

Can I touch you online?

Reshaping Touch Communication: An Interdisciplinary Research Agenda.

Lancel, Karen; Brazier, Frances; Maat, Hermen

Publication date

2018

Document Version

Final published version

Published in

Reshaping Touch Communication: An Interdisciplinary Research Agenda

Citation (APA)

Lancel, K., Brazier, F., & Maat, H. (2018). Can I touch you online? Reshaping Touch Communication: An Interdisciplinary Research Agenda. . In P. C. Jewitt, P. S. Price, P. K. Leder Mackley, D. G. Huisman, P. B. Petreca, P. N. Berthouze, D. Prattichizzo, & P. V. Hayward (Eds.), *Reshaping Touch Communication: An Interdisciplinary Research Agenda* CHI.
http://www.lancelmaat.nl/site/assets/files/1457/2018chi_montreal_lancelmaatbrazier_canitouchyouonline.pdf

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

Green Open Access added to TU Delft Institutional Repository

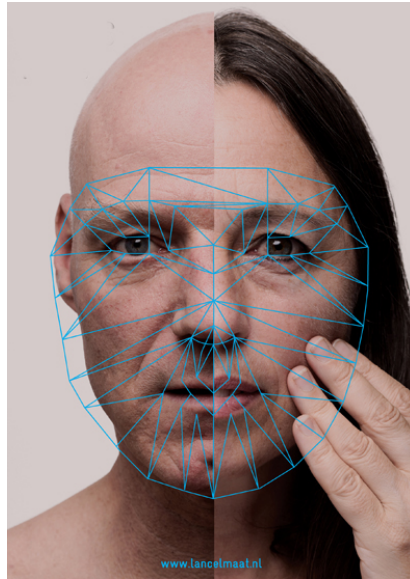
'You share, we take care!' - Taverne project

<https://www.openaccess.nl/en/you-share-we-take-care>

Otherwise as indicated in the copyright section: the publisher is the copyright holder of this work and the author uses the Dutch legislation to make this work public.

Figure 1.

Saving Face
Publicity Image
by Lancel/Maat
and Studio Matusiak.
© Lancel/Maat, 2015.



Karen Lancel, MSc
Delft University of Technology
Artist studio Lancel/Maat
Amsterdam, NL
lancel@xs4all.nl

Hermen Maat
Artist studio Lancel/Maat
Amsterdam, NL
maat@xs4all.nl

Frances Brazier
Systems Engineering Group
Faculty of TBM
Delft University of Technology
f.m.brazier@tudelft.nl

- License: The author(s) retain copyright,
but ACM receives an exclusive publication license.

Can I touch you on-line?

Abstract

This paper introduces art and research on disrupted, touch in networked environments in which realities merge. Aesthetic sensory disruption and haptic distribution are purposefully designed for reflection, in a new type of 'dialogue space'. The effects of embodied cognition, with respect to trust and experience, are explored in Artistic Social Labs (ASLs) designed to this purpose. Two ASLs are described in this paper.

ACM Classification Keywords

H.5.m. Information interfaces and presentation
(e.g., HCI): Miscellaneous;

Author Keywords

Performance interactive art, on-line touch, shared reflection and expression, mirror process, data environment, synchronization, sensory disruption and distribution, aesthetics of interactive art, co-creation, engagement, trust, digital art, playful environment, posthuman social construct, embodiment.

Research Websites

www.lancelmaat.nl
www.lancelmaat.nl/work/saving-face/
www.lancelmaat.nl/work/tele-trust/
www.participatorysystems.nl/

Figure 2.

Saving Face

Video stills of participants caressing their faces, Utrecht (2012), Amsterdam (2013).

Accessible at:
lancelmaat.nl/work/saving-face/

© Lancel/Maat, 2013.



Introduction

Touch, to Reflect on Trust

Today, interfaces for digital touch and haptic mirror-processes increasingly shape affective communication, social cohesion, well-being, agency and trust. Such interfaces merge various biofeedback processes simultaneously in on- and offline realities. Experiences of sensory connecting are disrupted and extended in time and space.

In these 'merging realities', people are no longer the centre of their own mirror processes. Instead, they meet each other with data as co-actors, while merging with technologies. What yet unfamiliar and imaginary awareness of touch and sensory embodiment emerges from such distributed mirror-processes?

This art and research focus on the design of interfaces, with which to explore the experience of sensory disruption in merging realities, with shared expression of reflection.

Can I Trust my Touch?

This paper focuses on the design of shared expression of reflection on networked touch. Shared expression of reflection, on networked touch and sensory embodiment, is fundamental to the social construction, of what can be called 'post-human embodied cognition and relations', as well as for future affective communication design and mirror-processes. (Butler, J. (1990).

To this purpose, 'Artistic Social Labs' (ASL) are designed with an international team and partners, presented and explored in multiple international art settings. An innovative, distributed haptic interface design for mirror experiences is explored, in particular in relation to embodied knowledge of co-located intimate touch.

This paper describes 2 ASLs that explore shared experience of mirroring and reflection through touching, between participants, and observers; in multi-modal orchestrations, in different contexts, as art and as scientific research.

Artist Motivation

Feeling Touched to Trust

Although networked media extend our bodies in time and space, experiences of touch are disrupted. In the ASLs, reflection on touch is designed based on aesthetic principles of sensory disruption (Kwastek, K. (2013). Sensory experiences of seeing and touching are connected in a new, distributed synthesis. Familiar relations between 'who you see, who you touch and who is being touched' are re-orchestrated: participants touch themselves to feel touched, while connecting with others on a screen.

The participants' slow, caressing gestures are mirrored on the public screen, intertwined with an intimate sense of being touched (by themselves). The slow act of caressing allows participants to concentrate on touch, as a haptic experience and as a movement, for intimate self-exploration in relation to technology.

Figure 3.

Tele_Trust

Waag Society 20019, Publicity

Image by Pieter Kers

© Lancel/Maat, 2009.

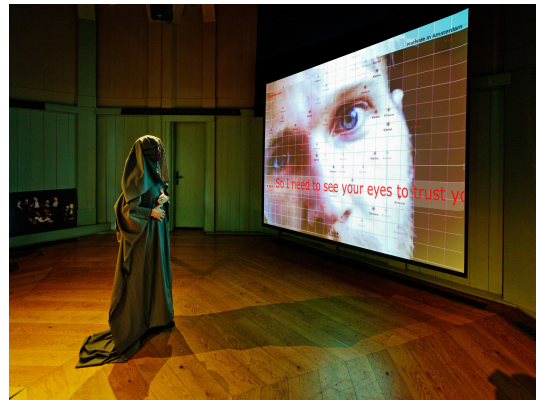
Figure 4 .

Tele_Trust

Interface DataVeil-Smartphone

Image by Lancel/Maat

© Lancel/Maat, 2009.



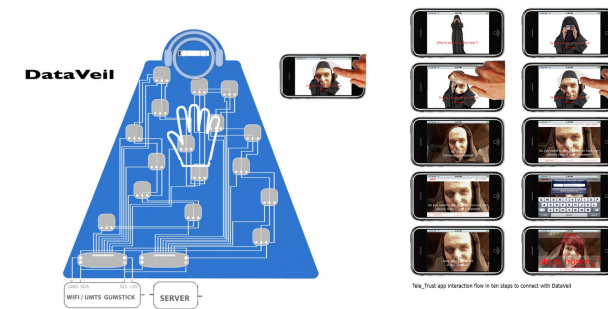
In public spaces, this intimate caressing gesture is staged. Participants share their intimate gestures with strangers. Acts of caressing socially inform an interplay between participants, observers and a virtual persona on screen. All members of the public are invited as co-researchers, to participate in a new type of 'dialogue space'. They share expression of reflection based on embodied cognition and on tacit knowledge.

Each interface has been designed to support collective reflection, through re-orchestration of social, technical and spatial interaction. They facilitate people to connect in tangible and virtual realities simultaneously.

ASL 1: Tele_Trust

Sub-question: 'Can reflection be orchestrated on touching, for people to mirror their tangible, physical presence in a digital network?'

A full body covering, artificial synaesthetic skin interface is designed. This DataVeil is One size fits All and Gender Neutral. Its' visual design is based on a monk's habit, a burqa and Darth Vader. In the Veil's smart fabric, flexible touch sensors are woven, to transform the wearer's body into an intuitive, tangible interface.



A host invites participants to wear the DataVeils. By caressing their data-veiled bodies interwoven with touch sensors, DataVeil wearers can connect to the smartphones of surrounding public.

Observers around can download the Tele_Trust app. When they caress their smart phone screens, they connect to the Dataveil wearers. Firstly, they 'unveil' the faces of DataVeil wearers on their screens. Secondly, they read a question: 'Do I need to see your eyes to trust you?'. They are invited to use their phones for a spoken statement to the DataVeils.

Through caressing their veiled bodies, DataVeil wearers listen to these statements, audible through their head-sets. Simultaneously, the statements become visible on a large screen in the urban space, for all to see.

ASL 2: Saving Face

Sub-question: 'Can reciprocal human touch be part of a networked reflection design?'

For this ASL, an open source, innovative multimodal, system of face recognition-, face merging- and generative database technologies has been designed and developed. The technical interface consists of an interactive, aluminum sculpture with a camera, connected to an urban screen.

Figure 5.

Saving Face
at Connecting Cities,
Berlin-Dessau-
Ars Electronica.
Image by Ruthe Zunz
© Lancel/Maat, 2015.



Participants are invited to caress their faces, in front of the camera and in this way to create their portrait on the screen. On the screen, their portraits first appear and then slowly merge with the portraits of previous visitors. Participants can then choose to save their portraits and merge them with the portraits of previous participants. Every merged portrait, or 'Virtual Persona', is saved in a generative database. Each new face-caressing gesture supports further merging over time. Communally, participants and observers perform in a ritualized production, which is described by Lancel/Maat as: 'Caress to Mirror and Merge'.

Current and Future research

Our research shows, that shared expression of reflection and dialogue, on distributed touch as a new form of touch perception, is possible. In the near future, industrial developments will provide new multimodal touch technologies, based on bio-feedback, such as Skin Sensors and Brain Computer Interfaces (BCI). These technologies will lead to new forms of distributed touch perception. Further research is explored by the authors, to understand future forms of distributed sensory embodiment and touch.

Acknowledgements

Lancel/Maat presented the ASLs in various public spaces internationally, in different cultural contexts, including:

- Venice Biennial 2015
- Transmediale Berlin 2016
- BCAF/BCAC Beijing Culture and Art Centre 2016
- ISEA 2011 Istanbul
- TASIE Art Science Museum Beijing 2013
- Connecting Cities Network/ Public ArtLab Berlin 2013
- Stedelijk Museum Amsterdam 2011
- World Expo 2010 Shanghai

The ASLs were developed with an international team of hard & software developers: V2_Lab Rotterdam; Mart van Bree; Sylvain Vriens; Matthijs ten Berge; Tim Olden. Thanks to Jason Saragih's open source Facetracker library.

We thank partners in research:

- Mondriaan Foundation
- Delft University for Technology,
Participatory Systems Initiative
- MediaFonds and Sandberg@MediaFonds Amsterdam
- NWO Netherlands Organisation for Scientific Research
- TNO Dutch Organisation for Applied Scientific Research
- University of Twente, Social & Affective Touch Group
- University Utrecht, Urban Interfaces Group
- Waag Society Amsterdam

References

1. Judith Butler. 1990. *Gender Trouble, Feminism and the Subversion of Identity*. Routledge Publishers.
2. Katharina Gsöllpointner et al. 2016. Digital Synesthesia, A Model for the Aesthetics of Digital Art. Edition Angewandte Austria.
3. Katja Kwastek. 2013. 'Aesthetics of interaction in digital art', MIT press.
4. Marc Hansen. 2006. *Bodies in code. Interfaces with Digital Media*. Routledge Publishers.
5. Caroline Nevejan. 2007. *Presence and the Design of Trust*. University of Amsterdam.
6. Nanna Verhoeff & Heidi Cooley, "The navigational gesture: Traces and tracings at the mobile touchscreen interface" in *NESCUS, Spring 2014_#Traces*, 2014).