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## **Saving Face: Shared experience and dialogue on social touch, in playful smart public space.**

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Can shared experience and dialogue on social touch be orchestrated in playful smart public spaces? In smart city public spaces, in which physical and virtual realities are currently merging, new forms of social connections, interfaces and experiences are being explored. Within art practice, such new connections include new forms of affective social communication with additional social and sensorial connections to enable and enhance empathic, intimate experience in playful smart public space.

This chapter explores a novel design for shared intimate experience of playful **social touch** in three orchestrations of ‘Saving Face’, in different cultural and geographical environments of smart city (semi-) public spaces, in Beijing, Utrecht, Dessau-Berlin. These orchestrations are purposefully designed to create a radically unfamiliar sensory synthesis to disrupt the perception of ‘who sees and who is being seen, who touches and who is being touched’. Participants playfully ‘touch themselves and feel being touched, to connect with others on a screen’. All three orchestrations show that shared experience and dialogue on social touch can be mediated by playful smart cities technologies in public spaces, but rely on design of mediated, intimate and exposed forms of ‘self-touch for social touch’, ambivalent relations, exposure of dialogue and hosting.

**Keywords:** Social engagement, digital art, city smart spaces, intimacy, exposure, playful social touch.

## 1 Introduction

Can shared experience and dialogue on social touch be orchestrated in playful smart public spaces? 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 (Benford et al. 2012; Blast theory 2007; Gould and Sermon 2015; Lozano Hemmer 2001; Sermon 2014). In such digital interactive art, social playfulness has been pursued through design of sensory disruption to evoke ambivalence, immersion and reflection (Benford et al. 2009; Kwastek 2013). New haptic and visual connections are explored, in physical and virtual entanglement. (Gsoelpointner et al. 2016).

This chapter explores self- and social touch in such smart playful public spaces. In a series of orchestrations known as ‘Saving Face’ (Lancel/Maat 2012) (Fig. 1), in Beijing, Utrecht and Berlin/Dessau, participants’ sensorial experience of self-touch is disrupted, re-orchestrated and shared with the public. These orchestrations are purposefully designed to create a radically unfamiliar sensory synthesis to disrupt the perception of ‘who sees and who is being seen, who touches and who is being touched’. Participants playfully ‘touch themselves and feel being touched, to connect with others on a screen’. Participants are exposed, their intimated experience made visible to others in real life and on the screen and shared in public dialogue.

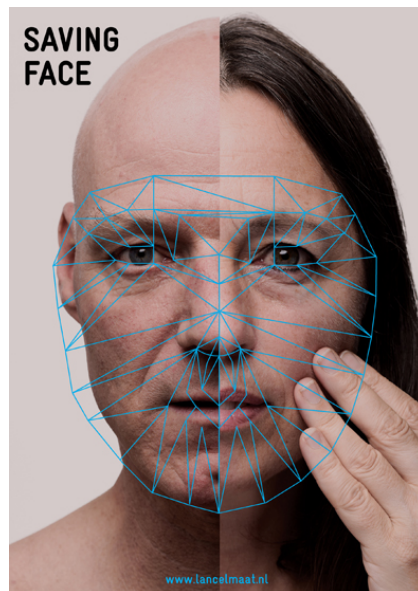


Fig. 1: Saving Face. Promotion Photo © Lancel/Maat and Studio Matusiak 2015

## 2 Related Work

In smart city public spaces, smart systems have been designed to monitor city inhabitants, to shape cities in terms of efficiency, safety, health and commercial interests (Nijholt 2018). City inhabitants are connected to globally distributed networks and complex technological systems (McQuire 2008a). Information from urban screens, sensors, social platforms and apps, is collected and processed by different organizations and authorities for different purposes. This information is for example used for scanning and profiling, to monitor and coordinate activities within a city, for purposes including traffic management, crowd control, spread of epidemics and security.

Systems are also, however, being designed to enable city inhabitants to monitor the city themselves, to share their experience of social, cultural, ecological and economic developments of their city (Nijholt 2019; De Waal 2017). The concept of Playful Cities builds on the second type of system - systems in which the citizen is “in control”. New types of social interfaces and connections, with different levels of public exposure and connection, are currently being explored in public digital art practice.

In such artistic interventions, smart city technologies are purposefully deconstructed and re-orchestrated enabling participants to play and rethink emerging social connections, relations and encounters (Pop 2016; Struppek 2007; McQuire et al. 2009). Participants can, for example, play with cameras to visually expose and ‘mirror’ themselves, their behaviour and movements on the screen. Simultaneously, they ‘transform’ themselves into ‘digital others’ (Verhoeff 2016), exposed on the screen, to be explored as part of a hybrid physical and digital reality (Blast theory 2007; Chomko and Rosier 2014; Ga 2004; Lozano-Hemmer 2001; Sermon and Gould 2014). The mirroring screen, in fact, facilitates both public communication and shared reflection on social connections in the smart public space (Mul 2009; Verhoeff 2016).

In such artistic interfaces, direct ‘face to face’ connections are disrupted and re-orchestrated. Physical and virtual presence, familiarity and unfamiliarity, predictability and unpredictability, seriousness and fun are combined, to evoke individual and shared experiences based on ambiguity. This ambiguity, in turn, provokes reflection and interpretation (Benford and Giannachi 2012; Gould and Sermon 2015; Kwastek 2013). Interface design for incomprehensibility and unpredictability, described by Reeves (2005) as ‘magical’, invites and entices participants to engage in playful experimentation (McQuire 2008b).

Ambiguity is also leading in new types of artistic interfaces and orchestrations that are currently being explored in experimental environments, for new digital synaesthetic syntheses of touch (Gsoelpointner et al. 2016). Familiar visual, haptic and auditory relations are disrupted and re-orchestrated to support ambivalent perception of social touch and experience of being immersed. While ‘social’ or ‘interpersonal’ touch design of remote, prosthetic and multi modal interfaces often focus on efficiency, automatiza-

tion and direct user experience (Huisman 2017)<sup>1</sup>, these artistic interfaces explore intimacy and reflection, as part of connecting through touch.

Screen based interfaces, for example, that expose the intimate character of social touch between participants, or between performers and participants, have shown to effectively evoke spectators' emotional reactions (Lancel et al. 2018, Verhoeff 2014). Types of intimate experience that are explored in this context include telematic haptic experiences of holding and caressing the body to evoke social affection (Cillari 2006-2009; Lancel/Maat 2009, 2016; Vlugt 2015).<sup>2</sup> Examples of mediated experience of touch that evokes confusion between self and others in merging realities have been orchestrated by CREW (2017) and Lancel/Maat (2009).<sup>3</sup> In these artistic orchestrations, the spectators' perception, of actually seeing others in this context touching each other or themselves, or seeing to be touched, is explored to resonate social empathy and connectedness, as an embodied experience (Martin 2018; Ward 2018).<sup>4</sup>

In such artistic orchestrations, participation is often facilitated by artists guiding participants through different 'stages' of 'intimate aesthetics' (Loke and Khut 2014) or 'interactional trajectories' (Benford et al. 2009), including stages of engagement, explanation, facilitating (embodied) experience, forms of debriefing or sharing interpretation (Fosh et al. 2013). Both facilitation by artists and witnessing by spectators are integral components of such orchestrations, enabling participants to share an intimate experience, through aspects of self-disclosure, vulnerability, physical proximity and witnessing, (Lomanowska and Guitton 2016; Verhaeghe 2018).<sup>5</sup>

Touching another person is an affective and powerful gesture that can support affective communication for social connections, intimacy and well-being (Van Erp and Toet 2015, Price 2018). This chapter explores the design of artistic orchestrations for shared intimate, social touch experience in public spaces. These artistic orchestrations, mediated by technology, are designed to be playful and immersive.

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<sup>1</sup> Emerging research includes remote, prosthetic and multi-modal interfaces for touch practices between humans, virtual agents, robots (Van Erp and Toet 2015, Huisman 2017).

<sup>2</sup> Research on experience of affective touch using vibro-tactile technologies showed that telematic, haptic experiences of slow (1–10 cm/s) gentle stroking of the body, such as caressing, are associated by participants with experiences of affection (Huisman et al. 2016).

<sup>3</sup> These works can be related to the facial illusion experiment, in which acts of touching a participant's face are mirrored real-time in acts of touching other peoples' faces, visible on a monitor in front of the participant. As a result, afterwards, participants confuse their own faces with faces that were touched, visible on the monitor (Aldhous et al. 2017; Tajadura-Jiménez et al. 2012).

<sup>4</sup> Related to this artistic research, mirror neuron brain activity while seeing others (painfully) being touched have shown to evoke participants' sensory, social and empathic connections and vicarious perception (Ward 2018).

<sup>5</sup> Engineering discomfort within public performance, of intimate social touch experience, has shown that participants need to know that they can leave at all times (Benford et al. 2013).

### 3 Artistic Motivation: Caress to Mirror and Merge

This section describes three orchestrations of an artistic intervention designed to facilitate social touch in public urban spaces from the perspective of the artists Lancel and Maat. The orchestrations of Saving Face (Lancel/Maat 2012) have been performed across the world.<sup>6</sup>



Fig. 2: Participants caress their faces in Saving Face orchestrations at Festival aan de Werf Utrecht 2012 (NL) and at Rijksmuseum Amsterdam (NL) 2013. © Lancel/Maat

#### 3.1 Design Goal and Introduction on the Artists' Research on Mediated Touch

In much of their work, Lancel and Maat orchestrate novel affective, haptic connections between participants, to relate individual participants to others in public, digitally distributed environments. In these orchestrations, participants relate to others on electronic screens through mirroring self-touch as a form of social, relational touch (Lancel/Maat 2000-2019), through unique syntheses of ambiguous disrupted sensory connections.

The design goal of Saving Face is to invite participants to experience shared social touch in public space of merging realities. Ambiguity is created by disrupting direct sensory connections while synchronizing participants' caressing actions in relation to the screen.

To explore these aspects of shared experience of social touch, orchestration 1 explores the question: 'Can shared experience through participation in playful social

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<sup>6</sup> Orchestrations of Saving Face were shown at 56th Venice Art Biennale - China Pavilion 2015; Connecting Cities Network Berlin 2015; Museum BCAC Beijing 2016; TASIE 3rd Art and Science Exhibition and Symposium Beijing 2012; Festival aan de Werf Utrecht, Netherlands 2012; Holland Festival / De Balie Amsterdam 2015; 'Play Perform Participate' University Utrecht 2015; ISEA Istanbul & Istanbul Art Biennale 2011; European EIC ICT labs: 'Mediated presence group' 2012; Conference & Masterclass 'Wireless Stories' 2012.

touch be orchestrated in smart public spaces?', orchestration 2 explores: 'Can shared experience through dialogue on playful social touch be orchestrated in smart public spaces?' and orchestration 3 focusses on the question: 'Are shared experiences through participation and dialogue on playful social touch be orchestrated in different cultures?'

### 3.2 Saving Face: A Description of Artistic Orchestration

Saving Face is a 'city interface' designed to provoke social engagement and reflection in smart city public spaces, through social touch as play. In three, multi-modal orchestrations (performance installations), participants are invited to feel, see, touch and share an experience of shared touch, as shown in Fig. 2.

In front of a city public screen, participants caress their own faces, to connect with others in the physical public space, on the public screen and in the digital network, guided and facilitated 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 acquired in the same way, together co-creating untraceable networked 'identities', as Virtual Personae on the screen. Each composed identity is saved in a user generated database, that may be printed, provokingly, for a Saving Face Passport.

Saving Face has been designed to orchestrate an immersive, engaging environment for shared intimate experiences in multi-modal, computer interaction through social touch. The touch interface connects face recognition technologies to an urban screen that functions as a shared facial 'mirror'. Participants explore acts of socially touching, as a process of interpersonal 'scanning' or 'profiling'.

Hosting is an essential part of the design, to entice members of the public to participate, to guide them through the orchestration, and to engage in discussions on their shared experiences facilitating individual and shared reflection.

### 3.3 The Design

This section describes the social and technological design of the artistic orchestration, while section 4 focuses on testing the technical and interaction design, in particular on synchronisation of disrupted sensorial connections. The technical, spatial and social design of the Saving Face orchestrations are depicted in figure 3.

*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), connected to a city public screen (B).

*Socially*, the interface invites participants to interact with each other in one of 3 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<sup>7</sup> (1), people from the public

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<sup>7</sup> The Actors' participation exposed to the Spectators can be described as 'performative'. Instead of referring to the notion on *performance* as a form of 'role-playing', *performativity* is,

are invited to caress their faces in front of the camera and publicly ‘paint’ their portraits on the city public screen. They then can 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 public screen. Spectators (3) view from a distance (and can become Actors themselves).

Aspects of Virtual Personae (2) and Hosting (C) are described in the sections below.

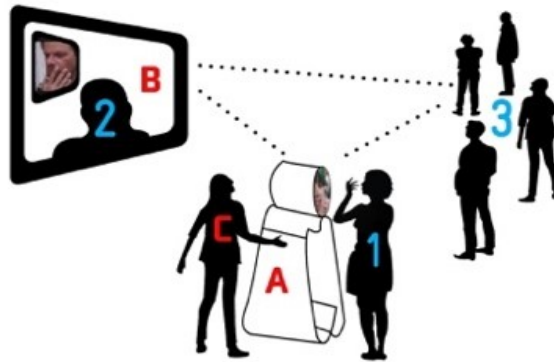


Fig. 3: Spatial model of Saving Face © Lancel/Maat and Studio Matusiak 2015.

A) Aluminium City Sculpture (Camera, face recognition technologies), B) City Public Screen, C) Host. (1) Actor, (2) Virtual Persona, (3) Spectators (potential Actors).

### 3.3.1 Virtual Personae

The merged portraits are described to participants as Virtual Personae (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.

The Virtual Personae emerge and are visualized from all Actors’ caressing gestures, 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 (Fig. 4).<sup>8</sup>

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in this context, considered to be a repetitive act designed for public spaces, to share reflection and social engagement (Butler 1990).

<sup>8</sup> 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.

When no Actors participate, the Virtual Personae morph with portraits in the database through auto-play, visually displaying the process of merging with others on the screen.

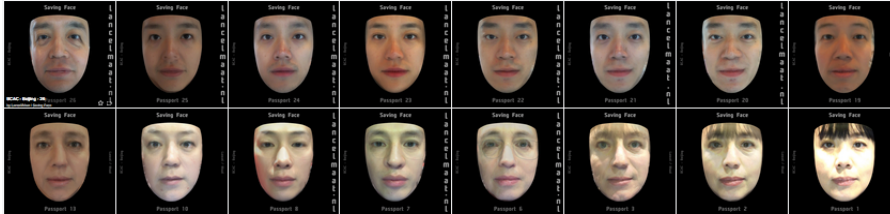


Fig. 4: Excerpt of online, generative database collection: merged portraits ('Virtual Personae')<sup>9</sup>

## The Host

A *Host* (C) is part of the designed orchestration, often performed by the artists or by volunteers. The Host explains a) the aim of the orchestration to explore social engagement through mediated touch and b) physical interaction. The orchestration is explained to people using words such as 'touch', 'digital', 'mobile phone', 'see', 'connect', 'meeting', 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, ensuring a safe space for concentration when necessary and d) engages in dialogue with participants afterwards. The Host mediates between physical and virtual presence, between public space and intimate space. The Host, in fact, mediates the mediation.

## 4 The Design Process: Exploration of the Effects of Technological Design Choices on Participant Experience.

Technical and interaction design tests are described below in detail. Different aspects of the design of Saving Face were implemented and evaluated in different tests to synchronize participants' caressing actions in relation to the screen.

<sup>9</sup> 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 Test 1: Face recognition and merging: Forms and Faces**

During the first studio test, open source face recognition technology (McDonald, Saragih) was used to merge different portraits into a Virtual persona. However, as the shapes of different participants' faces are never equal in size, the merging processes often resulted in Virtual personae with facial mismatches. As a design solution, software was designed to detect facial elements (nose, eyes and mouth) as points of reference. These points of reference are used to place elements on top of each other to subsequently, average out the differences between shapes of faces, such as wide and long faces. This design solution most often works well, resulting in coherent Virtual Personae portraits.

#### **4.2 Test 2: Face recognition and merging: Skin Colour**

During the second studio test, 5 participants with different skin colours were asked to caress their faces, to acquire portraits that were then merged. As the merged portrait (Virtual persona) is built from fragmented parts of the face that have been touched, the merging process resulted in what can be called a 'fragmented colour field', instead of a coherent portrait. Again, averaging provided the solution: weighted averaging of skin colours favouring the colour in the last portrait.

#### **4.3 Test 3: Portrait Appropriation (A)**

During the third studio test, participants were asked whether they felt related to the merged portrait (Virtual persona) on the screen, to which all previous portraits (including their own) contributed equally. Participants did not relate the effect of caressing their faces with the resulting portrait on screen, not recognising themselves as expressed by statements such as: "I believe the portrait is a result of my caressing acts and the emerging traces. But the resulting face has nothing to do with me." and "The interaction was mine, but that portrait is weird." The final merged portrait (Virtual Persona) was rejected by most as a self-representation. The design of the interface was adapted to enhance the Actors' visual self-recognition in the merged portrait on screen, through weighted averaging and tested in studio test 4.

#### **4.4 Test 4: Portrait Appropriation (B)**

During the fourth studio tests four participants tested a new version in which every layer of the merged portrait (Virtual Persona) contains 50% of the caressing participant, 20 % of the previous participant and 20 % of the second but last participant. The last 10% is based on the "average" participants' portrait. As a consequence, the portrait shows some resemblance to the actual participant. From that moment on participants appropriated the portraits, expressed in words such as: "I felt my face when making this

portrait and now, in a way, it looks like me”, “I made this, it doesn’t really look like me but it must be me” and “I caressed my face, it is me.”.

#### 4.5 Test 5: Studio User Test for Relation with the Screen (A)

During the fifth studio test, 11 participants were asked to caress their faces in front of a camera and screen in different roles – as Actors and as Spectators. After their acts of caressing, Actors described unfamiliar, embodied experiences, for example “It thrilled me. I could feel my face appear on the screen”, “This is weird, the softness of touching feels different”, “It feels as an extended touch.” However, Spectators surrounding the Actors seemed to lose interest fast. They stated that “It is nice to do it yourself but not special to watch for a long time” and “I found it special to look at the person carefully caressing his face, but the emerging picture on the screen did not directly relate for me to the caressing gestures.” Based on these reactions, the design was adapted to include a real-time ‘mirror-image’ of the caressing Actor next to the emerging Virtual Persona on the screen and tested in the following tests (Fig 5).

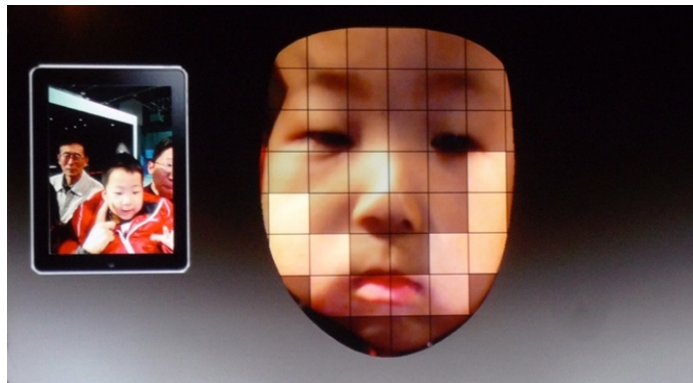


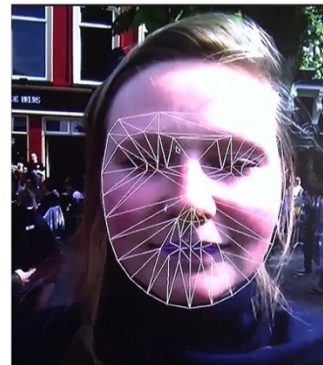
Fig. 5: Mirror-image of caressing participant visible in the inserted screen (left in the screen), while his caressing acts are lightning up in his portrait (right). © Lancel/Maat (2012)

#### 4.6 Test 6: Studio User Test for Relation with the Screen (B)

During the sixth studio test, four participants tested the new version, in which a ‘mirror-image’ of the caressing Actor was inserted on the screen as shown in Fig 5. In this inserted image, both Actors and Spectators could see themselves and each other in the same physical space that was simultaneously represented realtime on the screen. As a result, Spectators watched for a long time while talking with each other. Their gazes shifted between watching the caressing Actors and the screen.



1. Actors arrive at the screen, watching a Virtual Persona.



2. (left) The Actor's photo portrait is made, visible on the screen.

3. (right) A face recognition technology grid is layered over the portrait.



4) Participants caress their faces (left). On the screen (right), the facial parts that have been caressed become visible. In an insert screen, the Actor's face caressing gestures are real-time mirrored.



5) Actors can choose to 'save' their facial parts to be 'merged' with facial parts of previous Actors into a new Virtual Persona on the screen.

Fig. 6: Performative actions in the Saving Face interface. Still from demonstration video.

#### **4.7 Test 7: Spatial relations between Sculpture, Screen and Participants.**

The seventh test took place outdoors and focused on the position of the sculpture in relation to both the screen and participants' engagement. The effects of the sculptures' different positions, at various distances and visual angles to the screen, were explored. If both the act of caressing and the screen cannot be seen from the same position, participants (Actors and Spectators) show less engagement and connection with the merged, Virtual Personae on screen – they seem to 'lose touch' and leave.

As a result, the design choice was made to position the sculpture and the screen in such way that participants can see both from one place.

#### **4.8 Test 8: Demonstration video of Performative Interaction Flow**

In the eighth studio test, a demonstration video (Fig. 6) was made to explain how the orchestration has been designed, to be viewed before a performance takes place, to trigger participant imagination and interaction.

The performative actions implemented in the final design of the orchestrations, its actual performance and portraits, are explained below in the next section.

## **5 Saving Face: Three Orchestrations in Public Spaces**

This section analyses three Saving Face artistic orchestrations to answer the question: 'Can shared experience and dialogue on social touch be orchestrated in playful smart public spaces?', each focusing on one of the three questions presented in section 3.3

### **5.1 Research Method**

This section describes and analyses the three artistic orchestrations described above to explore the effect of the interface design choices on the experience of shared social touch following a research through design methodology (Zimmerman and Forlizzi 2014). Three sources of information are analysed 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.

## 5.2 Orchestration 1: Festival aan de Werf, 2012, Neude, Utrecht (NL)

Orchestration 1 took place in the Netherlands in the lively city centre of Utrecht during the 10 days art festival “Festival aan de Werf”. The specific research question on which this orchestration focusses is: Can shared experience through playful participation in social touch be orchestrated in smart public spaces?



Fig. 7: Participant caressing her face in Saving Face orchestration 1. Festival aan de Werf, Utrecht (NL) © Lancel/Maat (2012).

### 5.2.1 Results

The Host stands near the sculpture and observes the public stopping and viewing the orchestration from a distance. When portraits emerge on the screen as a result of caressing, they show interest, come close and ask the Host to explain what’s happening. They express their interest and amazement with words such as: “This is magical! Can I appear there?” or “Can my face be there?”. Many first watch between 10 and 30 minutes, before participating, although some come back the next day to participate.

The Host also observes how Spectators turn to the screen, look back at the caressing act and back to the screen again, relating the caressing gestures and the Virtual Personae on the screen, immersed in a disrupted, two-fold gaze. They stay between 5 and 30 minutes watching and often take pictures of the screen after an Actors’ portrait has merged into a composite Virtual Persona.

The Host observes that once a Spectator decides to become a caressing Actor, more follow, similar to what is called ‘the honeypot effect’ (Wouters et al. 2016).

Having decided to become a caressing Actor, standing in front of the screen (Fig. 7), many Actors express a feeling of nervousness, and wary about caressing in public. In

some cases, however, participants expose their caressing gestures in what can be called a ‘theatrical’ manner, mostly when friends are around.

A feeling of nervousness, however, is more common, as expressed by a participant to the Host: “Do you think I would succeed to do this?” before participating as an Actor, or as observed, when a woman standing in front of the screen brings her hand slowly towards her face, almost touching her skin. She suddenly stops to turn to her friend behind her, who smiles while nodding her head. Then, carefully, the woman touches her face and starts caressing. Another Actor first touches her face and then stops, giggles and tries to push forward a friend. Then she starts again, caressing her face in a slow, concentrated and precise manner.

In two sessions, a student explores the effect of keeping his eyes open or shut when caressing his face, leading to what he expresses as “I discover the machine as part of my imagination while I feel myself caressing my own skin”. In another case, three men have a long discussion with the Host after which they decide to not participate and leave. When after a few minutes, one comes running back, the others follow and surround him closely. With their bodies encircling them, they isolate him visually from the surrounding public, while he caresses his face.

In all cases the feeling of discomfort seems to disappear once Actors are absorbed in the interaction between themselves and the screen, losing touch with their surroundings. The Host invites Actors to caress their own faces: ‘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 recordings capture people slowly and intensively caressing their faces, again and again in many ways of caressing over time: Actors show body language of immersion, intensity, alienation, stillness, and unfamiliarity. Their faces express disbelief, pleasure, wonder, joy, concentration. Some Actors do not look at the screen in front of them while touching, but follow their own caressing hand from the corners of their eyes.

Instead of caressing, some mimic putting crème on their faces or ‘shaving’ 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.

Actors seem eager to be exposed in a Virtual Persona once they have overcome their nervousness. They sometimes caress each other’s faces, co-creating the shared Virtual Personae. Video recordings show, for example, a child caressing the face of her father, tracing his face with her finger. He then caresses the face of his child and her mother, after which the mother caresses the father’s face. A group of six women friends all caress each other. Furthermore, the Host observes that many Actors come back to merge with friends and family, to embrace the visual effects and co-creation over time. For example, a girl having participated once comes back the next day with her parents and her brother to co-create merging portraits as a family.

In another case, three young men caress each other’s faces. 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. Although starting the caressing act as instrumental to surprise his daughter, the Host witnesses a transition to a shared experience, of exploring and discussing the feeling and effects of the unfamiliar orchestration.

In a few cases when no Spectators are around and exposure (of their caressing acts) is not part of the interface, actors describe the experience of caressing as purely instrumental to produce a portrait on the screen.

In dialogue with Actors and Spectators, after the experience of caressing and rendering a Virtual Personae, discussions range from individual experience to more general discussion on the ‘use of social media’ and about the ‘difference between local embodied connections and ubiquitous digital connections’. These hosted dialogues, in which individual experience of ‘self-touch for social-touch’ within the orchestration are explored, are focus of the second orchestration.

### 5.2.2 Discussion

The multi-modal, socio-technological synthesis is activated by a Host, Actors and Spectators. Exposure of the intimate character of the self-caressing act incites shared experience and participation. 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 wonder. Even when acts of intimately caressing result in merely ‘losing touch with surrounding Spectators’, Actors still need the exposure and witnessing presence of the Spectators’ gazes around them, to experience their gestures as socially engaging. Co-creation of the Virtual Personae on screen incites participation.

The unfamiliarity with the role of caressing creates a safe space to embrace interdependency, experiment and sharing conversations both with the Host and Spectators around. Participants share expression of reflection among each other, to accompany each other when caressing and seduced by the unpredictable, exposed outcome of merging portraits. The next orchestration focusses on the hosted dialogues.

### 5.3 Orchestration 2: Connected Cities Network Berlin: Dessau, 2013.

Orchestration 2 was presented<sup>10</sup> during 2 days from late afternoon till midnight in between Dessau's historical Bauhaus buildings. The sculpture was positioned to mirror its silvery aluminium in the fading daylight, seemingly floating without gravity, connected to the digital network. Actor's acts of caressing were projected on a very large wall (instead of an electronic screen as in orchestration 1), as shown in Figs. 8 and 9, in high quality. A device showing the video demonstration described above in section 4.8 was implemented in the sculpture (an extension of orchestration 1), showing the procedure and participants reactions, to explore whether this would stimulate agency to use and play with the interface with and without a Host.

In this context, hosting of dialogues was explored. Participants were invited to discuss their experiences and imagination of touching their faces and the influence of technology in creating their mirror image and of sharing the mirror-image with others. Furthermore, personal, embodied appropriation of the digital mirror images on the screen that are merged with images of previous participants are discussed.

This second orchestration addresses the question: Can shared experience through dialogue on playful social touch be orchestrated in smart public spaces?



Fig. 8: Orchestration 2 of Saving Face. Image by Ruthe Zunz © Lancel/Maat, 2013.

<sup>10</sup> Presented by Connecting Cities Network, European infrastructure of urban screens and media facades for artistic content, <http://connectingcities.net/>, last accessed 2019/2/27.

### 5.3.1 Results

Over 130 people participated over this 2 days period, often together with friends or family. As part of the orchestration, after participation, most Actors are asked by the Host to reflect and answer questions about their experiences and emotions. Often, Actors express that they are fascinated by the experience of caressing their faces and that they have never had an experience like this before. The experience of touch in public space is often stated to be a totally different experience, described as “disturbing” involving co-location of oneself”. They often state 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. 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.” Another Actor stated that he felt he was giving away a piece of themselves to a ‘digital grid’.

Furthermore, the Host inquires whether Actors embrace the Virtual Personae as a mirrored self-image. Actors tell the Host that they have mixed feelings about this image, for example by stating: “I think it is me. Yes, maybe. I was here. It must be me”, “These are my eyes, but whose mouth is that?”, ‘Yes, a technological but sensitive me”, “It could be family”, “No, I never look at me like that”, “Yes but alienating”. To answer the question whether Actors feel the Virtual personae have been created by the machine or by themselves, they often describe a form of relation with the machine through statements such as: “The machine is part of me”, “This is technology in a sensitive way”, “The machine changed my face”, “The machine was scanning me”, “I feel merged with other people”, “It feels only natural”.

The Host observes that Spectators not only watch the Actors’ caressing gestures and the emerging Virtual Persona on the screen, but also listen to the dialogue between the Host and the Actors after fact. In contrast, if no dialogue takes place, Spectators seem less involved.

In this orchestration, as stated above, the influence of the Host was explored. The demonstration video (described in section 4.7) itself was sufficient for participants to autonomously use and play with the interface. Participants even ‘teach’ each other how to use the interface and play. However, without guidance and dialogue with a Host, the emphasis shifts from concentrated and haptic exploring, to ‘fun’ forms of exposure, such a making weird and funny faces, exploring technical possibilities and limitations of the face recognition software.



Fig. 9: Orchestration 2 of Saving Face. Participants exploring during 'Connecting Cities Network' at Dessau/Berlin. Image by Ruthe Zunz © Lancel/Maat, 2013.

### 5.3.2 Discussion

Orchestration 2 explored the influence of the Host on the shared experience and dialogue on social touch. In dialogue, the Host provokes Actors to describe their experiences of the socio-technological synthesis that include disrupted self-touch through technical mediation. All participants try to remember and describe their embodied sense of mirroring versus the scanning, tracing and emerging information on screen. Furthermore, they describe their relations to the Virtual Persona, that emerges through intimate acts of caressing and which they visually share with previous participants. The visual-

haptic experience of *caressing-and-feeling-caressed* intertwined with visually emerging on screen was described as unfamiliar by all participants. Actors take time to explore new words, while stuttering and remembering, expressing new images and emotions.

Shared experience for Spectators not only emerges from exposure of caressing and emerging Virtual Persona on the screen, but also from the dialogue between Host and Actors and between participants. Without the dialogue with the Host, Actors and Spectators tend to focus on “fun” forms of exposure and less on exposure of their intimate acts of social touch.

#### 5.4 Orchestration 3: Beijing Culture and Art Centre (BCAC) 2015

In Beijing, orchestration 3 was performed in Beijing’s Culture and Art Centre, in a historical *hutong* courtyard building, in one of Beijing’s old and crowded streets, for a period of 10 days.<sup>11</sup> The sculpture (A in fig. 3) was positioned in a glass architectural space between the crowded street and the first museum courtyard. The sculpture and the screen were positioned between these two glass walls, as shown in Fig 10.

The urban screen was two-sided, to allow the virtual persona to ‘gaze’ in two directions, both indoor and outdoor. The Virtual Personae gaze at both the outdoor passers-by in the street and to visitors in the indoor gallery in the historic courtyard.

To incite involvement and support dialogue, a text describing how to participate, is made available in both English and Chinese. The text is accompanied by a project description and an invitation to participate. It is placed on the glass window to read from the outdoor street and on the walls in the indoor gallery:

1. Can I touch you online?
2. Come close
3. Caress your face
4. Merge & Mirror

The role of the Host is again subject of study. The initial role of the Host is performed by both the artists and by the Art Centre’s staff. This is observed in cases by the Host standing on a distance. Orchestration 3 addresses the question: Are shared experiences through participation and dialogue on social touch be orchestrated in smart public spaces in different cultures?

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<sup>11</sup> The orchestration was presented as part of the opening ceremony of the BCAC Beijing Culture and Art Centre.



Fig. 10: Participant caressing his face in Orchestration 3 at BCAC, Beijing. © Lancel/Maat, 2015. The text of the orchestration is exposed on the walls of the gallery and on the glass windows.

### 5.4.1 Results

On the opening afternoon, young designers, cultural entrepreneurs, staff-members of art institutions and sponsors crowd the space indoors and outdoors. The outdoor street is crowded with businessmen, neighbourhood inhabitants, school children and shop-owners walking, on bikes and on scooters. The air is heavy with pollution, many people have used thick facial creams and face protecting and oxygen filtering mouth caps.

The Host observes that many people watch the performance from outside through the window, while pointing at the text on the window. Instead of watching the screen, Spectators endlessly watch specifically the act of caressing, both from inside and outside the glass window. They watch the caressing gestures in the orchestration's technological system and take pictures.<sup>12</sup>

There is closer interaction between Spectators and Actors compared to orchestration 1 and 2, in Beijing. Spectators gather closely together around the interactive sculpture and around the caressing Actor, watching the caressing acts and following the emerging digital traces on the screen. Together they wait for the unpredictable portrait on the screen to emerge, helping each other to participate, making pictures and posing for pictures. They point at the sculpture and explain to each other how it works.

Moreover, compared to orchestration 1 and 2, the Host is approached by more Spectators for additional information and for serious discussion. The title 'Saving Face' is often subject to discussion, as it is stated to be a somewhat disturbing title, expressed with words such as: "Are you aware what that means for Chinese people?" or "Do you know that 'saving face' is very important to Chinese people?" Discussions focus on 'hiding behind a social mask' and aspects of 'hiding' and 'shaming' mechanisms when meeting each other, both on social platforms and in the city.

Whereas in previous orchestrations the Virtual Persona was referred to as someone that may resemble the Actors themselves, in orchestration 3, Spectators describe the Virtual persona as someone they socially relate to, for example as "A friend", "A sort of relative", "Someone I might know".

The artists hosting the performance are assisted by a Chinese speaking Host. Dialogue evolves between Actors and the artists-Hosts or the Chinese speaking Host. The Host observes that once Actors start caressing they keep concentrated while others watch and talk. Most Actors tend to caress their faces very fast or tap them softly, carefully. When the Host suggests that they caress their faces 'as a lovers' face', they try to adhere. For example, a young woman who hardly actually touched her face, changes her caressing rhythm into long, slow strokes. Another woman who initially tapped her

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<sup>12</sup> While the opening day is very busy, the days after a few people step into the gallery. In the streets, throughout all days, people keep stopping to read the text on the window, watch the video documentation and to watch the screen with the transforming Virtual Personae.

face, seemingly afraid to remove her make-up, changed her gestures into slowly outlining the contours of her face. A third Actor, a middle-aged man, touched his face for a long time without moving, watching the still screen responding his absence of moving, until being explained to move slowly.

After caressing, Actors express wonder, for example stating that “Caressing my face is a nice feeling” and “I never touch my face consciously, only for creaming” and “I only touch my face to remove pollution”. Many times, after their caressing acts, Actors wanted to be reassured by the Host that the Virtual Persona on screen will keep transforming, without a final face that might be identifiable.

The use of printed texts and questions to incite participation appears to be effective, for all surrounding public. The Host observes people reading the texts before participating. Although stepping out of social comfort is experienced as a challenge, it was well received and participated. Actors still discuss with the Host but independently start the performance, and, if necessary, help each other to perform. Younger people find it easier to start independently from a guiding Host.<sup>13</sup> Exposure of individual dialogue between Host and Actors is less effective compared to orchestration 1 and 2. The Host finds that in dialogue with a group of people, more and more people will participate.

#### 5.4.2 Discussion

Although an act of caressing in public can be considered as embedded in cultural meaning, caressing in the Saving Face orchestration opens playful participation and dialogue in different cultures. Moreover, the combination of unfamiliar caressing and technology appears to be a safe seducer for individual reflection on historical and social interdependency and coherence. Overall, exposure of caressing and dialogue are observed as more communal activities compared to orchestration 1 and 2. People gather around the interactive sculpture, they stand closer to each other while caressing and communally discover how the interface works and teach each other. Exposure of intimacy of social touch in public space through dialogue emerged in collaboration between the Host and Spectators around. The resulting Virtual Personae on the screen are interpreted rather as socially relational than individually mirroring.

Dialogue happens within the socially gathering, with or without a host, slightly decreasing the importance of the role of hosting, especially in case of a language barrier. Moreover, the technical interface and performance of caressing is found to be more accessible when texts and questions are on the windows, especially for young people.

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<sup>13</sup> Due to this accessible character, the exhibition period was pro-longed.

## 6 Discussion and Conclusion

This chapter explores the design of three artistic orchestrations of Saving Face, for shared experience of social touch in smart public space. The effects of specific design choices are analyzed. Orchestration 1 explores shared experience through playful participation of social touching, orchestration 2 explores shared experience through dialogue on social touch and orchestration 3 focusses on participation and dialogue on social touch in different cultures.

New types of social interfaces, with unfamiliar, ambiguous and disrupted sensorial connections, are key to the Saving Face orchestrations. They enable embodied, emphatic relations with others through touch, based on the design of mediated 'self-touch for social touch'. This form of mediated self-touch disrupts familiar social, sensory relations between 'who you see, who you touch and who is being touched'. In all orchestrations, caressing has shown to evoke an intimate and affective social touch experience for co-located participants touching and spectators.

In these orchestrations, interaction is evoked between participants, in various time relations. Through acts of touch, participants synchronize ambiguous virtual and sensory connections. Synchronization is acquired by 1) perceiving all virtual and sensory connections from one spatial position and 2) co-creation of unpredictable merging portraits, to facilitate shared experience of social touch.

Staged dialogue with a host, as part of the orchestration, evokes shared experience and reflection for both Actors and Spectators. Orchestrations in different cultures showed that although participants explore and expose both caressing acts and dialogue, hosting needs to be adapted to differences of dynamics in individual or joint exploration. Alternative forms of hosting that enable permanent installation of the orchestration in city spaces are currently subject of research.

All three orchestrations of Saving Face, show that shared experience and dialogue on social touch can be mediated by playful smart cities technologies in public spaces, but rely on design of mediated, intimate and exposed forms of 'self-touch for social touch', ambiguous relations, exposure of dialogue and hosting.

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