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Saving Face: Play-full design for social engagement, in public smart city spaces

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Abstract. Can social engagement and reflection be designed through social touch in today's smart city's public spaces? This paper explores ludic, playful design for shared engagement and reflection in public spaces through social touch. In two Artistic Social Labs (ASL), internationally presented in public spaces, a radically unfamiliar sensory synthesis is acquired, for which perception of 'who sees and who is being seen, who touches and who is being touched' is disrupted. Participants playfully 'touch themselves and feel being touched, to connect with others on a screen'. On the basis of the findings in the ASLs, guidelines are proposed for orchestrating social engagement and reflection, through social touch as play.

Keywords: Social engagement, digital art in city spaces, playful social touch.

1   Introduction

Can social engagement and reflection be designed in smart city's public spaces through social touch? This paper explores ludic, playful design for social engagement and reflection in public spaces through social touch, between person to person and person to city.

Playfulness in digital interactive art in public spaces ambiguously combines aspects of physical and virtual presence, familiarity and unfamiliarity, predictability and unpredictability, seriousness and fun [2,7,9]. Sensory and social interaction is disrupted to evoke the participants' ambivalence between action and reception, between observation and identification or immersion, for engagement and reflection to emerge [10]. Playful social and haptic disruption have been pursued in many digital art works [1,13,16], to promote new sensory connections and relational spaces [2,8] embedded in the smart cities' networked information flows [4,14]. However, playful social touching in public spaces has been subject of little art nor research [11].

This paper presents two experiments 'Saving Face' [12], from a series of Artistic Social Labs (ASL). These ASLs are fact mixed reality, multi modal public interfaces. The ASLs are firstly designed to disrupt perception of 'who sees and who is being seen, who touches and who is being touched' among public participants. Participants are asked to publically touch themselves and feel being touched to connect with oth-

ers on a city public screen. The ASLs have been performed in various cultural contexts and geographical city public spaces (Venice Biennale (2015), Utrecht (2012), Amsterdam (2015), Berlin-Dessau (2013), Beijing (2013, 2015-16)).

Combining artistic insights and academic analysis, this paper presents results of two ASLs called 'Saving Face' and proposes guidelines for social engagement and reflection design in city public spaces, through social touch as play.

2　Method

This paper describes and analyses two experiments in outdoor city public spaces to explore the effect of the interface design choices through research through design [17]. Two experiments explore the design choices, based on 1) observations (by a Host, see below) of participants' actions and reactions; 2) thick descriptions of open ended interviews with participants; 3) photo and short video documentation that support these observations, when available.

Fig. 1. Actors participating in the ASL caress their faces. © Lancel/Maat 2015.

3　ASL Interaction design: Caress to Mirror and Merge

Saving Face is a 'city interface' designed to provoke social engagement and reflection in smart city public spaces, through social touch as play. Citizens are invited to meet in a playful, networked social system. In front of a city public screen, enhanced with face recognition technology system, participants caress their own faces, to connect with others in the physical public space, on the public screen and in the digital network, guided by a Host.

By caressing their faces, participants 'paint' their portraits on the screen. Their portraits appear and slowly merge with the portraits of previous visitors. These portraits merge further through every face-caressing act of following participants, co-creating untraceable networked 'identities'. Each composed identity is saved in a user generated database, to be printed, provokingly, for a Saving Face Passport.

Spatially, Actors' intimate caressing gestures are publically staged both in the physical space and on the *screen*. In front of the screen, the intimate, slow and vulnerable character of caressing gestures is designed to contrast with common public dynamics of the city public space, to visually articulate an 'aesthetic distance' [10]. Such aesthetic distance has been designed to frame the intimate gesture of caressing as an invitation to play.
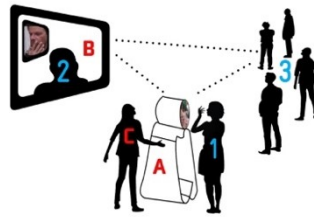

Fig. 2. Interaction Model for Artistic Social Lab[1]. A) Aluminium City Sculpture (Camera, face recognition technologies), B) City Public Screen, C) Host. (1) Actor, (2) Virtual Persona, (3) Spectators (potential Actors). © Lancel/Maat 2015.

3.1 Actors and Spectators

Technically, the multi-modal interface consists of an interactive, aluminium sculpture with a camera and a small, in-built mirroring screen with face-recognition technology (A in Fig. 2), connected to a city public screen (B in Fig. 2).

Socially, the interface invites participants to interact with each other in various possible roles: that of Actor (this notion is used to describe an active rather than passive role of audience), Spectator and Virtual Persona. As Actors[2] (1 in Fig. 2), people from the public are invited to caress their faces in front of the camera and publically 'paint' their portraits on the city public screen. Actors can then choose to save their portraits and merge them with the portraits of previous Actors, people they have often never met before. The merging process of portraits into Virtual Personae is visible on the screen, for Actors and Spectators (3 in Fig. 2).

Spectators (3 in Fig. 2) view from a distance (and can become Actors themselves).

3.2 Virtual personae

The merged portraits are described as Virtual Personae (2 in Fig. 2). These Virtual Personae are designed to 'virtually gaze' into the public domain, as contemporary 'fellow men and women'. They emerge from the interplay between Actors, Spectators, the technological system and caressing gestures as described above. All Actors'

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[1] Interaction Model for City Interface: Artistic Social Lab 'Saving Face'. © Lancel/Maat 2015
[2] The Actors' participation exposed to the Spectators [15] can be described as 'performative'. Instead of referring to the notion on *performance* as a form of 'role-playing', *performativity* [3] is, in this context, considered to be a repetitive act designed for public spaces, to share reflection on social engagement.

caressing gestures are visualized real-time on a city public screen. The gestures are translated into visual, slowly emerging 'data traces'. While caressing, only the caressed part of the face is highlighted as 'data trace', building up to a (full) portrait. These data traces then merge with previous participants' portraits from a database[3]. When no Actors participate, the Virtual Personae morph auto-play from the database, displaying the process of merging with others.
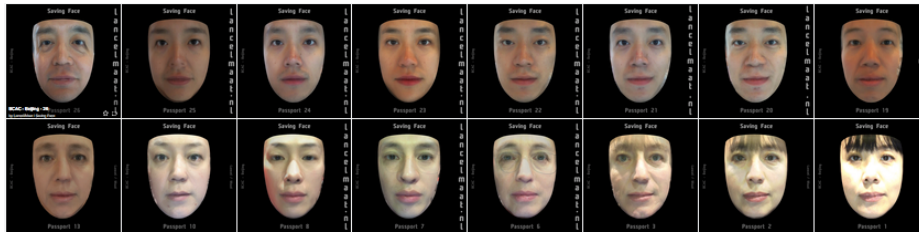

Fig. 3. Excerpt of online, generative database collection: merged portraits ('Virtual Personas')[4].

3.3 The Host

A *Host* (C in Fig. 2) is part of the interface design, often performed by the artists or by volunteers. In all Saving Face ASLs the Host explains a) the project researching social engagement through mediated touch and b) the physical interaction. The ASL is explained to people using words such as 'mobile phone', 'connect', 'meeting', 'touch' 'digital', that are internationally understood. Through both words and body language words such as 'caressing', and 'being close' are visualized. The explanation serves both as a spoken manual and as contextualization. The Host then c) witnesses the performativity of the Actor from a distance, ensures a safe space for concentration when necessary and d) mediates reflection through open ended interview afterwards. In this way, the Host mediates between physical and virtual presence, between public space and intimate space. The Host, in fact, mediates the mediation.

4 Two ASL Experiments in Public Spaces

Below two experiments, in outdoor city public spaces, are described and analysed, to explore the effects of the interface design choices addressing two research questions: Does disrupted touch lead to playful exploration and engagement in smart public spaces? and Does the ASL's sensory orchestration of social touch lead to playful engagement and reflection in smart public spaces?

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[3] In this way, each Virtual Persona exists of data traces generated by many caressing acts. The last portrait layer contains 50% of the previous portrait, to enhance the Actor's self-recognition and connection. Colours of skin merge, but the last colour is dominant.

[4] Generative database collection of merged portraits © Lancel/Maat, 2015. Each merged persona is automatically uploaded to Flickr, for public use: https://www.flickr.com/photos/savingfaceportraits/page1/

4.1 Festival aan de Werf, 2012, Neude, Utrecht

ASL 1 took place during 10 days between 10 am and 11 pm, on a dynamic square in the middle of Utrecht, during the art festival Festival aan de Werf. During this period, streams of people passed from all directions: men and women off to work, youngsters strolling along, families exploring the festival, girls shopping, tourists dwelling. In this context, the ASL addresses the question: Does disrupted touch lead to playful exploration and engagement in smart public spaces?

The Host stands near the sculpture and observes people's actions and reactions when they pass. As people pass, they often stop to watch the ASL from a certain distance.

Most Spectators are first attracted by the screen, but only stay to watch if they also see an Actor caressing his or her face. In these cases, they turn to the screen, look back at the caressing act and back to the screen again, relating the caressing gestures and the virtual faces on the screen, immersed in a disrupted, two-fold gaze.

When Spectators see Actors emerging on the screen, they show interest, come close and ask the Host what's going on. When the virtual faces merge and partly disappear into composite faces, many Spectators take pictures of the image on screen. Often, they then take on the role of the caressing Actor. Lively discussions with Actors about the use of social media and sensory connections, often follow.

The Host observes that once one Actor starts caressing, more follow. At first, Actors often express to feel socially uncomfortable and strangely exposed to be observed while caressing in public space. This feeling seems to disappear once they are absorbed in the interaction between themselves and the screen, losing touch with their surroundings. This unique experience of touch in public space is often stated to be a totally different experience, often described as disturbing, involving co-location of oneself. This experience is not described as such when no Spectators are around.

The Host observes many ways of caressing practiced over time: Actors show body language of immersion, intensity, alienation, stillness, and unfamiliarity. Their faces express disbelief, pleasure, wonder, joy, concentration, and sensory involvement. Often Actors are fascinated by caressing their face and tell the Host that they have never had this experience before. Instead of caressing, some mimic putting crème on their faces or 'shave' their faces. Others just softly touch one spot on their face and then another. Some hesitantly caress their faces partially, some eagerly grasp their full faces. The Host directs Actors to caress: 'Caress your face as if it was your lover's face' and 'Take your time'. Actors strongly respond to this intimate reference, smile, giggle and concentrate. Various video captures show people slowly and intensively caressing their faces, again and again.

During the first days, the position of the sculpture was tested. It was placed at various distances and visual angles to the screen. It became clear to the Host that if both the act of caressing and the screen cannot be seen from the same position by both Actors and Spectators, they all express less connection with the merged, Virtual Personae on screen – they 'lose touch'.

Often, the Host observes participants' engagement and reflection. For example, three young men caress each other's faces. While caressing, their increasing concen-

tration and tenderness is observed by the Host. During caressing, they talk with each other about how it feels to appear on the screen though touching their faces. Another example is a father who wanted to surprise his daughter by 'painting' his moustache in her portrait that she previously created on the screen. While starting the caressing act as instrumental to surprise his daughter, the Host witnesses a transition to a shared experience of exploring the effects and the feeling of caressing his moustache in the ASL, visible to all. The Host observes that many Actors come back to merge with friends and family, to embrace the visual effects and co-creation of the shared Virtual Personae over time. For example, a girl having participated comes back the next day with her parents and her brother to co-create merging portraits as a family.

4.2 Findings

The ASL synthesis is activated by a Host, Actors and Spectators. Relations between caressing gestures, gesture tracing on screen and a resulting shared Virtual Persona, incite playful immersion for both Actors and Spectators. This immersion is established only when both screen and caressing gestures can be seen or experienced from one spatial position. The Hosting design creates conditions for all kinds of caressing and allows Actors to fully concentrate on this process. People experiment with acts and experiences of caressing, while expressing and sharing pleasure and joy. Even when acts of caressing result in merely 'losing touch with surrounding Spectators', Actors still need the witnessing presence of the Spectators' gazes around them, to experience their gestures as socially engaging. Moreover, the unpredictable results of merging portraits, becomes exciting only when witnessed and discussed by others. Co-creation of the Virtual Personae on screen seems to incite participation.

Fig. 4. Participants exploring in the ASL Connecting Cities. © Lancel/Maat 2013.

The unfamiliarity with this role creates a safe space to embrace interdependency, experiment and sharing conversations both with the Host and Spectators around. People of all ages, social cultures and geographical backgrounds participate. Participants

share expression of reflection among each other, to accompany each other when caressing and seduced by the unpredictable outcome of merging portraits.

4.3   Connected Cities Network Berlin: Dessau, 2013.

Connecting Cities Network invited the ASL around the historical Bauhaus Architecture (1919, W. Gropius), now housing the Academy for Architecture Dessau. In this context, this second ASL addresses the question: Does the ASL's sensory orchestration of social touch lead to playful engagement and reflection in smart public spaces?

During two days, from late afternoon until midnight, people came along wondering. In between the Dessau buildings, the sculpture's silvery aluminium mirrors the fading daylight. It seems to be floating without gravity, connected to the digital network. A video device with the ASL documentation was added to the sculpture (an extension of ASL 1). More than 130 Actors caress their faces.

The Actors' small, caressing gestures were counter-parted by a huge wall high quality projection. The projection on the wall (instead of an electronic screen as in ASL 1) provided a very 'clean' visual environment, in which the projected, Virtual Persona seemed to appear as a loose, floating Gestalt.

The Host observes people of all ages, in small social groups or families, crowding the space. The Spectators' gazes, between a) mirroring the caressing gestures and b) watching at a distant screen the corresponding visual traces, is disrupted. The emerging traces on screen direct the Spectators' dwelling eyes.

After participation, Actors are challenged by the Host to reflect and answer questions about their experiences. They often stated that it felt strange, and that they do not have words to describe this experience as a sense of touch. And yet they try. It often leads to stuttering and to finding new words and images, expressing their experiences, as a form of reflection. For example, for many, the installation appears to be an incentive for the gesture to caress their faces, to mirror and be part of a coded system. One Actor commented: "When I closed my eyes caressing in front of this technology, knowing that that my caressing act was exposed, it seemed as if a hand outside caressed me, as if it was not my hand but the hand of God." Some told that they felt like giving away a piece of themselves to a 'digital grid'. Others would be immersed in a twofold, disrupted experience of seeing and feeling their faces, for a long time - and then stop, as if awakening.

4.4   Findings

The Host mediates the mediation and challenges Actors and Spectators to describe their experiences on the ASL's disrupted synthesis. All participants reflect on an embodied sense of mirroring versus the scanning, tracing and emerging information on screen. They reflect on their experiences of caressing themselves in order to appropriate a Virtual Persona, shared with others. Their aim to reflect leads to stuttering, to finding new words and images, as a shared form of playful reflection. The Actors expressed unfamiliarity with the visual-haptic experience of *caressing-and-feeling-caressed* intertwined with visually emerging on screen.

Fig. 5. Participants exploring in the ASL. Connecting Cities. © Lancel/Maat 2013.

5   Conclusion

City interface Saving Face is designed for playful engagement and reflection, through social touch. Technically, the smart cities infrastructure is reconfigured to accommodate participants to play with a city public screen, a generative database system and face-recognition technologies. A novel, social touch interface has been designed in which the familiar relation between 'who you see, who you touch and who is being touched' is disrupted. The ASL is orchestrated to experience a socio-technical synthesis on the basis of 'caressing your face to connect with others on a screen'. Design impacts of two experiments are analysed below, to propose guidelines for designing social engagement and reflection, through social touch as play.

Social Touch. People of various ages play, from diverse geographical backgrounds and cultures. Playful exploration and reflection emerge from both self-referential exploration and from relations with others. Both experiments have shown to provoke participants' joyful experiment and shared pleasure. Many people perform and observe face caressing, in concentrated and touching ways, as if for the first time. They interact with others who are previously, virtually, actually and potentially present, in various time relations.

Ambivalent Design. Vital to the design are aesthetic principles of unfamiliarity, unpredictability and disruption, to engage in playful exploration, interaction, immersion and reflection. Experiment 1 shows that Actors and Spectators interact in codependency, relating simultaneously in the physical space and via their bodies as signifiers on a city public screen. Their acts of physical caressing must be mirrored real-time as emerging data traces on the screen. The unfamiliar, ambivalent design of both physical and virtually mirroring is crucial to engage shared immersive, playful

exploration. The ambivalence occurs when all participants can perceive both acts of caressing a face and data traces from the same spatial position. The unpredictable results of merging portraits with previous participants becomes exciting only when witnessed by others.

Reflection through Play. The acts of caressing need to be visually staged, counterparted by social city dynamics and exposure on city public screens, to evoke an aesthetical distance from which playful reflection and dialogue can emerge. Hosting is conditional to involve the Actors and Spectators in shared expression of reflection, as became clear in experiment 1. The Host invites Actors to participate, mediates the mediation and frames the public space as a lively agora. Actors describe their experiences to the Host in new words and images, as found in experiment 2, as a new form of 'embodied sense of knowing' [6] and express a sense of shared embodiment with others, 'through technology'.

Both Artistic Social Labs show that the social touch interface design evokes social engagement and reflection, in smart cities' public spaces, through social touch as play.

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