Exhibition Strategies for Videogames in Art Institutions: Blank Arcade 2017

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ABSTRACT
While debate over videogames' cultural status can still become contentious, theorist Bruce Altshuler describes the contemporary exhibition form as a route into art history, and therefore, exhibitions of videogames and their curatorial and display choices have already drawn videogames into the discursive construction of the history of art. Examining past exhibitions as well as reflecting on current curatorial practices is a vital area of investigation to form an interdisciplinary history of videogames. After providing a historical background of this phenomenon, I summarize my practical work in games curation through a case study of *The Blank Arcade 2016*, reflecting on how exhibition strategies can incorporate a comprehensive and engaging perspective on videogames into the art world. By reviewing both the process of exhibition organization and resulting visitor feedback, I reflect on the effectiveness of the present curatorial process and issues it will benefit from taking into account in the future.

Keywords
Art games, art history, curation, game exhibitions

INTRODUCTION
When the Corcoran Gallery in Washington, D.C. temporarily welcomed arcade machines into its halls for its *ARTcade*, held in 1983, the institution was making certain aesthetic, historical, and value judgements about videogames. Since then, more art and design institutions around the world have also welcomed videogames and similar software-based works into their exhibitions, and eventually, collections. Bruce Altshuler describes the temporary exhibition, the now-dominant form in which Contemporary Art is conveyed, as a route into art history (2008, 11). Additionally, New Media scholar and curator Beryl Graham also describes the function of the New Media exhibition as a "testbed," the success of which determines later collection, conservation and historicization (2014, 1).

For over 30 years, exhibitions of videogames have been temporarily on display at major institutions, recently the V&A in London, Smithsonian American Art Museum, and The Museum of Modern Art in New York. Major touring exhibitions, such as *The Art of Video Games* and *Game Masters* have traveled across countries and between continents. My research investigates the history of these exhibitions, what rhetorical arguments they are making through their curatorial choices, and how these arguments situate games within the art world and broader culture.

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Different types of exhibitions with varied goals and criteria have emerged over the years, from exhibitions interested in presenting a broad historical narrative, those focused on narrower tendencies or issues within videogames, those evaluating the videogame as a designed object, and even monographic shows of a single designer's works. There is also a history of New Media artists making work in the form of videogames that are generally considered separate from these more recent exhibitions of videogames, yet many fruitful comparisons can be made in the aesthetic choices, conceptual issues, and institutional challenges these works encounter.

Putting my research into practice, during 2016 I co-curated the third iteration of The Blank Arcade with its original organizer Lindsay Grace, an exhibition of videogames that launched during the Joint DiGRA/FDG Conference in August 2016 and ran through October 2016 in the Hannah Maclure Centre (HMC), the institutional art gallery of Abertay University in Dundee. The featured videogames, software, artworks and other forms of interactive technology were selected from a submissions pool by the co-curators of the exhibition, and evaluated specifically for their playfulness, innovative qualities, and how they expand mainstream conceptions of videogames and play. Existing knowledge of issues in the history of exhibitions of videogames informed my curatorial approach, and shaped my reflection on the message conveyed by the exhibition itself.

HISTORICAL BACKGROUND

Exhibitions displaying videogame-based works in a museum or gallery context span a broad variety of production and display contexts. While New Media art has gone through a rocky history in terms of institutional acceptance, and in many ways this history is still ongoing, individual artists eagerly took on new interactive technologies as they became available. Similar to Nam June Paik's early forays into video with the advent of the portable camcorder, Lynn Hershman created one of the first interactive media installations, *Lorna*, on laserdisc in 1979. Shortly afterwards, in 1983, an early piece of interactive new media art directly contextualized within videogame culture, *Mike Builds a Shelter*, a homebrew game installed in a custom arcade cabinet, debuted. The same year, the Corcoran Gallery in Washington, D.C. staged an exhibition of arcade games for a fundraising event, a choice framed as an initial exploration of incorporating videogames into the category of the arts (Trebbe, 1983).

As artists were introducing interactive technology, and specifically videogame technology, to museum exhibitions, institutions began to consider the uses of this technology as well. In 1989 the Museum of the Moving Image put on the exhibition *Hot Circuits*, which presented a collection of playable arcade machines, presented not as historical artifact or technological advancement, but as living culture. This exhibition indicated a change in philosophy, expanding the institution's conception of what fell under the category of "moving image" (Slovin, 2009). *Hot Circuits* retained many of the contextual elements that would have been present if encountering the games on display in an arcade. The cabinets were preserved in full, and visitors were given a set number of tokens (and could purchase more) to play the machines.

During the 90s and early 00s, other institutions would offer counterpoint exhibitions exploring the manifestations of games and software in a contemporary high art context. Beryl Graham's 1996 exhibition at the Laing Art Gallery, *Serious Games*, is an important investigation into this topic, and as an early example reveals many challenges and preconceptions inherent to presenting videogames in a contemporary art space. Graham notes that the show was not intended to be primarily about the technology supporting the

works, but the interaction involved with activating them, and this is demonstrated by some of the works not having technological components at all. This usefully contextualized videogame-based works in the tradition of previous playful, interactive, and rule-based forms of art production, such as Fluxus, Conceptual, and Performance Art. Despite this, Graham still noted some institutional prejudices in how the show was handled. For example, while able to avoid stereotypical "computer lettering" or "fractal" graphic design, the battle was lost trying to avoid a "fun for kids" marketing angle because of the presence of the word "games" (Paul, 2008).

Other exhibitions followed, focusing on artists using game-making and modding tools to create works that were primarily situated within New Media or net.art circles. In 2000, Antoinette LaFarge and Robert Nideffer curated *SHIFT-CTRL* for The Beall Center for Art and Technology at UC Irvine. This show presented the work of many net and new media artists who had a history of working with videogames and game mods, but also featured two cases of a videogame which was also a commercial product, *The Sims* and *Ultima Online* (LaFarge, 2015). Between *Hot Circuits* in 1989 and *Game On* in 2002, this was one of very few cases of a commercial game being shown in art institutions without artist mods or performances attached to it.

Commercial games and homebrew culture had become distinct categories, and while elements of homebrew culture were acknowledged and used by many artists, it was not yet mainstream or even known to most of the art world. The exhibition *games: Computer Games by Artists* (2003), curated by Tilman Baumgärtel, Hans D. Christ and Iris Dressler, was in part inspired by a curiosity about the potential offered by games adding more options for modification, and contextualized this in artistic practice by relating modification to "appropriations" and "détournements." While noting the disproportionate marginalization of games as a cultural form, still only pieces presented as "artists approaches" were selected for the show, maintaining a separation between homebrew and modding communities generally and the art world (Paul, 2008).

Game On (2002), alternately, attempted to present a broad history of the form, presenting over 150 games between several locations and covering topics from the 1960s on to the present (as well as updating its selections with each iteration of the show.) However, *Game On* also set a major precedent for commercial games beyond the arcade era being presented in an arts institution. While other exhibitions presenting "artist's takes" on videogames in the spirit of appropriation or critical response continued, as *Game On* toured multiple countries in the following years, entering many different art and design institutions, it presented the idea that videogames do not necessarily need the intervention of existing artistic approaches to fit into the narrative being produced by art and design museums. This would shape eventual collecting and exhibitions strategies adopted by major institutions like MoMA, the V&A and the Smithsonian American Art Museum.

During this period, a major change was also taking place in how commercial games were categorized. In the 1990s and early 2000s, a binary conception of game production as either commercial or artistic that exhibitions from this era presented seemed more convincing. With the rise of the internet and more accessible software tools for game creation the weaknesses in this model of categorization became apparent. Sites like Newgrounds, GameJolt and itch.io, as well as tools like Macromedia Flash, GameMaker, Unity, Twine, and many others, made the creation and distribution of games by individuals more broadly visible and popular.

Presently there are a whole range of methods of production, from a single developer or creator working on a title from start to finish (similar to how many of the earliest Atari games were created), to small teams, mid-size independent companies, and massive AAA studios. Additionally, the scale of the production method has less of an effect on visual aesthetic and gameplay design due to the accessibility of tools and knowledge provided by the internet, as well as increasingly sophisticated affordable home PCs. Many videogames created within this context, from highly experimental works to ones modeled on mainstream genres and conventions, were gathered under the umbrella of "indie." Indie arcades and festivals, such as Indiecade, which started in 2005, and similar exhibitions (such as *The Blank Arcade*, which traditionally travels with the DiGRA Conference) provided another influential exhibitionary style for videogames.

The commercial and critical success of several independent games, created by single authors or a small team of developers, as well as an ongoing conversation about the stylistic influence successful producers from large game studios, like Shigeru Miyamoto of Nintendo or Peter Molyneux of Lionhead Studios and now 22Cans created a renewed interest in games both as authored object and stylistic work of art. This is reflected in two major exhibitions from 2012, *Game Masters* and *The Art of Video Games*. Originating at the Australian Centre for the Moving Image and Smithsonian American Art Museum respectively, both exhibitions made arguments through their selections that certain games bear the print of some sort of particular stylistic or expressive authorship, whether it be from an independent developer, producer, or large studio. The focus on authorship by particular figures or well-known companies helps to establish videogames as a form belonging in art institutions, because of the art world's similar focus on tracing styles, relationships of influence, and artists' careers.

These two exhibitions were followed shortly by *Applied Design* (2013), MoMA's exhibition celebrating their first acquisition of 12 videogame titles, including commercial successes like *Tetris* and *SimCity* alongside niche indie and freeware titles like *Dwarf Fortress* and *Passage*. MoMA has both fine art and design collections, however, Paola Antonelli, the curator of the selection, was clear that they were collecting the games as design objects. On display, these games are presented with only a screen and the minimum required control interface available to the visitor. This is opposed to the collection and display strategy of the 1989 *Hot Circuits* exhibition at The Museum of the Moving Image, which conserved and presented the game cabinets as if they were also part of the game, displaying them in a way that maintained some of the original arcade context. While Antonelli says this decision was made to isolate design elements and avoid "arcade nostalgia" in the presentation, it can also be read as a limited strategy that neglects important aesthetic and historical components of the games (Antonelli, 2013).

Smaller exhibitions have also confirmed the trends identified by these major acquisitions and traveling exhibitions, using their narrower scope to explore specific themes within videogames. For example, in 2013, *XYZ: Alternative Voices in Game Design* presented a selection of games that challenged not only the presumed demographics of game players and creators, but also the aesthetic and conceptual potential of videogames. In 2014, the Museum of the Moving Image presented *Indie Essentials*, indicating a degree of institutional acceptance to what was becoming an increasingly contested and splintered classification. Recently, in 2016, *The Game Worlds of Jason Rohrer* was billed as the first monographic retrospective of a single game maker (The Davis Museum at Wellesley College, 2016). Whether or not this is technically true, in light of considering New Media artists who worked primarily in games and software during the 90s and 00s such as Brody

Condon, Jodi and Natalie Bookchin, it demonstrates a further integration of games made outside of an art context into the art world and its styles of exhibition. It is within this exhibitionary and historical context that the display choices for the 2016 edition of *The Blank Arcade* were made.

CASE STUDY: *THE BLANK ARCADE 2016*

The Blank Arcade 2016 was the third iteration of a yearly exhibition put on in conjunction with the Digital Games' Research Association's (DiGRA) annual conference. The exhibition is usually put on the week of the conference, in a small venue nearby or within the conference center. The featured videogames, software, artworks and other forms of interactive technology are selected from a submissions pool by the co-curators of the exhibition.

The 2016 edition of *The Blank Arcade* exhibition was initially conceived as an event associated with the First Joint DiGRA/FDG conference in Dundee, Scotland. Because of its relationship with the organization of DiGRA/FDG and its proximity to the event venue, as well as the gallery staff's experience with new media art objects and the resources to display them, the Hannah Maclure Centre gallery at the host institution, Abertay University, was identified as the best venue for the exhibition. The convenience and resources afforded by the location led to the decision that *The Blank Arcade's* usual duration should be extended to last almost three months, from August 2nd 2016 to October 27th 2016. *The Blank Arcade 2016* would also have an opening event targeted at delegates of the conference, and a subsequent event for students and the public. The longer exhibition period and higher accessibility to the public offered an opportunity to collect information on how many types of visitors respond to exhibitions of experimental and unusual videogames.

Early meetings determined that the goals of *The Blank Arcade 2016* would be to curate a selection and organize events that would continue the tradition of presenting interactive artworks, games, and other forms of playful experience that offer experimental perspectives on the purpose and potential of play. This presentation would not only complement the academic gathering it was associated with, but also make these works accessible to a non-academic, non-specialist public in this iteration. The submissions would be rated on appropriateness to exhibit based on their functionality, accessibility, aesthetic effect and suitability to the exhibition's purpose of presenting new and unusual perspectives. Adjustments to what type of works could be accepted as well as how many had to be made to adapt the exhibition to the expectations and limitations of a space that was also like a more traditional contemporary art gallery. Both curators were committed to presenting experimental works, but they would have to be durable and non-ephemeral enough to withstand three months' worth of being displayed five days a week, and also be possible to transport to and fit in the top floor gallery space of a university building rather than a conference venue or other multipurpose space.

Selection Process

Conscious of the above issues, the curators drafted a submission form and made it available online. It was distributed via online mailing lists and social media, extending the invitation to submit to communities of independent game developers, games-related academics, and new media artists. We received a response over the 6 weeks the call was open of 57 different submissions from a variety of individual artists, studios, collectives and development teams based across the UK, Europe, Asia and North America.

After submissions closed, Lindsay Grace and I prepared to co-curate the submissions. We evaluated the pool and ranked the entries separately before meeting over Skype calls to discuss the works we agreed were suitable and decide on the content as well as general theme of the show. While evaluating the selections, some had to be discarded offhand for lack of quality, non-functionality or insufficient relevance to the prompt. Other works were conceptually original and of sufficient quality, but simply required too much space, or more advanced technology and upkeep that the HMC could not afford to provide for the three months over which the exhibition would be held.

For those works which were not disqualified, I curated two ideal but different selections, one of a show that featured games that responded to current events, and another that focused on games that appealed to the senses in unusual ways, through alternative graphics styles, tactical interfaces, sound engineering and so on. I found that, as co-curators, we overlapped more on our positive opinions of the latter category of games. The games we both felt positively about and felt fit this general theme were narrowed down to 9, which led to the eventual 8 selections featured in the show.

The final selections were *Abstract Playground AP1* by Will Hurt, *Beeswing* by Jack King-Spooner, *eBee* by the collective Pins and Needles, *Fugl* by Johan Gjestland and Team Fugl, *Katakata* by Kirsty Keatch, *Lissitzky's Revenge* by Christopher Totten, *Orchids to Dusk* by Pol Clarissou, *You Must Be 18 or Older to Enter* by Seemingly Pointless, and *Walden* by Tracy Fullerton, though *Walden* was found to be beyond the means of the exhibition, requiring an extensive graphics and video card setup the HMC could not supply.

These selections draw from the history of videogame exhibitions and also challenge it, by including works by teams and single creators, works of vastly different scales and media, and works from creators that described themselves as artists, designers, and game developers alike. This was done partly to bridge the gap between the parallel histories of independent and new media art game development which rarely interact in the history of game exhibitions, in the hopes of creating fruitful and provoking juxtapositions between works that feel more like "art" and "games," or works made by teams and a single artist. After the selections were made and the creators of each work confirmed that they would still like their work to be featured in the gallery, we moved to preparing for the installation stage of the exhibition.

Due to limitations of space and budget, as well as the desire to create a tightly curated show, the 2016 edition of *The Blank Arcade* ended up being the most selective iteration. Several submitted games, such as *The Meadow* by Richard Lemarchand, related to the theme of expanding the aesthetic horizons and types of sensory engagement offered by videogames, but because the work needed several attendants, a large amount of space and advanced VR technology, it was not feasible for the gallery space or maintainable for the length of the exhibition. Other games with complex VR setups or unstable custom peripherals were also turned down for these reasons. Biome Collective's *Killbox* was another exceptionally well-designed experience which effectively provoked questions about drone warfare, however it requires two synchronous players at separate computers, which made it difficult to guarantee that it would always be playable in a small gallery like the HMC. Additionally, its explicit political themes would have been an outlier in a show that is primarily concerned with the personal and aesthetic.

Finally, games like *Magic Wand* by Stephen Gillmurphy, while thematically appropriate, featured a steeper learning curve for the game's controls and mechanics. Deliberately, most of the games in the exhibition were intuitively accessible, or at the most could be figured out through a brief period of experimentation. *Fugl* and *Lissitzky's Revenge* were the games in the exhibition which demanded the most skill with controls, but they also allowed the player to restart and change their approach quickly in the case of failure, so that it was not a major discouragement or setback. This is not to say that all gallery games must be simple. A difficult control scheme that draws from tacitly accepted "gamer" culture norms can be used to add to the themes of a piece and its aesthetic experience. Eddo Stern's *Vietnam Romance*, for example, was displayed concurrently in the Dundee Contemporary Arts center as a part of a different exhibition, and has a complex control scheme with a high learning curve, even for experienced players. However, it was also situated in a larger gallery space and had a robust attract mode that could communicate the content of the game to people intimidated by the control scheme. Gauging the appropriateness of including difficult or unintuitive games is a case by case judgement, and considering the other games in the exhibition, the flow of visitors through the space as well as the likely audience is an important part of this curatorial process.

Exhibition Installation

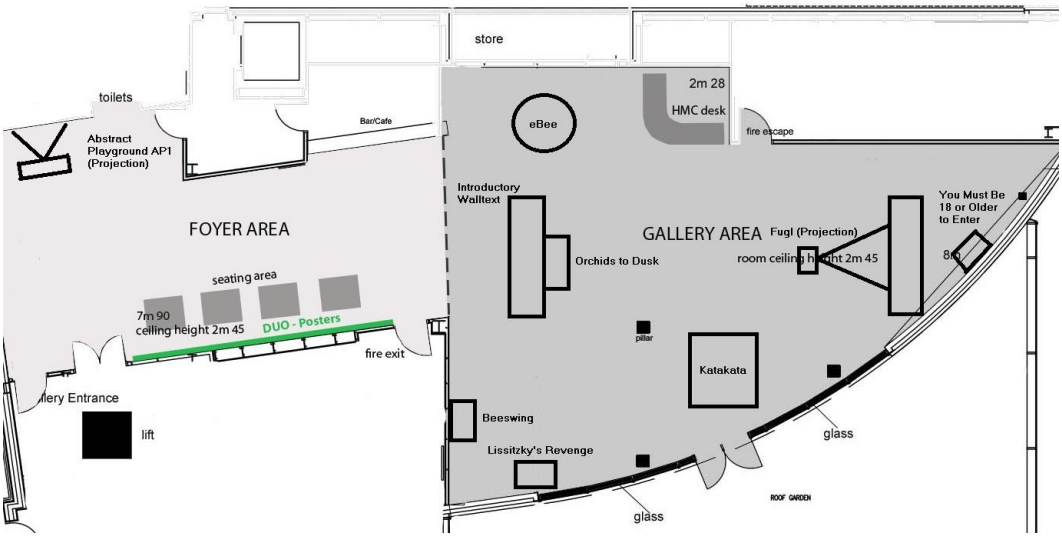


Figure 1: Floorplan for *The Blank Arcade 2016* installed at the Hannah Maclure Centre in Dundee.

The information submitted was reviewed and the chosen creators were asked to confirm the technological needs of their works before requests for furniture, computers, and peripherals were made to the host university's estates and IT departments. Texts were also prepared for the gallery's labels as well as the catalogue to offer background information, interpretation and an explication of the exhibition's theme for visitors.

Because some of the exhibited works for *The Blank Arcade* were displayed in the form of screens or projections, the long stretch of windows was covered with black vinyl to allow for more control over the exhibition's lighting. Two mobile partitions were also used to mount the introductory wall text and direct flow through the space, as well as to create a slight barrier between the general exhibition space and *You Must Be 18 Or Older to Enter*, the sole submission that had consistent suggestive sexual content. For this work, some specialized furniture for setting a scene similar to the one implied in the game was

acquired. The rest of the works were either on standard desks or plinths provided by the gallery, projected, or freestanding in the case of *Katakata*.

Upon first entering the gallery, visitors would have been in front of Will Hurt's *Abstract Playground AP 1*. Will Hurt is an artist whose work primarily deals with creating digital compositions that draw on formal elements of architecture and diagrams. This work is made up of a projection of a 3D program developed in Unity which presents a reactive architectural environment that players interact with through a custom made control panel of arcade buttons. Interactions trigger sounds and animations, changing the color scheme and configuration of the depicted structure, as well as the sounds it produces. It was considered a strong inclusion for the show for its distinct graphical style which referenced Brutalist architectural movements that appear in the skyline of Dundee. Will Hurt's project also involved collaboration with players who have learning and/or motor disabilities, and may not be able to enjoy the complex control schemes or speed and challenge of more mainstream videogames.

While few of the videogames on display in *The Blank Arcade* had traditional fail states or Game Over screens, they still frequently utilized more complex and therefore potentially "intimidating" interfaces such as contemporary game console controllers or WASD-Mouse style controls for PC, which tend to rely on pre-existing knowledge of videogames. Placing a work with an interface more firmly and universally rooted in daily life at the beginning of the exhibition (the visitors likely used similar push buttons in the elevator on their way to the gallery), established confidence in a broad swathe of visitors before leading them to more complex experiences. One visitor from the 45-65 age group, noted that Abstract Playground was the only work they found "immediately accessible," and needed help from the gallery attendant to use the others. *Abstract Playground*'s lack of explicit goals often caused players to treat it more as an instrument than a game, "performing" small compositions before moving on.

Moving past *Abstract Playground*, and to the left of the introductory wall text, the visitor came to *eBee*. *eBee* also does not utilize a typical technological interface. In terms of genre, it has more in common with tactile puzzles and table games. eBee stages gameplay that can be either cooperative or competitive, but is guided by the universal laws of electronics. The rules of the game are literalized in that, to be successful, the players must place game pieces that represent a functioning electrical circuit, and because of the e-textile elements in the pieces, properly placed pieces will result in an actual circuit being created and an LED light turning on. *eBee* was created by the Pins & Needles collective, which is a group of students and faculty at Northeastern University with a multidisciplinary background interested in game design.

eBee not only experiments with possible uses for e-textile, as well as the expanded potential of table games involving electronics, it also aspires to bring forward forgotten elements of the history of computing and social life that are neglected in mainstream videogames. The choice to use textile and quilting processes and motifs in the creation of a game about electronics is intended to emphasize the origins of early punch card computing, which was used to control textile design through Jacquard looms, and also make games inspired by female-oriented social spaces, like quilting bees.

Because *eBee* demanded a lot of handling of custom pieces, the creators provided spare pieces in case of loss, spare batteries and a simple repair kit. Gallery attendants were also shown how to check if the game was working and how to regularly change the batteries

to keep it running smoothly. Because of the game's more complex and flexible rule structure, and because it was partly up to visitors to enforce the rules, as it is not a digital game managed by a computer, laminated cards fully explaining the rules were provided in addition to the gallery text. Additionally, the rules allowed for competitive and collaborative play, making it a work that a social experience of multiple visitors could be built around, allowing many interactors at once and creating less pressure for players to hand off the controls if they feel they are taking too long or playing poorly.


Figure 2 & 3: *Abstract Playground AP1* (left) and *eBee* (right) as installed at The Blank Arcade.

Next to *eBee*, immediately behind the wall text partition, was Pol Clarissou's *Orchids to Dusk*. This game is another 3D rendered environment made in Unity, like *Abstract Playground*, but is controlled by a much more typical keyboard and mouse setup. *Orchids to Dusk* was particularly suited to gallery display because it has a set play time that is the same, or shorter, for each player. The game follows an astronaut who crashes on an apparently depopulated planet. After pausing to examine the environment for a few moments, the option to remove one's helmet appears to the player. Unlike the fast paced action in many mainstream games that has been associated with videogames as a whole, this game requires the player to play slowly and carefully to reveal all gameplay choices and possibilities. The player is limited to one choice, to die with their helmet on or off, and each player can take a different symbolic and philosophical meaning from this choice. More complexity is added by the fact that the game remembers each respective player's choice and what point on the map their play session ended. Based on the cumulative choices of many players, areas of the map can become lush and fertile from many astronauts returning their bodies to the land, or littered with hermetically-sealed frozen corpses.

Orchids to Dusk also exists as a networked, online environment that records every play session experienced by players who download the game from Clarissou's Itch.io page. In the year since it was released, Clarissou noted on his Twitter account that some areas of the networked version have become heavily forested, as previous plays' effects on the gameplay environment shape how the next players explore (Clarissou, 2017). The iteration displayed at *The Blank Arcade* is not connected to this networked version, however, so the environment created was specific to those who visited *Blank Arcade*. This created a distinct record of plays and an experience over time that differs from the online version, and offered an indirect way for visitors to interact with those who visit long before or after them in the exhibition's lifespan.

Beyond *Orchids to Dusk* were a pair of games presented on computer monitors at plinths. Both shared visual aesthetic themes in that they were games utilizing tactile media like cut paper, sculpture and drawing in the creation of their digital graphics. However, in terms of mechanics and theme, they were very different. The first game in this corner was by local Edinburgh-based developer Jack King-Spooner. *Beeswing* is a personal narrative game about revisiting the Scottish village he grew up in, and so was a good way to pull local topics into an international selection of games. It also relates to King-Spooner's larger artistic practice, producing games with collaged visuals and original soundtracks he creates himself. All of *Beeswing*'s graphics began as drawings, paintings, or clay figures, which he scanned or photographed and animated digitally before putting them into the game. The game allows the player to take control of the creator's avatar within the world and explore locations of the village and nearby city at their leisure and in any order.

Personal photographs and video clips are included in addition to the subject matter. The fact that all game assets, writing, audio and programming were created and implemented by a single author gives *Beeswing* potentially a different reception as an art object within the gallery, opposed to other projects which rely on abstract or digitally generated imagery, or work credited to teams or collectives. Including a game which reflected this working style and approach to game development, as well as emphasized the handmade feel were primary reasons why this work was selected as an example of how the aesthetic horizons of videogames are being expanded.

Next to *Beeswing* was Christopher Totten's *Lissitzky's Revenge*. Like *Beeswing*, this videogame also features graphics made primarily in a non-digital medium, in this case paper craft and drawing. The graphics mimic the drawings and designs of the Suprematist painter, El Lissitzky. Christopher Totten is an independent game developer who is interested in facilitating meeting points between videogames and cultural institutions like galleries and museums. *Lissitzky's Revenge*, like *Beeswing*, expands the aesthetic horizons of mainstream games by referencing an art historical movement in all aspects of its design. While other mainstream games have occasionally referenced specific art historical moments in character costumes, architecture, or paintings within these game environment buildings, the most common artistic reference point for videogames tend to be either increased photorealism, or nostalgic references to past games and consoles.

Suprematism is a unique moment in the history of design because it was a movement that explicitly attempted to shape the not only the aesthetic taste of the people, but also their political consciousness through abstract design. *Lissitzky's Revenge* utilizes motifs and principles of Suprematist design to question whether such abstract symbols can provide motivation and narrative to the player, and if the videogame player of the 21st century can be manipulated by the same principles developed by the Suprematism movement a century ago. This not only taps an unusual design inspiration and medium for the videogame's visuals, but also challenges dominant preconceptions of the Game Studies field, which often rhetorically separate the underlying code of a videogame and its and "aesthetic trappings" (Niedenthal, 2009).

Moving towards the center of the exhibition space, visitors would next encounter an object that initially does not seem like any recognizable form of videogame at all. This large sculpture, made of a metal frame, wooden plinth, and a long Jacob's Ladder toy with a robotic servo motor and contact mic attached is Kirsty Keatch's *Katakata*. This project consists not only of the visible material of the sculpture, but also of a computer and Wi-Fi router within the plinth that allows visitors with a smartphone to connect to the

sculpture and control it. Once the user connects with their phone to *Katakata*, flipping the phone activates the motor at the top of the statue, turning the Jacob's ladder toy and processing the audio data that goes through the contact mic into an accompanying sound that is played through nearby speakers. Moving the phone from side to side allows the user to alter the frequency of the sound, speeding it up or slowing it down as it is repeated.

The directions to interact with *Katakata* require some technical knowledge, using a smartphone browser and entering a URL to connect, in addition to requiring visitors to have a smartphone with an accelerometer feature to activate the work. The fact that the work required some form of technology to be brought to the gallery by the visitor was considered and weighted against the aesthetic effect and innovative nature of the piece. While some visitors did make complaints about the requirement for a phone with these features, phones with these features are quite common, and museums have made use of them to supplement exhibitions many times in the past. Additionally, every Gallery Assistant working for the HMC at that time had a phone with these features, and therefore could demonstrate or lend the phone to any visitors who had problems or did not own a sufficiently featured smartphone. In the end, the use of the personal phone was deemed not only necessary to the piece technologically but also in line with the artists' intent.

For Keatch, *Katakata* originated in a dissatisfaction with sound design for mobile technology, where, despite the potential offered by the portability and features of the technology, generally little effort is put in beyond basic sound effects and music because many users simply play the games on mute, while in a noisy area such as their commute. Keatch's other sound design work includes an infinite runner puzzle game for mobile phones known as *Hedra*, which she created the soundtrack for. *Katakata* innovates on mobile phone related audio by using the ubiquity of mobile devices to control external sound. Only one user is able to play with it at a time, adding elements of spectatorship and performance to the often solitary or networked world of mobile gaming. This made it an extremely relevant selection, but it also came with more risk and challenges than the other objects in the exhibition. It was the only piece with robotic moving parts, which sometimes had to be repaired or reset by Keatch herself or another expert. Therefore, *Katakata* experienced the most downtime in the exhibition.

Beyond *Katakata* is a large projection that serves as the visual focal point of the main area of the exhibition. Projected on the central movable wall was Johan Gjestland and Team Fugl's *Fugl*. Gjestland is also known for *Melodive*, a mobile game designed to create a relaxing, dreamlike environment players feel as though they are falling through. *Fugl*, like *Lissitzky's Revenge*, can fit neatly into an existing videogame genre, in this case the flight simulator. However, while mainstream flight sims typically involve piloting some sort of vessel, like an airplane or spaceship, and navigating to specific goals or engaging in combat, Fugl does not include any of these features. Instead players control a bird. Rather than the controls approximating vehicular movements, they include flapping, perching, and riding gusts of wind. This was decision was meant to create a flying simulator that was less about racing or combat and instead focused on the sensation of flight itself. A variety of environments, such as archipelago, canyon, and forest can also be accessed from the start screen, as well as a list of animals within these environments that the player has spotted. That these are the only two implied features of the game beyond flight leave the goals and motivation for play up to the player.

The game is available on mobile platforms, using tactile touch and tilt controls, for the Virtual Reality headset Oculus Rift, and for basic desktop PCs. The PC version may seem like the version most detached from the idea of sensation, as a mouse and keyboard or game controller controlling the action onscreen would be the most abstracted form of engagement with the work, diminishing the sensation of flight in the player considerably more so than it would be with touch and tilt controls or the perspective of VR. However, we decided a VR headset would hamper flow through the exhibition and require more monitoring, space, and resources than the gallery could provide, and similarly using the mobile game would only accommodate one player at a time and risk being overlooked as the smallest screen in the gallery space. Running the game on a PC, but projecting it, was the best option. Because of the scale, all viewers, not just the player, can get a sense of the feeling of Roger Caillois' concept of ilinx, a type of play that relies on sensations of speed and being out of control from disruptions of perception that *Fugl* provokes (Caillois, 2001). Again, because *Fugl* was a beta version of a game and still in development some performance risks came with its selection, like occasional lag and crashes, but training gallery attendants on how to quickly restart the game if there were any issues made *Fugl*'s downtime negligible.

Figure 4&5: *Katakata* (left) and *You Must Be 18 or Older to Enter* (right) as installed at *The Blank Arcade*.

The final game in *The Blank Arcade* was displayed in a small room created by a movable wall within the gallery space. Separating it from the main area of the exhibition with the partition served multiple purposes. *You Must Be 18 or Older to Enter*, by collective Seemingly Pointless, was the only game in the show to have explicit sexual content. The game is an interactive fiction piece primarily about being a child sneaking onto the family computer to look at online pornography for the first time. Seemingly Pointless includes the developer James Earl Cox III, as well as Joe Cox and Julie Buchanan providing graphical and audio support. Cox's games are mostly short and unique in that they explore personal and humorous themes. The personal nature of this game is heightened by the graphics and visual design, which place it in a specific period of early internet culture. ASCII art makes up the imagery of the computer and the AOL homepage the story is told through, as well as the eventual graphic pop up ads and porn sites the player encounters. The use of ASCII art to represent pornographic elements puts a kind of screen between the viewer and what would typically be scandalous content, making the focus more on the narrative and atmosphere generated by the work. Despite this, some

moments in the game could still be seen as inappropriate for children, so the installation of the game is behind a partition and a small content warning is under the label.

These display choices also were intended to serve the content of the game and make this freely available online PC game, which visitors could download from home, become a unique gallery experience. The partition served the purpose of allowing us to simulate the scale and setup of the computer room mentioned within the game itself. Used furniture and knickknacks were acquired from the gallery's existing resources and local thrift shops under the supervision of myself and the artists. The light of a lamp also added a glow the extended beyond the partition, which Fugl was projected on, to increase visitor awareness that the exhibition continued that way.

The effect of creating the computer-room like setting within the gallery was successful and contributed to the exhibition's overall theme of games extending the aesthetic and sensorial potential of digital game design. The shape of the created room mimics the implied setting of the game, and the layout of the room, with the visitors being able to see the computer screen over the current player's shoulder as they enter, references the anxiety within the game of the player character sneaking onto illicit websites and looking over their shoulder to ensure their parents aren't home. It created an atmosphere that was both intimate and nostalgic, as well as spectated, playing with ideas of comfort and performance as well as suggesting the typical setting where games are played, and how they are displaced from that setting within the game.

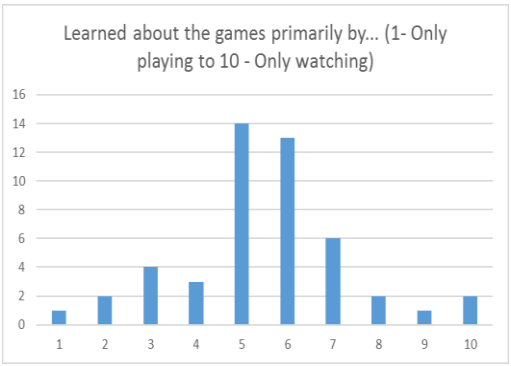
Data Collection and Evaluation

Surveys available for visitors to fill in at the gallery asked basic demographic questions that are a traditional part of gauging the reach and influence of gallery shows. However, because of the interactive element of the artworks, as well as their technological interfaces, which may seem complex, daunting and unfamiliar to certain audiences, I also included questions about the perceived accessibility, clarity, and functioning of the works in the exhibition. Sections one and two ask typical demographic and reasons for visit questions that are found on most exhibition surveys, while three through six ask questions related to accessibility and visitor experience, and a final section asks for any additional comments not covered by the other questions.

Because these forms were voluntary for visitors to fill out, they do not represent nor were they intended to record an accurate number of attendees or precise demographic data. Instead, they were primarily for gaining impressions of the general variety of people who attended and their perception of and response to the exhibition methods. The overall demographic data may also be slanted towards the demographics likely to attend the gallery events, specifically Abertay students, because they were mentioned during the events but individual visitors at other times were not directly asked to fill in a form. Overall, 48 responses were collected.

The first section asks the visitor to select a gender and age range. The gender distribution consisted of 42.2% responding female, 55.6% responding male, and 2.2% responding as non-binary or other. The represented age groups, on the other hand, were dominated by the 16-22 category, most likely representing Abertay University students, specifically from its well-known Arts, Media and Games department. 54.2% of the responses indicated the 16-22 age group, followed by 23-30 at 31.3%, 31-45 at 10.4%, and 45-64 and 65+ both at 2.1% with one response each.

The next section allowed the visitor to select any number of available statements that were related to their reasons for coming to the exhibition. 70.2% noted that they were a student at Abertay University, whether at the undergraduate or graduate level. 46.8% noted an existing interest in videogames as a primary reason. 40.4% indicated a pre-existing interest in new media or contemporary art generally, more in line with the program of the HMC, which does not regularly exhibit videogame works. 21.3% indicated that the visitor lived nearby and a further 21.3% responded that a teacher or professor had recommended the exhibition. 12.8% cited a social media post as encouraging them to visit while postcards and posters for the exhibition were mentioned by 2.1%. 4.3% of visitors were students from other Universities in the area, and 4.3% noted that they typically visit all HMC exhibitions. 6.4% of visitors primarily attended for an event. "Gamers" and mainstream gaming often tends to be at odds with so-called "art games" or use of gaming technology in new media art, so that the exhibition was advertised and presented in a way that appealed to both interests is encouraging.



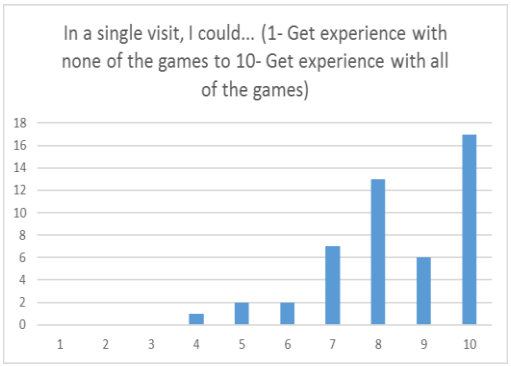


Figure 6&7: Distribution of answers for questions 4 (left) and 6 (right) from the visitor survey.

Questions three through six, asked the visitor to rate their opinion or experience on a spectrum between 1 and 10. The first question had two sub-parts. First, the visitors were asked to rate the way the games were set up, whether they found them Totally Uninteresting (1) or Totally Interesting (10). The average value of these 48 responses was 7.75. Next, visitors were asked if they found the way the games were set up to be Inaccessible and Confusing (1) or Accessible and Clear (10). The average value of these responses was 8.15. The lowest score in the first category was a 6, and the lowest in the second was a 5. From this data, most visitors found determining how to interact with most of the games easy, or at least not extremely difficult. There may even be space for more experimental and creative ways of setting up the game while retaining sufficient clarity and accessibility.

Next, the visitors were asked to rate how they primarily learned about the games, Only by Playing (1) or Only by Watching (10) with a clarifying note of Equally Playing and Watching Others in the center (5). The mean value of these responses was 5.5, very close to the middle, with an even distribution. This response especially has interesting connotations for exhibitions of videogames. Academic discourse surrounding games has long prioritized the individual experience of the player, or the game as activated by player interaction as the primary object of game studies. Only recently has work considering spectated and cooperative play of so-called "single player" experiences, such as Let's Plays, streaming, speedrunning, and so on, entered the mainstream. This statistic is also a

practical support of the importance of these considerations. Not only in recreational play of mainstream and commercial games does watching have a marked effect on how players receive games, but the same also appears to be true of less typical games in a gallery context.

The next two questions also relate to visitor experience. The first asks the visitor to rate how the games in the exhibition were working, from Not Working (1) to All Working Well (10). The mean value of these responses was 8.58, a fairly high score, with no response lower than 6. Only *Fugl* and *Katakata* experienced significant technical errors during the exhibition, and these were the only two works mentioned as not working in the additional comments section, if the visitor noted them.

These situations demonstrate what new media curator Beryl Graham has already noted about exhibitions involving interactive electronic components. Training gallery attendants and always having one on hand to demonstrate the works or restart a crashed machine was something she argued was vital as early as 1997, when she organized the *Serious Games* exhibition (Graham and Cook, 2010). Additionally, without accessible expert knowledge, games exhibitions, especially ones running on original or custom hardware, are especially susceptible to long periods of works being out of order, which can alienate visitors and also give the impression that videogame works are minor or less valued than other objects on display (Guins 2014). Featuring works with custom hardware or still in beta was taking a risk, but these unconventional games also represented important tendencies and innovation in the field. Working with the artists and training gallery assistants to navigate any issues was able to prevent significant downtime.

Finally, visitors were asked how many games they felt they could get sufficient experience with during a single visit to the gallery, rating it from None of the Games (1) to All of the Games (10). The mean value of all the responses in this case was 8.4. The distribution in this case was a bit broader than other categories, ranging from as low as 4, implying slightly less than half the games, to the maximum of 10. A high number of games available to play has been a selling point for several past exhibitions, such as *Game On*. However, that a comparatively small exhibition of only eight works still overwhelms some visitors in terms of being satisfied in the amount of time spent with each game confirms that increased curatorial control and tighter selections may be more satisfying, and offer a deeper understanding of the games on display than an overabundance of choice offered by large-scale exhibitions featuring many more games.

CONCLUSION

The Blank Arcade 2016 was both a continuation and expansion of an existing curatorial approach towards games. By staging it in a gallery location and for a longer period, as well as building an event program around it and collecting visitor feedback, we were able to gather insights into how visitors respond to experimental videogames in an exhibitions context. While *The Blank Arcade 2016* did not contain any games which would be considered mainstream, they did cover a variety of production team sizes and approaches, with creators describing themselves as artists, designers and game developers all included. It was thematic rather than historical, with the aim to present new works that surrounded the topic of experimental play and the senses, and came from a variety of different production methods and aesthetic approaches. In the end, the goal of the exhibition, to present a set of unconventional approaches to digital games and play and accessibly expose them to a broad audience of academics, students, and the public, was

achieved through the selections and display choices. Despite this, it is important to pay attention to additional issues that arose amid the exhibition's reception.

This case study has addressed certain issues evident in videogame exhibitions, primarily visitors' perceptions of the accessibility and intelligibility of experimental games, creating experiences that build on games that are downloadable or free to play at home, and presenting works together that cross lines of genre, production method and form, but other important issues are outside the scope of this paper. My future research hopes to further test and question boundaries between arts practices and games industry practices, and address the urgent issue of very few institutions collecting and conserving videogame-based works. As the discussion around videogames, their place in culture, and their possible roles in the narrative presented by art and design institutions develops, more institutions will hopefully feel more comfortable moving beyond temporary and traveling exhibitions to create long-term collections and conservation strategies.

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