

Play Design as a Relational Strategy to Intensify Affective Encounters in the Art Museum

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ABSTRACT

This paper presents an exploration of play design as a relational strategy to intensify affective encounters during an art museum visit. Theoretically, the paper presents a foundation emphasising the relational aspects of designing playful museum experiences. Based on a detailed and contextual analysis of a mobile web app entitled ‘Never let me go’, designed to be used in art museums, we show how the app and infrastructure catalysed affective encounters and put the relations between the players, the architecture and the exhibited artworks into motion. In our analysis, we highlight four ways through which the players’ experiences were intensified. Finally, we discuss the potential and concerns arising from working with relational play strategies in the design of affectively engaging museum experiences, emphasising emergence, intimacy, ambiguity and trust as key elements.

Author Keywords

Play design, relationality, affect, intimacy, ambiguity, emergence, encounters, museum

CCS Concepts

• **Human-centered computing** → **User centered design**;
Empirical studies in interaction design

INTRODUCTION

Within the field of interaction design and HCI, the application of new technology in museums has drawn many researchers’ attention since the 1990s [12]. This research has covered a broad range of aspects such as information delivery [36,59,72,75], participation [13,15,16] and embodied interactive experiences [61,76]. In the last few years, an increasing amount of work is being done on the emotional enhancement of a museum visit [10,26,37], as well as on museum experiences that foster personal and social connections [25,69]. These efforts go hand in hand with an

increasing interest within the museum world in affect and the role of emotions [68]. At the core of this development, we find fundamental questions about the complex relationships between museums, visitors and cultural objects [20]. Museums are complex cultural institutions [48], in which the relationships between material objects, technology and systems of “*ideology, narrative, aesthetics and flesh*” [2:xii] are intensified. One of the most critical functions of museums is in fact to make us reflect on and affectively experience these entanglements. To put relational perspectives at the forefront when designing museum experiences is thus becoming increasingly important.

In this paper we contribute to this development by focusing on play design as a *relational design strategy* highly relevant to the design of museum experiences. We present a study in which performative artistic methods were used in combination with playful technology to intensify affective encounters in an art museum. Play is here seen as a certain relational approach to the world – a form of ‘worlding’ which is described by Helen Palmer and Vicky Hunter as,

A turning of attention to a certain experience, place or encounter and our active engagement with the materiality and context in which events and interactions occur. It is above all an embodied and enacted process – a way of being in the world - consisting of an individual’s whole-person act of attending to the world. [57]

Playing in intimate connection with someone, or something, becomes an active process of what Haraway calls “*sympoiesis*”, or *worlding-with* [19]. The idea of intensifying the relational aspect of the museum visit to the point where sympoiesis would not just become inevitable but even quite palpable (in the form of arising pleasures and tensions), was one of the main motivations driving the development of ‘Never let me go’; a two-player system allowing visitors to playfully guide a companion through the museum [62].

In this paper, we present the field trial of ‘Never let me go’ at the National Gallery of Denmark. We scrutinise the data from the perspectives of relationality and affect, focusing on how participants describe and make meaning out of the emerging intensities of the play experience. We end with a discussion on the potential and concerns arising from working with play

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design as a relational strategy for catalysing affective encounters in museums. Considering the findings, we put forward the relationship between players, as well as emergence, intimacy, ambiguity and trust as key qualities to take into account when designing affectively engaging interactive museum experiences.

RELATED WORK

In this section, we present a body of work connecting work on affective and relational approaches to HCI, interaction design, play design and museum experiences. In so doing, we both aim to highlight themes cutting across all areas, while at the same time presenting a joint conceptual foundation for the present paper.

Affect, Intensity and Relationality in HCI and Design

Affective and emotional aspects of interacting and living with digital technologies has been under much scrutiny in Human-Computer Interaction (HCI) and interaction design for more than two decades. Affective Computing was coined by Picard in 1997 as a research agenda for making computers better at displaying and recognizing motions [60] and Emotional Design [55] has emphasized that understanding affective and visceral attachments to product design must be a central aspect of a product's success or failure. These approaches, however, have been criticized for attempting to structure, formalize, and represent emotions and affect as 'informational' units in a cognitivist perspective [1,9]. A range of design researchers have instead proposed an 'interactional' approach to affect, arguing that emotions and affect are in the affective interaction between a user and a system, and not to be found in the code or hardware (see e.g., [9,42,65]). Here, affect and emotion are seen as essential for unfolding the richness and complexity of human experience in interactive systems design more broadly.

In critical and cultural theory, there has also been a so-called 'Affective Turn' aimed at cultivating, among other things, the impact on a non-cognitive and bio-social level of new media and technologies on our possibilities of experience [7,14,34,47,51,64]. Affect "*arises in the midst of in-betweenness*" as "*those intensities that pass body to body (human, nonhuman, part-body and otherwise)*" [34:1]. Building on Spinoza, Brian Massumi has suggested that affect accounts for the pre/non-conscious dimensions of experience felt as transitions in our capacity to act; positive affect is characterized by the ability to affect and be affected, negative affect as the inability to act or be acted upon [51,70]. Massumi further emphasizes that starting in-between means starting in "*a region of relation.*" [53:2]. Here we also find a reference to William James' radical empiricism, where relations are said to have the same ontological status as the particulars being related [45]. Changes in relations are felt as changes in affective intensity constituting proper affective encounters or encounters with affect [3].

Bringing these insights back to design, Fritsch has proposed an affect-driven and relational account of design aimed at fostering conditions of emergence towards affectively engaging encounters between people and technology [27].

Under the heading of Affective Interaction Design, it has further been suggested that affect is central for linking the micro-interactional and macro-relational for changes in affective attachments [28]. Here, affect is understood as an in-between, relational and more-than-human concept whose intensity ultimately colours our engagement with ourselves, each other and the world, which will be the conceptual starting point in this paper.

Play as a Catalyst for Affect

Instead of trying to define play (which has proven to be a tricky matter) theorists often provide lists of essential qualities, characteristics or traits of play. Most commonly, it is described as unproductive, free and voluntary, uncertain, separate, make-believe and governed by rules [11,43]. It is also often emphasised that play is intrinsically motivated [33] and driven by curiosity [38]. A unique experiential quality of play is that it gives us agency to explore and create new forms of agency [67]. In this sense, play is a very specific mode in which to relate to the world. It involves a both assertive and inquiring stance toward things around us, our bodies, abstract ideas, feelings or whatever we chose to play with, leading to reimaginings, creation as well as destruction. Through play we get exposed to the unexpected and the in-between dimension of experience (c.f. [2]). Importantly, as a consequence, this is how play makes transformation possible, however small it may be [33,40].

Because play frequently invokes people's abilities to respond to unanticipated and unpredictable situations, it is often emotionally charged and expressive [39]. According to Sutton-Smith, play can "*give rise to the pleasurable effects of excitement and optimism*" [73:253]. If we take a closer look at play experiences, we find transitions from one pattern of awareness to another [21,39]. According to Eberle, play leads from "anticipation" to "surprise" to "pleasure" to "strength" and "poise", and back again in a spiralling movement [21]. By putting our inner states into motion, play increases the level of intensity we are experiencing. Play can empower people by expanding and consolidating their feelings about what they can be and do. Afterwards, when the activity is concluded, there is often a feeling of gratification [39]. This view on play as empowering and affective is confirmed by Isbister in her work on digital games where she shows the benefits that social, co-located, and physical play can have on people's emotions [44].

From a design perspective, Bertran, Segura & Isbister have recently elaborated on how playful technology can enrich everyday activities outside leisure with socio-emotional value [6]. They outline a design space of "Technology for Situated and Emergent Play", which is fruitful in order to a) add joy to mundane situations; b) afford agency to explore, create and reflect; and c) facilitate meaningful social connections [6:10]. In this paper, we build on these ideas and elaborate on them further by putting emphasis on the relational qualities of play and how it enables us to explore the intensities of the world.

Affective Learning and Playful Technology in Museums

Historically, museums have been dominated by a “pedagogy of walking”, signifying linear narratives appealing to rational ways of thinking and the strict use of vision as a sensorial tool [5]. As a critical response to this traditional form of pedagogy, Witcomb [78,79] is advocating a “pedagogy of feeling” for museums in which “*nonrational forms of knowledge, ones based on other bodily sensations and on emotional forms of intelligence*” [78:58] are being foregrounded. These perspectives on affective learning in museums are currently under much discussion (c.f. [54]).

Smith, Wetherell and Campbell point out a need to explore different meaning-making processes as well as patterns of identity and affiliation in relation to affective museum experiences [68]. They suggest the study of “affective practices”, which implies the application of practice theories from social sciences in combination with affect theory [77].

The study of digital technology with the purpose of emotionally enhancing experiences in museum and heritage contexts is currently an active research area (ex. [58]). Within HCI, examples of such projects are “See Me, Feel Me, Touch Me, Hear Me” in which mobile technology was used to emotionally enhance a visit to a sculpture garden [26] and “Affective Presence” in which ambient displays in museums were used to augment experiences of affective presence [10]. Other examples include: [16,37,69].

Playful technology in museums, on the other hand, is most often associated with applications for learning which take the form of scavenger hunts [4,80] or role-playing [56]. A different design approach, more relevant to our work, is taken by Vayanou et al. exploring generic storytelling games for art museums [74]. Although interesting work is being done in the area of museums and playful technology (ex. [76]), we believe that the socio-emotional value of play as well as its relational qualities are not yet fully explored in the contexts of museums and cultural heritage.

To conclude, we see many overlaps between the conceptual development across the fields of HCI/interaction design, play design and museum design, where the affective and relational play a key role – both when it comes to understanding and analysing, and when it comes to developing actual design strategies. In the following, we present a case that both activates the analytic and design-oriented dimensions of these concepts in relation to the mobile web app ‘Never let me go’. We start out by outlining the motivations behind the design and the context in which it was conceived. Then we move on to a detailed description of the app in its final version, followed by the evaluation and its results.

CASE: DESIGNING FOR THE ART MUSEUM

The work presented here was carried out as part of the GIFT project which ended in 2019. The project had the aim to help museums overcome some of the challenges involved in using digital technology to facilitate engaging visitor experiences [81]. It was a highly cross-disciplinary project combining HCI

research, artist-led exploration, technology experiments, and experience design in collaboration with museums. Motivated by the overall challenge to develop new ways in which visitors may experience personal encounters with cultural heritage, the idea behind ‘Never let me go’ was to design a generic mobile app which could be used in any large to mid-size art museum, gallery or sculpture park.

One of the main sources of inspiration behind the design came from work done within performance art and experimental theatre where actors and performers use their voice to give instructions or tell a story with the specific purpose to manipulate or influence participants’ perception of specific objects, environments or situations (ex. [8,12,24,41,46]). These works, in different ways, play with authority, agency and intimacy by blurring the boundaries between audience and performers. They transport the participants/audience into a performative space [23] where new things feel possible and the effect can be both enchanting and unsettling. The artistic strategy of “making strange”, or defamiliarizing, is often used in this way to remove the automatism of perception and open up for changes in perspective [17,50].

The overall idea was to employ performative strategies, such as the intimate voice, defamiliarization, and altered forms of agency, and to put them into a playful context. Since these methods are already present in different forms of play, it would make it easy for the players to accept and make use of them. Moreover, it would take advantage of the power to change someone’s perspective and integrate this into naturally emergent and situated experiences where the social dynamics between the participants would play a crucial role in the affective engagements as well as in the sense-making processes taking place during the museum visit.

Never Let Me Go

‘Never let me go’ was designed as a two-player experience. It let the players take the roles of an Avatar and a Controller (Figure 2). The idea behind the two roles was to let one player be in charge of the other player’s experience, in real time, in the museum. The prototype was designed as two interconnected web apps, but it was only the Controller app that provided interaction. The Controller interface consisted of a menu with different commands, questions or instructions that could be sent to the Avatar (Figure 1), who would receive them as pre-recorded voice messages. Both roles had a shared audio feed in order for the Controller to closely follow how the experience was playing out for the Avatar. The shared audio was also used to emphasise intimacy and create a shared space where the two participants would feel safe together.

In the Controller app, there were six different categories to choose from in the menu. They served different purposes here briefly explained:

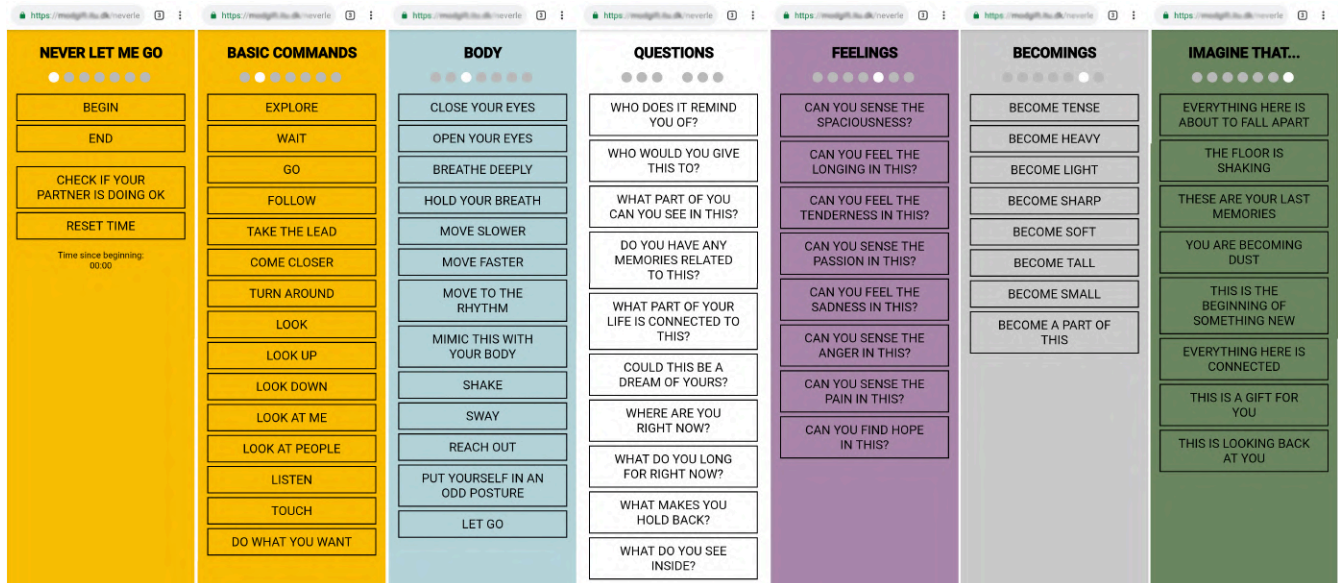


Figure 1. Screenshots from the Controller app.

The first category called ‘Basic commands’ consisted of direct prompts such as “Explore”, “Follow”, and “Wait”. It had the purpose to facilitate movement and exploration of the museums and its exhibitions. The second was called ‘Body’ and consisted of instructions relating to the body of the Avatar, such as “Close your eyes”, “Breathe deeply” or “Mimic this with your body”. This was included to encourage the participants to play with their physical presence and their senses in the museum. The third category consisted of personal questions that could be used in relation to the art, for example “What part of your life is connected to this?” and “Who would you give this to?”. The idea behind this category was to encourage personal reflections and emotional connections with the artwork. The fourth category was called ‘Becomings’ and consisted of prompts that were very open for interpretation. Examples were “Become light”, “Become sharp” and “Become part of this”. Even more than the ‘Body’ category these prompts were included for participants to play with new ways of being in the museum and to explore more embodied experiences of art. The fifth category was ‘Feelings’ which consisted of questions again to be related to the artworks, but this time in order to direct the Avatar’s attention to the emotional content of an art piece. Examples were “Can you feel the longing in this?” or “Can you sense the pain in this?”. Lastly, there was a category called ‘Imagine that’. This consisted of instructions intended to trigger the Avatar’s imagination. The idea was both to facilitate narrative play and to induce a sense of urgency in order to intensify the Avatar’s experience. Examples of this category were “Imagine that everything here is about to fall apart” and “Imagine that this is looking back at you”. Apart from the categories described, there were a ‘Begin’ and an ‘End’ option in the menu. These would trigger longer voice recordings of instructions, both for the Avatar and the Controller. In the case of the Avatar, the

instructions included a suggestion that whenever in doubt about what to do, they should just relax and enjoy the art.

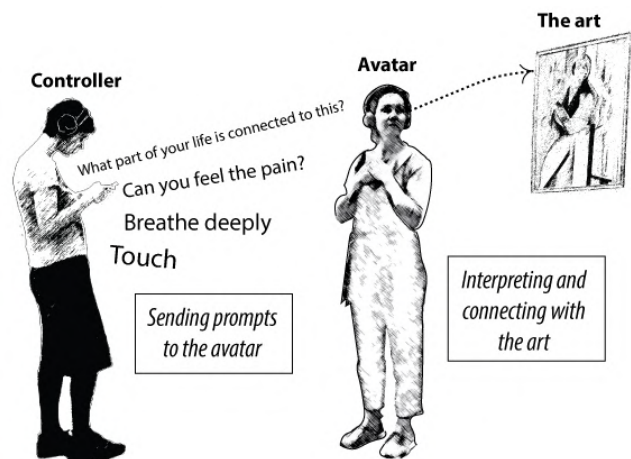


Figure 2. Never let me go: a two-player system.

EVALUATION

One of the main purposes of evaluating ‘Never let me go’ was to find out how participants would interact with the system, the exhibition space and each other during play. However, perhaps even more importantly, the intention was to get an insight into the experience from the players’ point of view. Would it feel more or less intense, embodied and emotional? Would it involve deeper or more superficial encounters with the artwork and the architecture? Would the existing relationship between the two players make any difference in the experience? Because qualitative methods are useful in order to answer this type of questions from the standpoint of the participant [35], this approach was chosen for the study.

Trialling Never Let Me Go

During the design process early iterations of the app were tested at three different art museums in Copenhagen with 6 users in total. After each test the prompts would be evaluated. The ones that did not work well would be removed and new prompts would be added according to what the participants felt was lacking.

The main trial of 'Never let me go' was conducted between April 22 and May 2, 2019 at the National Gallery of Denmark. 20 people took part in the trial. Of these 20, 14 were female; 6 were male; 8 were aged 23 – 30; 6 were aged 31 – 38; and 6 were aged 39 - 46. 6 out of the 10 pairs were romantic couples; 1 pair were siblings; 2 were friends and 1 pair had just met for the first time. All were recruited beforehand through public invitations on social media, and from a mailing list for people interested in cultural experiences in the Copenhagen area. In total, there were people of 13 different nationalities (mostly European) taking part in the study.

Each test was separated into 4 different sessions, approximately 10 minutes long. After a session ended, the participants would swap roles. Thus, they would try out both the Avatar role and the Controller role twice each. Before they started, they were given a mobile device each and a set of over-ear headphones. They could choose where in the museum to start the experience. Most often this would be in the modern art section. The Controllers were instructed to press 'Begin' when they felt ready to start. No training was provided beforehand. Brian Eno's ambient soundtrack: 'Music for Airports' was used as background music during half of the test sessions.

During the test the participants were observed and photographed (with consent given beforehand) by a researcher, and afterwards semi-structured interviews were carried out with them in pairs. The observing researcher took notes continuously of what the participants were doing and at what time. Photographs were taken to supplement the field notes and to contribute to the overall impression of the trial. The interviews (each between 30-40 minutes long) were recorded, transcribed and analysed through a process of inductive content analysis [22]. The themes that came out of the analysis were based on an iterative coding process where meaning units were identified, labelled, and put into 10 different categories.

RESULTS

The study reveals that playing 'Never let me go' had a strong effect on the participants' experiences during their time in the art museum. In general, it made them feel more open and stimulated than usual. Playing together gave them the opportunity to explore and reflect upon their existing relationship to each other. This relational activation, with all the intimacy, emergence and ambiguity it entailed, would also help players to establish new forms of connection with the exhibited artwork and the surrounding architecture. It enabled encounters that were more personal, emotional and sensuous

than what they would usually experience during a regular art museum visit.

In the following sections, we first present the two primary findings on the relationship as a resource and the enablement of new connections to the art. We then move on to unfolding in more detail results from the analysis that show how the players' experiences were intensified in four different ways: 1) by creating intimacy, 2) by enabling explorations of movement, rhythm, body and space, 3) by stimulating the imagination, and 4) by enabling play with social boundaries.

The Relationship as a Resource

A key feature of the design was how it connected two people in an intimate way. This enabled players who knew each other well to build on their knowledge, trust and specific relationship dynamics to achieve a meaningful experience in the museum. As P19 puts it, "*If it's with somebody that you know well. It gives a certain framework and certain ways to exchange*". In the trial of 'Never let me go' most of the player duos were closely acquainted with each other. Only one pair met for the first time (P19, P20). As could be expected, the choice of player partner had a big impact on the experience. As P13 describes it, "*I thought about the social boundary between us. Because we haven't known each other that long, I felt a little bit polite. It was like I don't want to ask too much. I don't want to push you too much. So, if we had been doing it a longer time, or maybe if I came with somebody that I had known for ten years, I think I would have pushed it more actually. So, I felt that I became very aware of where you were*". The temporarily heightened awareness of the relationship also led to new learnings. As P15 says, "*I learned something from my avatar. It was a way of getting to know another person's actions and intentions*".

The more intimate the connections between the two players were, the more possibilities for exploration it provided. P5 explains, "*It's about knowing the other person so that you can almost anticipate what they would feel and how they would react to you. You could see the smile coming, like the turning and smiling at you because of the playfulness*". This had a clear effect on how the players were able to engage with the artwork and the surrounding architecture (more on this in the next section). However, even though an already established close relationship was a great recourse in order to make the museum experience meaningful, several players suggested that playing 'Never let me go' could be an interesting way of getting to know someone new. P19 who played with a person she didn't know from before, confirms this in a way by saying: "*I think it's even good in our culture to start to try to emphasize that people can communicate differently. But we didn't do it so much in the first round. We did it the second time. But we also don't know each other so well. Now we know each other better*".

Enabling New Forms of Connection with the Art

One of the most promising results from the trial of 'Never let me go' was that participants were experiencing new forms of connection with the art. As P9 says in the interview, "*It felt*

stimulating. A way of asking new questions. It helps you to use the beginner's mind. To look with fresh eyes on things and step out from your regular thought-inertia". This "beginner's mind" was a result of players paying extra attention to different qualities of their experience. As P18 puts it, "I was more aware of emotions, because I was prompted to be thinking about things I normally don't think about". Being guided to look or to sense certain things helped to intensify or bring forth different details or aspects of the art experience. As P19 explains, "If I'm sensing the colour purple and if someone is showing me yellow, then that is intensifying the colour yellow for me". As a result, a shift seems to have happened where the role of the observer turned into something else, something more open. P4 describes it in this way: "I think it was a chance to connect with the art and not just be an observer, but to be part of the paintings but also the whole room. It helped me enjoy it and understand it more. And think about it more. It wasn't just my eyes watching. It was my whole mind observing". Part of what helped this shift take place seems to be the sudden change in perspective enabled by receiving a prompt at just the right moment. P13 explains, "If you just started looking at something and you're experiencing it and then you get an instruction that exact moment. It's extremely interesting, because it changes your perspective. And then it's like you're levelling up your experience. That outside input allows you to go places that maybe you couldn't have gone or wouldn't have gone on your own". This openness to the art and the experiencing of it could of course be achieved by the participants on their own, although playing 'Never let me go' made it easier. P13 again puts it this way: "The instructions enabled me to connect with the art in a way that sometimes can require a bit of an effort or you have to get into a specific mindset to really enjoy it, or to really consider what it's about".

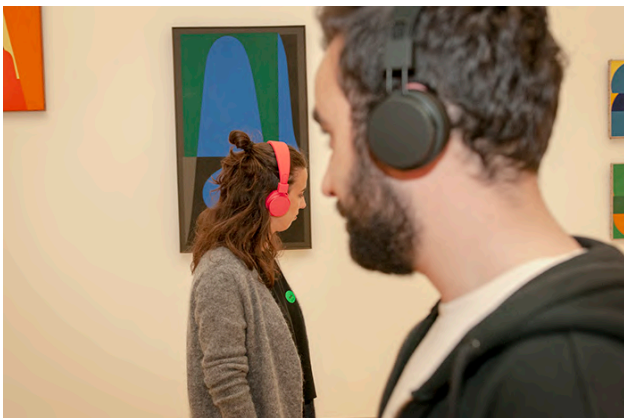


Figure 3. The Controller looking at the Avatar looking at art.

However, the forms of experiences described so far required that the players were able to establish a certain level of initial emotional connection or interest in the artwork which they were engaging with. If that wasn't the case, the participants would instead use the opportunity to play and have fun with it. P12 describes it this way: "When the art became let's say very modern to a point where I could not connect with it anymore,

the playfulness became a defence mechanism. I don't understand this so I will make fun with it. Because if I can't really connect with it, or interact with it on an emotional level, then I can at least make a fun experience out of it". This shows that using 'Never let me go' enabled a wide range of affective modes in which to experience the art, allowing the users to explore different intensities and ways of being. What here follows is an analysis of exactly how the players' experiences were intensified.

Intensification Through Intimacy

During the trial the participants experienced feelings of intimacy and empathy which intensified their affective encounters with the art and each other. What here follows are descriptions of these experiences in relation to different aspects of the design.

Playing with agency and control

The set up with two roles, the Avatar and the Controller, playfully provided a specific form of power relationship between the players. As the Avatar, players would voluntarily relinquish parts of their agency, knowing that they could retrieve it when they wanted to. Controllers, on the other hand, would accept the challenge of being the one in control of the situation. Both letting go of control and receiving an increasing amount of it led to certain feelings of tension as well as enjoyment. There was a strong element of trust and care being established between the players in order for these dynamics to be played out. As P8 describes it, "It feels like you want to take care of the other person, when you are the controller. Make it good for them. Or tease them or something. But still you have the responsibility". And P18 says, "I just went along with everything. But I also trust her and knew the circumstances, so I had no problems with doing that". Putting themselves into the hands of someone else, someone they trusted, strengthened the feeling of intimacy between the two players and intensified their experience.

Putting oneself into someone else's shoes

As Controllers, players were expected to engage with the Avatars and be part of shaping their experience. This led to them having intimate, intense and emotional engagements with the Avatars as well. Many of the participants described the Controller experience as being so focused on the Avatar that they would feel what they thought the Avatar was feeling. "It is an interesting and engaging experience to be the controller. It forces you to put your attention on the other person and try to be doing an empathy exercise. Putting yourself in the shoes of the other", as P9 puts it. And P6 explains it this way: "Thinking back, it's a little fuzzy when I was a Controller and when I was the Avatar. Throughout it was empathy when she was the avatar, because I was anticipating her feelings. So, that's why I keep jumping in and saying things like this was intense although she was actually the Avatar. There's no difference in my mind".

Making it personal

The possibility to share very personal moments was another aspect of the design that enhanced the feeling of intimacy.

These moments were in most cases triggered by the questions which the Controllers were sending (or asking) their Avatars, often in relation to an artwork they were engaging with. This led to very personal reinterpretations of the artwork. From the point of view of the Avatar P4 gives this example, *“It was intense. Very interesting. One time there was a painting of a woman, a naked woman. And she was longing or a bit lonely, standing. I could see myself in that painting. It was just like my mind flew to many situations and it was very emotional”*. Depending again on the level of intimacy already established in relationship between the two players, going into this private sphere of emotions felt more or less appropriate. As P8 points out, *“Some of the questions were too intimate. I felt that those questions were leading more toward deeper feelings and memories. Like when you ask them in that way, in an art setting. I don’t know. It felt weird”*.

The use of voice

The presence of an external voice is a significant part of ‘Never let me go’. The decision to use a pre-recorded voice, instead of letting players use their own, was taken in order to limit the scope of the communication – to set a clear tone and a frame for the whole experience. However, players never found it strange to use this voice and it easily became part of their communication. The voice in itself and the fact that players were in the situation of active listening, helped to create intimacy. As P20 points out, *“It was more intimate in a way, because headsets create a bubble and a voice in a headset is quite intimate for me. And it wasn’t my partners voice, but it was like something that she was saying to me”*. The voice also helped players to relax and receive the prompts they were given. As P10 puts it, *“With the voice vocalising the prompts in a very soothing way and so on. It felt very much as in a guided meditation in which, at least to me, it didn’t feel invasive”*. And P4 even says, *“It’s like it was taking us on a journey only with the voice”*.

Intensification through Explorations of Movement, Rhythm, Body and Space

‘Never let me go’ fostered new ways for the players to move in the art museum in terms of rhythm, expression and as a means of communication. This intensified their awareness of their bodies and the space around them, leading to new forms of experiences both in relation to the art, the architecture and to each other.

Moving together

Having the invisible bond that the mobile technology provided, the players of ‘Never let me go’ more or less always moved in relation to each other. Most often the two players would walk around in the museum together at a close distance. One would be leading and the other following. This sometimes led into a form of a dance around the artworks. P19 describes it this way: *“There was this moment when I think I was the Controller and we were looking at these three sculptures, and I was moving down, and I said, ‘Follow me’, or ‘Look closer’ maybe. And then I started to move around, and she also moved around and then it was like a shared experience. I mean that was an interesting moment we communicated with the body”*.

And as P6 puts it, *“It felt like a choreography, because we were all in sync”*.



Figure 4. Avatar lying down while the Controller is standing by.

Speeding up and slowing down

The players would experiment with using different rhythms than they would normally use inside a museum. As P15 explains, *“Going very fast I enjoyed, because you don’t usually move fast without having anywhere to go in this kind of place. I realized that I have never been moving fast just to move fast”*. Sometimes this led to very intense situations which involved a lot of trust. P12 gives this example: *“When I was told to close my eyes and then walk faster. That was a moment were I just thought I’m going to smash into a painting now”*.

Player would also use ‘Never let me go’ to slow down and become more present. As P2 says, *“I think that some of these tasks were about to stay in the moment. Like a meditative state in a way. So, it helps you to reflect: Where are you now? What is happening at the moment?”*. P18 expresses appreciation of being able to create these moments as a Controller by saying, *“I wanted to do that with the ‘Close your eyes’, ‘Breathe deeply’, ‘Imagine that everything is connected’. That’s cool, that you can make us create this situation of calming down, rooting the person, and then opening the eyes again and then continue. It was nice to be able to do that”*.

Using the body

Using their bodies in an attempt to copy artworks or to sense them in new ways became both an amusing and an interesting way for the players to explore the exhibitions together. As P15 explains, *“I normally don’t interpret anything with my body. That’s a very good alternative for me, who doesn’t like speaking. I could do that more. I enjoyed copying the bubbly sculpture, trying to become like it. That was a nice moment. It was an interesting form for the body to copy”*. For P9 it became a way to explore his sense of perception. As he says, *“I think the prompt was something like ‘Become a part of this’. And that was a good cue to use my body weirdly in that non-anthropomorphic, static universe that was in the room. It felt somewhat enjoyable on the side of exploring perception through physicality. Which is something that is not often done consciously”*.

Sensing the space

The mindset that the players adopted as they were using ‘Never let me go’ helped them to become more aware of their surroundings. They experienced space somehow differently which opened up for the possibility to explore not just the artwork but the whole architecture. As P3 explains, “*I felt like it was much quieter, and we had more space. Even when there were people around*”. The freedom to move differently was part of what made this possible. P15 puts it this way: “*I analysed the room and what was in the roof. It’s like you become more relaxed in your neck. Looking more freely*”. This led to some intense and rewarding experiences. P19 gives this example: “*I remember when the architecture opens up with the glass wall and you asked me to look. That was a nice moment. I was more like... [looking down]. I have a tendency to be like that. I mean really into things. And then you asked me to look up. That was nice to be guided and be like just aah!*”.

Intensification through Stimulating the Imagination

Part of the ludic approach to the design of ‘Never let me go’ was the goal to stimulate players imagination in different ways. During the trial, however, players also repurposed the content towards novel intense and playful experiences.

Creating a sense of urgency

Under the category ‘Imagine that’, Controllers would find a number of options with a rather uncanny feeling to them. These were used by the players to achieve a feeling of eeriness or a sense of urgency. As P3 describes it, “*She made it very dramatic and very apocalyptic in a way. She kept telling me it’s all going to fall apart. And ‘Imagine that these are your last memories’. She did this a couple of times and it gave me a very eerie emotion especially in connection to the music*”. For P11 this turned out to be the missing piece for her to have a deeper emotional experience with a specific painting. She explains, “*I think there was one point where he said to me ‘Imagine that everything is falling apart’. And we were looking at a painting of D-Day. And I was like yes everything is falling apart and will fall apart right here. And that helped me to get a little bit more into the picture... Or get sort of the feeling out of that painting. I remember specifically there was this one guy in the corner of the picture. That was very close to me. He had his arms full of holes. And that made me really, really, really sad*”.

The potential in becoming

The ambiguous category of ‘Becomings’ was a bit challenging for the players in the situations where they didn’t quite know how to interpret it. As P6 explains, “*So, become tense. Okay, I’m tense now. But it doesn’t necessarily become visible and it’s a bit of a fabricated feeling in a way. Because if for instance say that there’s this intense picture and you’re looking at it and get ‘What does this remind you of?’, then the tenseness becomes organic and you feel it*”. On the other hand, these prompts would also give players a direct opportunity to explore small shifts in awareness or body posture and to play with their senses in this way. P13 gives this example: “*When I got ‘Become tall’ I felt it inside. I was looking at something up*

there and I was imagining that I was on the same eye level as it. I was thinking like that I was up there”. For P14 it became an intense experience just to stand on her toes, very discreetly, in the presence of others. She describes it this way: “*I think at some point she told me something like to become light. And that was a bit challenging. I mean I didn’t feel totally comfortable as doing it at home. At the same time, I felt like doing it. And it was like yeah, there are people here, but it’s not a bad thing. So, I just did it*”.

Objects looking back

One of the prompts was specifically designed to challenge the relationship between the observer and the observed through letting players imagine that objects or artworks were returning their gaze. Players reported that, during the trial, this was one of the prompts that affected them most profoundly. P13 gives this example: “*It was like the place came alive a bit more to me. I especially remember one of the first things you asked was, or you said: ‘Imagine if this is looking back at you’. I felt like all the pictures were staring at me. And there were some bizarre creatures in there*”. Not only did it give them an uncanny feeling of artworks coming alive, it also led to moments of deeper connection with the art. P14 here describes an intense encounter with a small sculpture: “*That was super strong, ‘Imagine that something is staring back at you’. So, I was in front of this little octopus’ sculpture or something. I was quite looking at it. I really like sculptures and I always look at their expression. And when I heard that, it was so real and so connected, because yes, it was looking back at me*”.

Intensification through Playing with Social Boundaries

Using something as playful as ‘Never let me go’ inside an art museum, inevitably led to players pushing against the existing social norms of how to behave during a visit. Because the system provided clear rules and roles (although there was quite a large amount of wiggle-room) it helped them to feel confident enough to explore, or at least touch upon, social boundaries, between each other as well as in relation to other visitors or guards present in the exhibition space. This gave the play an extra level of intensity and challenge. As P10 explains, “*Because at times of course getting instruction gives you an alibi. But especially with the physical prompts I was limiting myself to what I feel is acceptable behaviour. Without any onlookers I might have done stuff bigger*”.

Controllers would also consciously play with the social boundaries in order to tease their Avatar or create funny situations. Thinking back P2 says to her Controller, “*I noticed that you said ‘Shake’ when the security guy passed*”. This led to a few occasions of resistance when the Avatar needed to decrease the level of intensity. As P3 explains, “*It was mostly because it was awkward for me. For example, she would tell me to stretch or mimic. And I did it a few times but then I was feeling very awkward. So, I didn’t*”. However, the Controllers didn’t just push the Avatars to explore their boundaries for the sake of their amusement, they also saw it as an opportunity for them to explore new ways of being. P4 puts it this way: “*I gave her some commands of becoming this or becoming that and*

stuff with her body, because I wanted her to overcome her boundaries and maybe to let go and try to do something that she feels is awkward”.

In the following section we discuss these results and the potential and concerns arising from working with relational strategies when designing interactive systems.

DISCUSSION

If we look more closely into what relations are actually activated in ‘Never let me go’, the list can get very long; we have relations between people (players and other visitors at the museum), between players and the artworks, between players and the physical space/architecture, between players and the museum as a cultural institution – and then we have more emergent/subtle relations; between the personal/private and the public/institutional (e.g. in terms of discourses and narratives), between inner states and outer world, between fact and fiction and so on. However, even though we find it enriching and potentially valuable for designers to consider all these relational aspects (and more), we believe it is important to unfold in more detail the primary relational activation which backgrounded everything else; the one between the two players; the Avatar and the Controller. Rather than aiming at intensifying all relations, ‘Never let me go’ starts from a basic intensification and rearrangement of a very basic yet rich set of relations; the relationship between two people. Of course, a relationship is in itself an assemblage, connecting bodies, lived stories and other attachments – and all of this comes into play and colours the experience initiated through the course of interaction, entering into resonance with the more-than human surroundings.

Emergence

In the beginning it was stated that ‘Never let me go’ was conceived as a generic system that could be deployed in any large to mid-size art museum, gallery or sculpture park. Potentially its use could be even broader. However, we do believe that art museums provide particularly rich semiotic, affective and liminal environments well suited for this type of design. We can clearly see from the empirical evaluation that even though the infrastructure might be conceived as generic, it has clearly resulted in strongly situated affective encounters in this particular museum between these particular people. This is an important takeaway; designing for relations does not necessarily mean designing for specified relations that are already known in advance. Here, we will argue that designing for *emergence* is a key concern.

Emergence is integrally related to creativity, something which has been previously explored in HCI [65]. In many ways this approach could be said to go counter to traditional strategies for dissemination and communication in the museum world, where the primary aim is often to curate and ‘control’ the experience from a predetermined set of already given constraints. It might be argued that the worlding ensuing from the primary relational activation will always be emergent and situated. However, through play this process becomes more open to the unexpected and to affective and creative qualities

of experience. Relations are put into motion; new potentials are actualised. Even though the focus on the relationship would sometimes distract players from the exhibitions, it was compensated by the level of affective engagement it provided in relation to specific artworks. By changing the constraints from curation to emergence, what we see is an actual intensification of the experience of, and connection to, the artworks and the museum as an institutional and architectural space. In addition, we also see something else – namely that the couples engaged in the experience encounter each other anew. Not only is the museum experience intensified, so too is the relationship.

Intimacy and ambiguity

Based on the above, we do believe it makes sense to talk about play design as a relational strategy for catalysing affective encounters on a number of levels. If we then want to move deeper into the actual intensification that took place during the trial of ‘Never let me go’, we believe two key concepts for understanding the nature of this are *intimacy* and *ambiguity*. That intimacy is a relational quality that leads to an intensification of affect is perhaps not surprising as affect and intimacy are closely interconnected. As Sadowski points out in her work on digital intimacies,

Coming back to the question of intimacy, it is becoming clear that intimacy is always affective. A collision of bodies (which might also be bodies of thought, technological objects, or collectivities, as Deleuze explained), is an intimate encounter in which bodies are modified through their encounter with the other. [63:51]

From this perspective intimacy constitutes complex relations that goes beyond the private sphere. It signifies a significant degree of exposure to another living or non-living body. As Sadowski puts it, “*Getting intimate with someone or something means crossing a boundary and connecting with the other, and being at risk of losing oneself to some degree.*” [63:45]. Experiences of intimacy can be felt as varying degrees of sensitivity, vulnerability and responsiveness. By putting ‘being’ into play it can also lead to experiences of enchantment [52]. Moreover, it is often ambiguities of intimacy that people find particularly interesting and exciting to engage with (just think of flirting and you get the idea).

When intimacy is coupled with ambiguity in the design of systems for communication, it will often lead to users engaging in active reinterpretations based on the relational activation. This was shown in a HCI study in which the intimacy between the interlocutors led to “surprising richness” of communicative experiences using very simple and ambiguous interfaces [49]. This can be further related to the findings in a recent HCI study where interpersonal gifting was used in order to emphasis personal and social aspects of a museum visit. As a result of this relational activation, users reported “*new ways of looking at or thinking about museum objects*” [69:7].

When it comes to play design, elements of ambiguity are important to spark the playful mindset and to encourage curiosity and exploration [29,30,31,32]. No emergence can occur (in relation, interpretation or behaviour) without some form of ambiguity or openness being present. In ‘Never let me go’, intimacy and ambiguity were integrated into both the system architecture as well as the content. The takeaway here is that the combination of these two qualities empowered users to engage in the playful behaviour leading to personal meaning-making and affective encounters with the artwork and architecture, which were part of the overall intensification of their museum visit. However, it is important to underline here that the design gave them the alibi both to immerse themselves in the experience and find ways to withdraw.

Trust

We see from the overall design process and ensuing evaluation that it is absolutely essential to establish *trust* on a number of levels: trust in the situation, in the system, and between participants. The tolerance of intimacy and ambiguity is highly individual, situational and culturally specific, and therefore issues around mutuality and consent have to be worked out in a satisfactory way. As with all play, there needs to be possibilities for deep engagement as well as to change state or discontinue. However, when the system is designed in an open and emergent manner which lets the participants negotiate the level of intimacy between themselves, as well as their depth of engagement, it becomes less of a problem. Players establish a social contract between each other as they enter into play [71] which can be renegotiated at any time. Previous HCI research confirms this by showing that social games can be an effective strategy at fostering interpersonal trust [18]. In ‘Never let me go’, in the recording which is played for the Avatar when the Controller uses the BEGIN-button, the voice says:

Welcome to this avatar experience. You will soon hear instructions chosen by your partner. Follow these instructions to your own ability and desire. Make it as dramatic or as subtle as you wish. Remember to stay safe and stop whenever you want. When in doubt of what to do, relax and enjoy the art. Now start by doing just that. Enjoy!

This statement set the frame for what was expected from the players taking the Avatar role, giving them the space to freely decide on how to play. We find creating the right balance between trust, intimacy, ambiguity and emergence to be absolutely key for developing successful play design strategies that enable people to have intense affective experiences, but also allow them to always opt out. When working with powerful materials such as relationships, intimacy and ambiguity, ethical considerations are important. As such, it should never only be a question of intensification, but of developing appropriate frames and constraints.

CONCLUSION

In this paper, we have explored how play design can be used as a relational design strategy to intensify affective encounters in the art museum through the use of digital technologies.

Based on the presented results from the evaluation of the ‘Never let me go’ web application, we have shown the complexity of how this relational activation and intensification plays out in situated encounters between people, art and places. In the design of the app, performative artistic strategies, such as the use of voice, defamiliarization, and altered forms of agency, were put into a playful context. From the analysis we see how a range of affective experiences were intensified 1) by creating intimacy, 2) by enabling explorations of movement, rhythm, body and space, 3) by stimulating the imagination, and 4) and by enabling play with social boundaries. Finally, we have stressed that emergence, intimacy, ambiguity and trust are key elements in creating affectively engaging museum experiences, and that the inter-activation of people’s existing relationships through the course of interaction has proven to be a powerful starting point. So far, this has only been tested in the context of an art museum, but we see potential for future work to explore these ideas in other settings as well.

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