as to if and how they wished to be cited in this paper. They were briefed that the subject of the interview was the specific installation in Venice

2019, but they were also encouraged to reflect on earlier or later installations of the work. They were asked about how the physical component became part of the overall concept and how the design process developed. Furthermore, they were asked about the general aspect of film festivals as distribution and exhibition venues and the potential future for location-based experiences outside of this context.

3 How Are CVR Installations at Film Festivals Designed?

This section will present a selection of the findings from the interviews. While I have previously argued for the function of installations as a transitional element of the experience design [12], this was confirmed in the majority of the interviews. However, several additional design considerations surfaced in the interviews regarding how to design installations for the exhibition context of film festivals and a conceptual and experiential link between physical and virtual elements. These considerations included audience put-through and spectatorship, transportability, and distribution of the design, venue specificity, and adaptability of the installation, among others. While there are many ways to structure these findings, I have chosen to keep the initial design strategy categories for this section, before opening up the discussion on more general perspectives in Sect. 4.

3.1 Designing the Story Room

To summarize, the “story room” strategy is described as an enclosed installation space making use of additional media and set-design to transition the audience into the experience before entering the HMD.

This section covers two different installations, both of which I have categorized under the name “story room”. The first one, *Battlescar - Punk was invented by girls*, is directed by Martin Allais and Nico Casavecchia, and produced by ATLAS V, Fauns, 1stAveMachine, RYOT, Arte France and Kaleidoscope [22]. The experience is 28 min long and follows the story of Lupe, a Puerto Rican-American living in the late 1970s New York City. She is introduced to the punk scene by Debbie whom she meets in the cell of the juvenile detention center, and through the story, you witness her entry into the secret worlds in the Lower East Side scene. The first episode, consisting of 9 min, premiered at the 2018 Sundance Film Festival in the New Frontier category and the experience furthermore went to Tribeca Film Festival later the same year. In Venice, the 28 min version was nominated for the Best VR Immersive Story for Linear Content. For the interview, Casavecchia was joined by Mercedes Arturo, who was the installation designer responsible for all three installations.

The installation concept came as an effect of getting accepted for Sundance, where the exhibition context involved some sort of physical place. However, as Casavecchia points out, you don’t have to create an artistic installation and many exhibitors choose not to. Comparing the three exhibition contexts, Arturo

reflects on both practical and creative changes to the installations. Particularly, the installation design adapts according to the physical measures and restrictions of the space given at the venue. Furthermore, Arturo notes how local logistics and budgets function as very practical but real constraints to the creative process. The installations in Sundance and Venice were more tactile, including several physical props as part of the design. Both installations represented rooms that were not part of the VR experience.

In Sundance, the installation represented, in Arturo's words, "the aftermath of the whole experience", being Lupe's bedroom one year later. The installation design included poetry on the walls, a lot of pieces of vinyl, instruments, and clothes scattered across the space. The design even included an original New York Times from 1979. In Venice, the installation represented the bathroom of what looked like a punk music venue, including toilet stalls, graffiti on the wall, and trash scattered on the floor. In Tribeca, however, the team was not allowed to alter the room. Here, the solution was instead based on a special lamp construction projecting words on the walls, which required a considerable amount of research. Comparing the two types of installations, Arturo notes how the tactility of the spaces prompted people to explore the world outside of the VR experience: "(...) people wanted to be there, wanted to touch, wanted to check her books, wanted to check her vinyls, wanted to check her clothes (...)". She furthermore adds how, in her opinion, installations themselves tell stories and contribute with a second layer of experience and produce a feeling of "being properly surrounded by a change of world." Apart from adding to the overall experiential aspect of the experience, this change of world furthermore has a very functional aspect in the way it transitions the audience into and out of the experience and how it, with Arturo's words "(...) softened up the moment of getting into the headset and getting out of the headset."

In the second experience, *The Key*, the transition into the experience is similarly helped by the set-design of the installation. *The Key* is directed by Céline Tricart and produced by Lucid Dreams Production and Oculus VR For Good [26]. In Venice, the piece won the Grand Jury Prize for Best VR Immersive Work. As the only piece of the six chosen for this paper, it included a live actor in the installation, who help you into and out of the experience. The piece was initially shown in Tribeca in April 2019, and in the interview, producer Gloria Bradbury, explains how it was always intended for the work to have a physical component due to the desire to "experiment with something that was semi-theatrical". In the design process, the idea of including a live actor in the work stemmed partly from the director's attention to the onboarding and outboarding for the work to strengthen the emotional trajectory. Bradbury explains how: "Putting on the headset is this mechanical action that normally interrupts the story, so the idea was to have a person who would also be the person practically helping to put on the headset as part of the story from the beginning and the headset became a magical device that would enable the participant to continue the story." As they wanted to keep the same voice as you hear once inside the VR, the experience makes use of a voice recording and sound collars to ensure the consistency of



Fig. 3. *Battlescar: Punk was invented by girls.* Photo copyright by Nico Casavecchia.

the audio. However, the team was aware of the difficulty for the actor to engage with the audience without speaking, which meant that before both installations in Tribeca and Venice, they provided the actors with training: “(...) in New York we hired a friend who worked at Sleep No More (...) to come and do a training for the staff that we had in Tribeca because they (...) had never really done interactive theater before. She provided them tips so that they would feel confident in interacting with people and know how to put the participant at ease and adapt to different reactions (...) that’s actually quite difficult (...)”. In Venice, they showed the staff videos from Tribeca and thus coached them based on the previous experience. For the outboarding of the experience, the live actor similarly had an important role that included helping take off the headset and guiding viewers in how to interact with photographs that were part of the installation and story. Bradbury added that “we anticipated or hoped that the story would have an emotional impact and having the actor there helped complete the journey for the viewer (...) practically speaking, we needed the actor to give a little gift at the end to the viewer.” The gift is a small key that functions as a story component but also as a way to make people remember the work: “We wanted to solicit engagement and empathy, so we came up with the idea to give each participant a key so that they remember the experience they just went through.” Besides, there is a marketing component to the leave-behind object: “(...) we have seen other projects do this in the past and it becomes a talking point, creates some buzz (...) it’s kind of a marketing play but more importantly for us, it was meant to symbolize that we are all part of this humanistic journey and thank the participant for being vulnerable to it.” Apart from the audience experience side of the work, several other design considerations were



Fig. 4. *The Key*. Photo copyright by Gloria Bradbury.

made. One refers to the transportability of the work and its potential afterlife as it travels between festivals or other venues. As Bradbury explains: “One of the questions that went into our thinking of designing the experience is, can we design something kind of like a kit-of-parts so we can keep it, put it in a container and ship it to another venue or activation to save costs, building costs on the initial pieces.” However, with *The Key*, they found that it was almost easier to recreate as shipping is a huge consideration and there are still relatively few venues to consider. Therefore, they considered “how can we design it so that we can easily recreate it?” However, even with this consideration in mind, each venue has different criteria, including space and safety considerations, and even aesthetic considerations, which pose potential alterations to the design. When comparing the installations in Tribeca and Venice, Bradbury mentions a number of changes which were made due to the above factors including lack of availability of the right type of digital Meural screens in Europe, color scheme and decoration for the outwards space to respect branding of the event and fog machines being either allowed or not (or potentially not working to the satisfaction of the team).

3.2 Designing the Attraction Window

To summarize, the “attraction window” strategy is described as a semi-open installation space that uses a window as a suspenseful interface through which the extensive set-design of the space is revealed to passing spectators.

This section similarly covers two different installations, both of which I have categorized under the name “attraction window”. The first work, *Porton Down*, is directed by Callum Cooper, co-written with Don Webb, and produced by

Cooper and Constance Nuttall [24]. The work is based on the experiences of Don Webb, who in the 1950s became a military test subject and the aftereffects of the experiment. In the experience, participants similarly become test subjects both in the effect of the narrative of the VR experience but also by the design choices of the installation. In the interview, Cooper explains how the aesthetic choices of the installation design are based around photographs of Webb's original stage play from the '80s. Before entering the primary experience room, there was a waiting area designed in the same laboratory aesthetic as the installation, preparing the audience for the experience while also playing with the infrastructural aspect of the film festival itself, where everyone has to wait her turn for the experience. Cooper adds that working with the installation design, the work became more of an artistic and performative thing, more "an artwork". Upon entering the experience and the HMD, the audience member is seated in front of a red button and underneath a timer, all directly in front of a window to the general area, which allows for all passers-by to observe what is happening. This too is referred to by Cooper as belonging to the overall theatrical aspect, thus turning people into performers themselves. Originally, he wanted to have a two-way mirror but decided that it wouldn't have drawn enough attention. However, looking through the window was not intended to be an innocent act: "(...) you feel complicit in this kind of, you're seeing somebody else almost like they are in some kind of laboratory and you're the lab attendant by being outside, and on the timer at the top that kind of presents how quick people's reactions are, adds a level of voyeurism to it, which I feel is, you know, it's an odd, vulnerable experience already of being in VR because you're basically being blindfolded (...)." Upon exiting the installation, you are handed a piece of paper including your test results of the different experiments conducted while in VR. On a narrative level, this relates to the fact, that this was exactly what Webb was not given access to. He was never given any validation of the data that was mined as part of the experiment. On a bigger level, it comments on the general theme of data mining in digital platforms and hardware, including that of the VR medium itself. As part of the experience design, this takeaway paper is intended to invite for reflection after leaving the installation, and as Cooper explains: "The paper you receive in the end is kind of like punctuation to the overall experience and something that you can meditate on later and kind of evaluate (...)." The individualistic aspect of the paper furthermore allows for conversations between friends where comparisons of the results might spark bigger discussions of how to navigate in a data-mining world.

The second work, *A Life In Flowers*, is directed by Armando Kirwin and produced by RYOT and Artie [21]. The experience revolves around the work of the renowned botanical sculptor, Azuma Makoto, and the harmony between flowers and human life. Through artificial intelligence technology, the audience enters into a conversation with Azuma resulting in an individualized, virtual bouquet based on the answers of the participant. In the interview, Kirwin explains how the physical component was always something intended for the work, even being unsure if the final budget would allow it. Referring to the work of Azuma, Kirwin



Fig. 5. *A Life In Flowers*. Photo copyright by Camillo Pasquarelli.

argues: “(…) because all of his work is physical, everything he does is essentially an installation (…) and then it felt like such a shame to not have a physical component because he is an installation artist.” The physical flower arrangements in the installation thus represent the work of Azuma but also connect with the narrative of the VR experience, which is only fully understood after the experience. As Kirwin explains: “(…) when you come out of the experience and you look around and you see all these unique arrangements, maybe some people, I don’t know how successful this was, but to think, oh I’m surrounded by all these lives. All these other people’s lives.”. Another design consideration of the installation space had to do with the speech recognition software and the fact that people had to speak out loud to engage with the experience: “Even before the Venice layout we wanted to make it a safe, enclosed space because some people were talking about really personal things, you could say something that is 100% not for anybody else to hear.” However, in addition to the audible privacy of the room, the installation furthermore had an outward-facing window similar to that of *Porton Down*. Kirwin explains how the window was both a matter of attracting audiences and to get them excited and curious about the work, but it was also a way of engaging with the urge for social experiences and a generation of social media natives: “We thought, let’s make it a little easier for people to at least take a picture”. However, it did get the team in a bit of trouble due to privacy issues, which made the venue apply the restriction that you

had to get permission ahead of time and to know the person to take a picture. That way, the solution was simply too effective, and Kirwin further adds that: “I think people are hungry for that and even this very simple solution we had was enough to get us in trouble because it worked well and because people want that kind of thing.” An additional feature of the window solution is its function as a transitional element. Kirwin argues how, even a simple thing like a window between the virtual and physical world can help transition people, which was a design consideration also applied to the installation and the VR experience itself: “Because we were hoping to get people to be emotional, in the experience, we wanted to have a transition into the world as much as possible (...) you are in the cube of flowers and then you finally go in VR and then it starts very simple, you’re not in a full environment yet, it’s just an abstract world (...) we’re just trying to slowly onboard you and also because of the speech recognition and AI component, we wanted people to be comfortable.”

After Venice, *A Life in Flowers* got acquired by the Phi Centre in Montreal, Canada. Speaking about the future of the work in this context, Kirwin explains how, from the beginning, the installation design was intended for touring and museum exhibition: “We wanted to do something that was more repeatable, something a museum could take over easily, that could pop up in other places (...) not that I’m only a practical kind of creator, but for practical reasons we wanted to make the installation easy to tour and yet still hopefully kind of cool. We have three copies of it, and we have plans for it to tour like two years.”

3.3 Designing the Performance Space

Lastly, the “performance space” strategy is characterized by having several “parts” either as differing experiential qualities within the same space or as adjacent rooms with different functions. Both versions must, however, be “activated” by the audience which is thus expected to act and “perform” the space. This section similarly covers two different installations, both categorized as “performance space”.

Cosmos Within Us is directed by Tupac Martir and produced by Satore Studio, aBAHN, and Satore Tech [23]. In Venice, it was nominated for the Best VR Immersive Experience for Interactive Content 2019. The piece has a duration of 45 min and the story draws us inside the mind of Aiken, a 60-year-old man suffering from Alzheimer’s. The installation of the piece and the experience space is twofold, or, put with the words of the director himself, “happens in different realities”. One audience member enters the room in an HMD and experiences the full piece in VR. This person is what Martir terms “the interactor”. Additional four persons are allowed into the room, seated across the back of the room as audience members. They all wear headphones but no HMD. To these audience members, all parts of the “behind-the-scenes” are visible, including the entire crew that holds, among others, a live orchestra, a live voice-over narrator, the director himself as the conductor, two “shadow men” ensuring the haptics of the experience, sound designers, and more. Put bluntly, the audience members are all watching the one interactor having a VR experience. But, they are also

watching the performative - and real-time - enactment around what is happening inside the headset. Therefore, even as the premise and the story are the same, the question is, with Martir's words, "in which reality are you inhabiting the story"? In the interview, Martir explains how, after Venice, the piece has scaled its exhibition format rather dramatically. From hosting four audience members in Venice, it hosted 10 people in London, 115 people in Amsterdam, and 150 people in New York. On a first note, it is interesting how this touring nature was always something intended for the work, as Martir states how the company origins from live entertainment, and therefore a touring model of distribution was natural. This has several implications for the design, as with different venues come different specifications including that of spatial dimensions and available technologies. Here, Martir stated how "The advantage of how the piece is made is actually that we adapt to the space that we are given. (...) Every single time, we shift and adapt. Audience, and size of us and how we are distributed based on the space that we are given." However, not only was the design of the piece affected by adaptations to the spaces given, but it was also continuously rethought in terms of potential audience experience enhancements. Since Venice, Martir states how there was very little for them to add to what is already happening to the interactor, but there was a big potential to the experiential layer available to the audience. These changes included technical upgrades including that of bigger screens but also changes to existing experience elements and the addition of new ones. To put the audience members even more into the space, the team added an entire lighting design for the performance. Furthermore, by the time the piece went to London, the role of the shadow men was changed from functional deliverers of the haptics to performative dancers, all adding to the "volume of what the audience is experiencing". This inclusion of additional media and the physical component of the experience was similarly inherent to the original concept of the piece. Martir states how they considered several different elements to enhance the story with the first proof-of-concept including a technical engine, a dancer in a motion capture suit, two musicians, and two actors to imagine how the story would feel. With his own words, it is a performance that happens in different realities - realities that will need to be subdivided and designed for to understand what they are serving and what they give to the experience. As such, it is not an experience by proxy with a hundred "cheap ticket" audience members watching the one lucky person in the headset. It truly is a performance designed with these different layers in mind. However, met with the criticism that "why would I want to watch someone else having an experience in VR?", Martir further suggests that there might also be a generational perspective on these new types of experiences. With the explosive growth of e-sports across the globe with viewing numbers exceeding many other media, we are starting to see other configurations of entertainment experiences that might pave the road for artistic experience and distribution models such as the one employed by *Cosmos Within Us*. Martir, at least, states how he hopes that others will copy his model and that he considers it to be what he has termed "theatre for the e-sports generation".

In the second experience, *The Collider*, there is a similar use of a performance space, a space of doing, but one which discusses the problematics and body politics of having spectators watching others in VR by zooming in on these extra-experiential qualities of being in VR and providing a privately shared experience between only two people. *The Collider* is directed by May Abdalla and Amy Rose and produced by Anagram [25]. In Venice, it was included in the Best of VR section and was thus out of competition. The piece was first shown at IDFA in 2018 as a prototype and later traveled to both Tribeca and Sandbox Immersive, which made the installation in Venice its fourth. The installation consists of three consecutive rooms in which the two audience members are joined in the last two. Before entering the first room, it is decided who will wear the HMD and who will wield the controllers in the second, shared “experience” room. Each audience member thus enters the first room individually, the rooms being placed side by side, where you listen to the first part of the story through a pair of headphones while seated in armchairs. In the room, there is also a cabinet and on it is a glass cake stand that holds several little figurines. Through the audio, you are prompted to lift the lid of the cake stand and make your own scene with the figurines based on your memory. On the controller side, you are asked to remember a time in which you felt powerful or had power over somebody else. On the VR side, you are asked to remember a time where you felt under somebody else’s power. In the interview, Rose explains how, in the design process, they spent a lot of time considering the beginning of the experience and “how you can get somebody into the right state of mind, get them to think about the right sort of things, in a way that’s still fairly gentle (...) so that somebody has a chance to arrive, emotionally, physically, in all ways.” A big part of this transition was attributed to the physical act of making the scene with the figurines: “We wanted something where people had to kind of do something actively, not just think, but do but do something that also didn’t betray too much of themselves, so there’s something abstract about what they do.” Furthermore, this act functioned as a way of introducing the two audience members to the overall elements of the piece that will continuously ask you to go back and forth between your memories and the experience, to highlight what the piece is about, with Rose’s words: “how our experiences impact on how we relate to people (...) and how you meet somebody or you’re with somebody and you respond to them in a particular way and the way you respond is a result of all of your memories and past experiences.” After making the scenes in the cake stand, the VR person puts on the headset, the controller person picks up the controllers, and both audience members enter the second room. This transition into the second room and the VR part of the experience was similarly designed for along the same theme of interpersonal relationships: “One thing we were interested in is the moment of drama when the controller person opens the door and sees the person wearing the headset, and we wanted to make the most out of that moment and make it feel as dramatic as possible. And as kind of compelling as possible, like this vision of this person wearing this headset and looking like they’re kind of half in another world and yet they are like still here (...) Giving people

full license to really look and think about that.” Even though the experience states that the controller person is in control, Rose states how, in reality, both are kind of handicapped by the imbalance of only having one half of a VR hardware set-up. This way, it was possible for the directors to explore how, with Rose’s words, “(...) you could create this line of communication between two people where one person had something and the other person had something and it only really worked together.” She notes how some people, who haven’t tried the work, have pointed towards potential issues of risk, but in reality, she explains how her general impression after installing the piece four times is that “(...) when strangers do it together they are very careful, they are much more careful than if it’s people who know each other because this thing kicks in where, like, this sense of responsibility to the other person (...)” Exiting the second room, both audience members leave their piece of VR technology and enter the last room, where they are invited to sit down and speak about their shared experience before leaving the installation and, if strangers, parting ways. When asked about considerations of increased audience put-through, Rose is very clear on the fact, that the experience was never intended for spectatorship, as it would potentially mess up the way the piece puts on the spot, with great precision, the relationship between two people, and two people only. However, she underlines how, at the moment, there is not a functioning distribution model for this type of installation-based work, where, in her opinion, galleries might be the best possible infrastructure. Festivals simply do not have the proper budget and also reach a too limited audience due to its short exhibition period.

4 Discussion

During the interviews, several design considerations became evident. Some of them were directly connected to the context of film festivals, while others point towards more general challenges for the future of location-based entertainment. Both of these are massively impacted by the current Covid-19 pandemic. While this was not directly formulated as a question in the interviews, it naturally became a topic while discussing distribution and the future of the works. Some of the experiences already had the flexibility to adapt to government regulations, including *Cosmos Within Us*, where Martir points out how the number of audience members can be scaled up and down and the space between audience members can be easily increased. Furthermore, there is only one person in the headset per show, which makes considerations of hygiene easier. Other experiences had to make additional changes to current installation contexts. Kirwin explains how, for installing *A Life in Flowers* at the Phi Centre, they had to temporarily change the installation because Canada banned VR in a museum setting: “We had to adapt it for a big screen, so you go in and you, there’s a big screen in front of you and there’s a microphone that’s kind of coming down from the ceiling and you’re from a fixed position which isn’t nearly as immersive, I think, but it’s still intriguing to people to kind of talk to this flower arrangement and have it reflect back to them, so, that’s a temporary thing for a few months

(...)" For other designers, including Arturo, the situation had them speculate about possible future infrastructures at venues that would be safer: "(...) if the Quest becomes more economic, more affordable, maybe there's a way that, maybe if you have a Quest, you can go with your own Quest, and that would be very safe, and then maybe there's (...) a thousand Quests headsets, and then only one has it and you go through the whole festival with one of them, and in the end, it goes to a (...) dry-cleaning or something."

Apart from the Covid-19 situation, the specific exhibition context of film festivals similarly produced several design considerations. As became evident during the interviews, several of the experiences have a touring life of more festivals, where the installation in Venice was rarely the first or last one. This leads to considerations of transportability and adaptability to varying venues, which was highlighted in the individual interviews. However, with only a handful of prominent festival venues, this type of context also dictates the overall life of the project. Bradbury notes how she believes that: "(...) anything that is entering the festival circuit kind of has a natural 18-month life, from start to finish (...)" For many designers, this lack of existing venues and distribution networks is a huge issue for future work. Rose states how she believes that "(...) what would be good for audiences, is if there were more venues or opportunities for broad audiences to see this kind of work (...) And so it's like, how do we find a distribution network? Is it like a gallery network? What's the right institution? What's the right infrastructure that will enable that to happen? I think it doesn't really exist yet (...)" In her interview, Bradbury similarly notes: "(...) There are so many things that need to be created (..) it's kind of like the chicken or the egg thing, right? Without a proper distribution system, you don't have the proper financing (...)" The lack of a proper distribution system and venues pointed towards some challenges identified by the designers. The biggest issue is one both for the potential venues but also for the content creators; that of sociality. At the moment, the majority of experiences are designed and exhibited in a way, that allows for singular experiences of one person at a time. Therefore, many experiences are challenged by a low audience put-through, which in itself makes it hard to establish an economically viable venue. However, it also poses the challenge of making the venues and experiences a social destination where people go with their friends and families. Arturo notes how with cinema we have a clear social ritual and she speculates: "What is going to be our social ritual in terms of VR?" For Bradbury, the social aspect is furthermore coupled with the question of recurrence: "With cinema, you're always going to be like, "Oh, new film" and you might consider going to see it, but with location-based VR venues, how often do they have new experiences or that you hear about them? You go once, maybe twice a year?"

For some designers, this led them to think of other established distribution systems and institutions, including that of theatres. For *Cosmos Within Us*, Martir believes that "(...) the best place to perform the piece is at theatres or black boxes." For other designers, the lack of existing solutions functions as a springboard for considering individual location-based business models. For

Battlescar – Punk Was Invented by Girls, Casavecchia and Arturo are working on a full location-based experience in a customized venue. While it might solve the issues of audience put-through and sociality, it brings with it several additional challenges. Arturo sums up: “It’s a complicated thing between, the number of computers you need, the number of square meters you need, and how much audience you can attract.”. And with the lack of existing venues to distribute between, these challenges would return with each move to a new country and city.

For some designers, the exhibition modus of the installation is only but one out of several versions of the experience. For distribution purposes and/or for considerations regarding investment and sponsorship, several of the experiences exist also as in-headset experiences distributed on existing platforms including Steam and Oculus Store, which in some cases lead to slight alterations to the design. Concerning *Porton Down*, Cooper notes how “(...) those theatrical elements need to be reduced to, needs to be changed slightly to be fitted onto those platforms.” Furthermore, he shares the plans of making a future short film version “(...) because it is an animation essentially, to try to keep this thing alive once the system’s dead.”

This leads to the last design consideration included in this discussion, exactly that of the preservation of installation-based experiences and VR works in general. Kirwin notes how: “The issue is that there is no aftermarket, preservation, there’s no intrinsic value (...) if you work in another medium, the value can actually grow, and in VR you’re basically kind of dead after two years. (...) People who are making stuff in VR, it’s all about the process really, because there isn’t much else right now. (...) It is process-driven, some of these things take a year to make, they go to one festival because they’re an installation with live actors or something, and they are never seen again. (...) And that certainly creates a certain context for the works from the concept all the way through the, you know, last gasp of the project. (...). So, this lack of preservation and the afterlife of the works are not only tied to the lack of distribution and business models but also has massive effects on the work processes and work context of the industry professionals. While distribution and business considerations might seem unfitted for academic inquiry, these interviews have shown clearly that in emerging media, due to the lack of commercialization and institutionalization, it is not only a matter of understanding the works themselves as ‘unassimilated’ (Rouse, 2016) but starting to understand how these bigger forces of economy and distribution are shaping how the works are made.

5 Conclusion

This paper has investigated some trends within installation design at film festivals exemplified by a selection of six works exhibited at the Venice 2019 VR selection. These works were initially divided according to the design strategies of ‘the story room’, ‘the attraction window’ and ‘the performance space’. While it can be discussed if the three design strategy categories are accurate and homogeneous enough to be sustained in future research, they did provide a helpful

initial structure for considering the experiences. Through interviews with industry professionals about their retrospective thoughts on the installation design for the experiences, the paper uncovered some design considerations and strategies, including consideration of installations as a transitional element of the audience experience design, how to approach audience put-through and spectatorship, ways to ensure transportability and distribution of design, and dealing with venue specificity and adaptability of the installation, among others. These design considerations lead to bigger discussions of not only the current challenge of the Covid-19 pandemic but also the general forces of economy and distribution shaping the future for location and installation-based work. This way, the paper has contributed to the larger notion of media in ‘attraction phases’ (Rouse, 2016) by documenting and discussing design approaches shaped by the forces of the industry. However, this paper is only but a small contribution and underlines the continued need for documentation, preservation, research, and development within the field. It is hoped, that by contributing to this perspective on CVR design, exhibition and distribution, we might take a tiny step towards more cross-pollinated research between academia and industry so that we might solve the challenge of creating standards for location and installation-based experiences to make it easier for the works to meet a bigger audience in the future. Following this paper and its insights, future areas of investigation for this researcher includes the co-existence and co-design of physical (location-based) and virtual versions of the same work, the adaptation of location-based works for virtual distribution, and virtual onboarding practices for the transition of the audience into the experiences.

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