

PERFORMING TOUCH

“Theory has only *observed* the world; the point is to *touch* it”.¹

1. Introduction

The first idea for this research came from my wish to ‘translate’ the book *‘Losing Touch. A Man without his body’*² in to an interactive performative experience. In this partly **autobiographic** book the leading character Ian loses cutaneous touch together with his movement / position sense or proprioception³ from neck to feet at the age of 19. He just wakes up one morning with the sensation of floating freely in space. After the initial feeling of dreamy relief, the ugly reality dawns upon him when he finds his whole body from the neck down turned numb. “Weird though this was, what was even odder was that he had no idea where his arms and legs were without looking. He was not paralyzed; his limbs moved, but he had no control over how and where they moved ... at this point, unable to feel or move, he felt completely disembodied, he had lost touch – literally – with his own body; if he did not look, he did not know it was there.”⁴ The story follows him, slowly coming to terms with his disability. He learns to move and walk, relying on sight and his other senses. These other senses help him to mentally ‘pre-think’ his actions and pre-count his steps and movements. As such he becomes a ‘robot’ that, before every action, needs to be (self) programmed on how to locate and where to position his limbs in order to do the most basic things like staying upright and walk. And, not being able to feel a sensation on the body, like weight or force, how can he teach himself to pick up a cup without crushing it?

All these physical (inter) actions Ian took for granted in daily life, need to be reexamined. How they were formally executed but also how they affected him; what did touching and moving his body through space used to evoke on a somatic, emotional and meaningful level?

The story of Ian made me wonder about contemporary questions concerning technology induced Touch. Ian learnt how to pre-think his ‘touching’ by relying on sight and other senses. However, actual haptic technologies (like our trembling mobile phone) influence our reaction to Touch, so how would Ian learn to distinguish between the symbolic value of technology-induced Touch and the inherent values of the human-to-human Touch? What if a similar sensation of touching (oneself) can be achieved via technology? As much of the ‘meaning’ of touch is culturally encoded⁵, can you teach somebody – or an AI - *how* to read and understand touch without being biased towards gender, age and background?

¹De la Bellacasa, P. (2009) “Touching technologies, touching visions”, *Subjectivity Issue* 28.

²Cole, J. (2016) *Losing Touch, A man without his body*, Oxford University Press.

³The sense of knowing where your limbs are in space and how to move them.

⁴Cole, J. (2016) *Losing Touch, A man without his body* (pp1), Oxford University Press.

⁵Think of our changing moral views on touching as a result of the #metoo discussion

I started to fantasize, would it be possible to let an audience experience, using wearable technology and inviting them to engage in interactive experiments, to first reset their senses (= the 'loss' of conscious touch(ing)) and from this point on lead them through a series of experiences, all focusing on their own body re-examining and re-establishing how to relate and react to Touch?

And to take this one-step further, how would our agreed-on coherent sense of self be influenced when our ability to consciously perceive / sense touch(ing) is replaced in space and time, fragmented and augmented by technological devices? It might stir us in the direction of professor Keltner⁶ approach to Touch, saying that our consciousness itself is 'exteriorized' and that we are alive in relation to others and the outside world, not in relation to some imagined inner self. Our Tactile experience is our primary experience of our minds. We live by feel.

For me the starting point of answering these questions lies into researching the technologies centered around touch and exploring artistic strategies to engage with these technologies in interactive, performative situations.

2. Relation to personal background

I see this research as the logical next step with regard to my artistic practice, that I describe in the book *Performance_As_Interface / Interface_As_Performance* (van der Vlugt, 2015, pp 13):

"As an artist I have been creating performances and interactive installations that enable the participant to experience how technological interaction is built and subsequently impacts our communication. What does it mean when the body gets extended, hybridised and delimited through technology? The participants are invited to alternate the position of performer and spectator, which enables them to unveil, sense and discuss actual emerging body concepts."

I have been inspired, influenced by and critically engaged with technological innovation for almost 15 years. The artistic works in this book were created in the period 2006-2014. A period of rapid changes looking at technology used for communication; it was the start of the massive use of mobile telephones, triggered by a booming Internet that led to the intensive use of social platforms. As a result, the sensorial body – except for our eyes staring at the monitor and our hands on the keyboard – was almost completely left out of Human Computer Interaction. For me however, having an embodied view on cognition and with a background in performance and theater, I felt it was necessary to put the body in the center of communication. To explore how this could be done, I specifically focus in the book on the - through my artistic practice assembled - requirements for interactive

⁶ Summary of quote by Dacher Keltner, in: Gnopik, A. (2016) "Feel Me, What the new science of touch says about ourselves", *Sensory Studies*, The New Yorker.

technological performative installations that aim for leading the attention back to the body, aiming for an audience to critically engage with technology.

Two of these design requirements are re-visited in this proposal. The first is the need for a haptic interface that requires the participant to explore and engage herself physically: to touch and being touched. The second is the need to address – bring to surface – certain aspects of our embodied cognition like preconceived expectations or image schemas⁷ (van der Vlugt, 2015, pp 18): what specific knowledge is meant here?

Now, in 2018, with innovation speeding up, making communication technology (even) more sensitive, wearable, intelligent, smaller and cheaper, I want to zoom in on our sense of Touch. So far, our tactility seemed to be relatively unexplored by technology, but this backlog is rapidly overcome as the field is conquered by the big industries. Now there is the Tesla Suit - the element missing when one wants to immerse in VR - a full body Suit that comes with haptic feedback, motion capture, climate control and biometric feedback systems⁸. Also in the fields of health and communication our tactility gets addressed; (wearable) devices that send touches, handshakes or even kisses⁹ over the internet or the care robots that caress the patient to substitute real human contact. The sex industries use haptic technologies to disembody our sexual organs; as the Real Touch¹⁰ combines a vibrator or masturbator with synchronized bodies executing sexual acts on online videos.

What normative models of bodily use are expressed and enacted in this haptic interfacing with media? Which “disciplinary knowledge formations, political parties, religious and cultural traditions, infectious disease authorities, immigration officials, and policy makers do not have a stake in, if not a measured answer to, this question?”¹¹

One approach to research this is to look at what language is used to ‘promote’ haptic technologies in various contexts, like industrial, educational or medical. “From the most sophisticated and specialized to the most banal gadgetry, the marketing of these developments uses exciting language that engages play, dexterity of manipulation, cultural imaginaries of affection, augmented or enhanced reality, experiences of sensorial immersion that mimic the real thing and promises of immediate connection.”¹² The inherent logical next step for me is then to question; how are (digital) media and its language reshaping our sensation of touch?

⁷ “Image schemas are used to structure higher levels of cognition: enabling the brain to categorize and assimilate both familiar and new experiences.” Van der Vlugt, M, (2015) *Performance As Interface*, Research Center HKU, ITFB.

⁸ <https://teslasuit.io>

⁹ https://www.youtube.com/watch?v=PspagsTFvlg&feature=player_embedded

¹⁰ <https://www.amazon.com/High-Tech-Interactive-Virtual-Masturbator/dp/B003LRZSOW>

¹¹ Barad, K. (2012) “On Touching (V1.1)”, Witzgall, S. (ed), *The Politics of Materiality*

¹² De la Bellacasa, P. (2009) “Touching technologies, touching visions”, *Subjectivity Issue* 28.

Professor Parisi¹³ states: nowadays technologies need to: “..give tactility a new utility in a political economy of sensations vital to a society of growing dependence on the efficient circulation of information through sensing bodies.” In other words, political and commercial parties influence and may even be dominant in what content 'a Touch' conveys. As our body is disciplined and trained through repeated interactions with these haptic technologies, I feel it's urgent to map the inherent narratives that are expressed and enacted through this interaction.

In my artistic works Touch has already been very present, moreover the need for a haptic interface to direct the participants attention to the body, is one of the requirements that was formulated as a conclusion. However in this earlier research, I didn't focus on how exactly this embodied sensation is influenced, is changed or supported by technology. By reading new texts, reciting and adding on specific parts of my own texts, I hope to deepen and broaden the acquired knowledge. In order to do this, I will critically explore the verbally and sensory communication that was generated in interaction with these kind of technological installations. As part of this enquiry I will re-use some of the technology (like the sensor suit) that was used in the installation *Series Patchmaker NO.1*, this time zooming in on the narrative qualities of Touch(ing) and the questions I now have formulated.

CASE STUDY / Series Patchmaker NO1, Marloeke van der Vlugt 1971.

In 2012 I made the performance installation *Series Patchmaker NO1*. In this performance installation the visitors were invited to communicate with me through Touch. As I was wearing a sensor costume, their touches were real time translated into light changes, projected video clips and audible audio fragments. I experienced on my body the immense variety of touches and my total reliance on my proprioception in order to physically respond in what I felt to be the appropriate manner to make 'real' contact. *As a result some participants later told me they 'experienced' their bodies as if they 'became' me.* Other ones had the impression that they were able to read my mind by touching my forehead, like this crawling under my skin. However, at several occasions I misinterpreted their touches, body posture or movement and as a response, turned around too abruptly or positioned my feet at the wrong place. Immediately participants expressed other behaviour and told me later they felt stirred in a certain direction, felt not 'seen' or even offended. I, on the other hand, had similar sensations, for instance when participants 'pushed' me around as if I was a robot myself or climbing on top of me changing me into a sex doll. Thinking of this experience I realized that the technology - the buttons, the accelerometer, the rubbing sensor – clearly evoked a specific focus and heightened awareness of 'touching'. However, the triggered lighting, video images and audio files gave these touches a narrative content. The installation provided a certain vocabulary of touch that could freely be explored but was *directed* by my, technologically induced, personal stories and interpretations.

¹³Parisi, D. (2018) *Archeologies of Touch*, University of Minnesota.

At that time, using sensor technology triggering touch(ing) on the body was fairly new and as a result this interaction raised immediate critical questions concerning power, trust, gender etc. Now our body is accustomed, disciplined and trained through repeated interactions with haptic technologies (think of touchscreens, the Apple watch or other wearable devices adjusting to your body temperature or correcting your yoga pose¹⁴).

Because of this training it has become more diffuse what 'norms and meaning' touch technologies are actually performing on and with the body. *Whose* touch is being made possible and why?

This underlines the urgency to explore what content, norms and narratives touch(ing) can trigger. Can touch itself convey a range of emotions? How can touch be guided over time? Can a range of touches create an artistic composition?

4. History of Touch Research

The following enumeration of the phases in the research of Touch is to underline the idea that Touch has been thoroughly reshaped by its repeated interfacing with science, technology and commercial parties.

The field of Touch has been actively researched from the 18th century on. The first research focus was triggered by the discovery of electricity. It was clear that only the human skin was able to register the charges of electric generators and batteries; no other senses were able to achieve this as precise and accurate as the skin. As a result the interest in the physical and psychological mechanisms of Touch was aroused and explored during the 19th century – with the intent of yielding objective scientific knowledge about the operation of the tactual senses. This culminated in the term 'haptics' as the 'doctrine of touch'. When most of the body was mapped in the laboratories, the question became if 'haptics' could be transformed into a new manner of communication (translating electricity into data). Newly invented machines were tested translating images and/or texts into taps onto the body. Touch was divided into its constituent parts and as such translated into language, as such it could only be read following a strict order and rules. Although many experiments were described as successful, this was only the case when the receiver was trained to understand how to translate the input into specific images or sentences. Alongside these developments the military gained interest in this research field as they understood that touching the skin was an endless and open 'arena of communication' that could be manipulated in a very discreet manner; the skin was hidden underneath the clothing but was always 'on'. Further more commercial, technological parties started to produce a demand and desire for touch – based interfaces as they were seeking to sell their new touchscreens and later on their technological sensorial enhancements. At first our sense of touch was kept limited to finger and hand¹⁵, but as technology progressed we now receive 'touch' on every

¹⁴ <https://www.racked.com/2016/7/20/12026574/haptic-fashion-wearable-experiments-project-jacquard>

¹⁵ Look at the early commercials for Nintendo that stated: Touching is good.
<https://addio.ecrater.com/p/15301890/need-for-speed-2-print-ad-nintendo>

spot on the body by means of our mobile phones or digital controlled wearables. Most of these haptic interfaces focus on either conveying a concrete message or on the creation of a perfect realistic experience (especially in VR devices). A lot of money is invested in the digital production of touching 'real' materials or even bodies-of-flesh-and-blood, all to sell more products via internet or to gain intimate data about how users touch and even on how they like to be touched.

So far it appears that research was mainly directed towards controlling and quantifying Touch. As said the digital touch that is made to convey a specific message or aimed at perfect realism as described before, has its specific protocol to handle and is never reciprocal. It is not possible to respond to a digital touch as free as one might prefer to while it would stop to function properly or the created illusion is broken. Under the dominance of the rules of the product, to response differently or explore its aesthetic or narrative possibilities doesn't come to mind. This is exactly the point where my interest lies.

I realised the potential of free and imaginative Touch when I worked with performance students and noticed how they touched one networked, conductive cloth in diverse manners, triggering pre recorded audio files and as such evoked a complete narrative. Or when I experienced a self made version of the navigation belt¹⁶ and felt the tiny motors vibrate around my waist – it made me feel like flying and I started to dance. What are the various (tactile) illusions that are induced by applying an device to different sites of ones' body? Can we explore anew what Touch can make us experience and what stories it can tell?

I believe it is time to explore what other (aesthetic) qualities and functions Touch(ing) may have, what novel tactile sensations can be created, and foremost to research what kind of Touch(ing) questions the border between real and unreal, between authentic and inauthentic.

I want to research how the moment we touch or are touched, the moment we interact with technologically induced touch, can be opened, its semiotic and embodied meaning explored and the interaction with the device performed.

4. Sketching (the discours around) Touch

Touch is extensively researched by Phenomenology, in which the body plays a central role; we always relate to the world through our bodily existence. This manner of engaging with the world provides a clear starting point on how to research touch. According to Merleau Ponty¹⁷, we have a 'natural' approach to the world around us, if we assume that objects have no meaning and we need to give them meaning. This process of 'giving meaning' is conditioned by the world we live in¹⁸. In his opinion,

¹⁶ <https://www.popsci.com/technology/article/2011-06/new-haptic-system-guides-us-soldiers-through-darkness>

¹⁷ Paraphrasing Merleau Ponty, M, (1964) *L'Oeil et l'Esprit*, 1964, translation by Vlasblom, R (2012) *Oog en Geest*, Parresia, Amsterdam.

¹⁸ In Europe this is based on the ocular chirurgic scientific view or the dominant view in Western Society

the 'unnatural' way of perceiving is the opposite: to live in the world and physically sense what meaning the surrounding objects already have. Then we use our corporeality to assemble a personal unconditioned approach¹⁹. For me one approach to researching touch is to trigger and describe these *conditioning mechanisms* while 'enacting' touch. What artistic strategies can be used to create these kind of interactive, performative²⁰ situations that brings these mechanisms to the surface, is one of the research aims of this proposal.

According to philosopher Karen Barad, paraphrasing her article 'On Touching', touch continuously changes meaning while it is always movement in time. As a result touching highlights that, "the self is diffracted through time and being"²¹. In other words, there is no static sense of self, the sensation of self is fluid and can be expanded over time and space. As a result Touch can be experienced in many ways; close by but also at a (remote) distant, inside or outside our body, physical or emotional. "So much happens in a touch: infinity of others – other beings, other spaces, and other times – is aroused"²². I regard Touch as the treshold experience where the material body meets the social/cultural body in the fluid experience where all sort of transformations take place. Is it possible to create these experiences for people, to observe and interview them with the goal of creating a kind of 'artistic language' that describes these ephemeral experiences?

If our sense of self is diffracted, it might be possible to embody somebody's touch over time and place. Can I recognize and acknowledge my lover's touch re-created by a machine? Can I hack, alter and re-use these touches? What to envision for the future of Touch? Here I am approaching the field of sociology. IN-TOUCH based at UCL in London²³ is a very interesting group of scholars, led by professor Carey Hewitt, doing research concerning these questions and participants' imaginations of future remote touch communication. This group is researching technological induced touch as communication, from a sociological point of view, regarding politics and ethics. As they are developing 'live methods' to do research around social practices, norms, rules, protocols/resistance and disruption, they are an interesting party to work with. As I see it, my approach, developing artistic strategies to explore interactive, performative narratives induced by technology induced touch(ing), can add another approach to their research. While for me in Touch "many voices speak.., a cacophony of always already reiteratively intra-acting stories. These are entangled tales. Each is diffractively threaded through and enfolded in the other." ²⁴

¹⁹ Being, in this sense, is a matter of bodily experience where the body is the centre of the process of action and perception, and the brain is 'just' a part of the whole system. Merleau Ponty, M, (1964) *L'Œil et l'Esprit*, 1964, translation by Vlasblom, R (2012) *Oog en Geest*, Parresia, Amsterdam.

²⁰ Term first coined by J. Austin, referring to the active nature of speech, text can change reality. Developed by J. Butler stating that identity is not given, but physical acts brings identity to the fore, one *does* one's body.

²¹ Barad, K. (2012) "On Touching (V 1.1)", Witzgall, S. (ed), *The Politics of Materiality*

²² Idem

²³ <https://in-touch-digital.com/>

²⁴ Idem

When approaching Touch from the new Materialities discours, Touch gives shape to our ongoing embodied interaction with the world around, not always consciously processed by the brain. In touching one can “..perceive a manifestation of deepened attention to materiality and embodiment, an invitation to re-think relationality and its corporeal character, as well as a desire for concrete, tangible, engagement with worldly transformation”²⁵.

We are seldom touched in our techno days. That's why some people long for returning to analogue, self-sufficient life. As a result craftsmanship has become popular and important again – no wonder, by consciously touching material new registers are opened that keep you in the here and now. Craftsmanship is an interesting metaphoric tool to research, experience and gain knowledge of our continuous intra-action with this outside world and how entangled our being-here actually is.

For me, when doing handicraft, the embodied contact with the material, using my hands or any other body part, can also make me frustrated, I become anxious and vulnerable while I am not-in-control. Pretty soon it becomes clear that the material I am working with has something to ‘say’ as well. This intra-action makes it very clear that it’s not only me as a human being that decides what the outcome will be. Many other (in)visible factors, like the technology used, material properties, tools, temperature, spatial circumstances, are all performing their agency. Barad (2007), speaking about physics, goes as far as to state that matter itself is as active as our interpretative frameworks, so that we do not give meaning to matter, but matter and meaning co-constitute each other.

Leading to the question: what ideas and knowledge is formed when human body and material intra –act²⁶? Is Touching similar to intra-action? Is it possible to create technology that triggers an audience to *perform* the fluid exchange between material and body? To make time slow down, even stop to unveil and critically question the ongoing intra-action between hidden stories, ideas and thoughts that are continuously (re)shaped in intra-action with everything around?

What kind of insights emerge from this intra–action; embodied knowledge, hidden in our flesh? For sure this knowledge influences us a lot more than we think and, as said and more questionably, can be influenced actively by the haptic technology that is getting developed.

²⁵ De la Bellacasa, P. (2009) “Touching technologies, touching visions”, *Subjectivity Issue* 28.

²⁶ A posthumanist understanding of performativity points to the materiality of meaning making: to how discursive practices and material phenomena do not stand in a relationship of externality to one another but are mutually implicated in the dynamics of what Barad calls intra – activity. ‘the point is not merely that there are important material factors in addition to discursive ones; rather the issue is the conjoined material – discursive nature of constraints, conditions and practices (Barad, 2003:823). Matter is substance in its intra-active becoming and this intra-activity Barad proposes to understand as performativity.

An example of positively influencing this existing embodied knowledge, I came across during my current assignment for Waag Society. As an artist and researcher in residence, I am engaged in an art / science project in which we develop – in close connection and in co-creation with the target group - an EEG feedback system that stimulates the belief in a ‘growth mindset’²⁷ for youngsters. Having a so-called growth mindset means that you understand that the brain is plastic, intelligence is dynamic and that brain changes are influenced by effort.

The aim of the project is that, as a result of using our newly developed EEG Feedback system during a range of engaging educational sessions, the youngsters will have internalized the idea that they can ‘work’ with their brain. They need to be convinced that their brain is malleable and can be actively influenced by themselves.

After three sessions with the target group, it became clear that a tangible translation of the connection between the headset and the measurements shown on the screen, is necessary to internalize this concept. The best translation turned out to be a small touch on the head. As a result we are now developing a wearable EEG headset that incorporates a small motor that vibrates just above the eye when the EEG measurement of effort (focus and concentration) is high. To intensify the experience of the brain/head this motor is combined with a bone conducting speaker located at the back of the skull, integrated in the headset, to give auditive feedback. How come this small touch makes such a big change? How is this touch actually perceived? Substitute for comfort? A human encouraging tap?

I noticed that the test persons just trusted the technology to touch them in a comfortable and kindly manner. But these touches could have been pinching or even been cruel. What if these touches had been hacked? These questions are not in the scope of the project at Waag, but will be part of this research. The developed technology can be explored further during this research period.

Let’s not “take touch for granted.”²⁸

²⁷ <https://waag.org/en/project/brainbeliefs>

²⁸ Quoting Mark Paterson at the conference “Hold me Now – Feel and Touch in an Unreal world” at Stedelijk Museum Amsterdam, March 22, 2018

5. Research Question:

As described in the beginning of this proposal, the artistic aim of this research proposal is the 'translation' of the book "*Losing Touch*" into an interactive performative experience. In order to get there, artistic strategies will be assembled, enacted and described, all centered around the following question:

Is it possible to take an audience through successive stages, inviting them to engage in interactive experiments in order for them to first experience the 'loss' of conscious touch(ing) and from this point on lead them through a series of experiences, all focusing on their own body re-examining and re-establishing how to relate to touch?

This wish leads to the main research question:

What artistic strategies can be executed in order to trigger an audience to critically explore how technologies inducing touch (haptic technology) *perform* meaning?

The first part of the research focuses on how we generate conscious, meaningful knowledge from giving and receiving touch. How do we learn tactility?

From the book '*Losing Touch*', I distinguish four manners:

1. using objective, measurable criteria like soft, hard, temperature, distance
2. by analogy, through the (earlier) experience of similarity and difference
3. combining with sensory input (spatial, temporal, material, olfactory, acoustic etc)
4. using or adding vocabulary (words)

In the research plan on page 13, these manners are explained.

The second part investigates how this learning relates to technology induced Touch. With technology induced touch I refer to technology that needs to be touched, like our smartphone, touch screen or keyboards. And to technology that 'touches' our body, think of wearables that vibrate, the kissing machine, or the Tesla body suit that lets you 'physically' experience the virtual world. How do we learn tactility when we don't need to be physically present to touch something or somebody? How to 'read' a touch that is experienced over distance or at another time? How does it feel when body parts become disembodied places?

All along the research period this learning is given shape and is tested in workshops, design sessions and interactive performative installations to identify by (individual and social) experience how touch *generates* meaning, focusing on the *influence* on our bodily perception and body schema, the *affordance* of affective qualities (moods, feelings, attitudes) and the evocation of *political, social, historical and personal* narratives.

The goal is to assemble, try out and describe a series of artistic strategies that create technological induced tactile experiences that evoke embodied, social and political narratives in order for (performance, visual arts, interaction design) makers to question, build upon and engage themselves with these topics.

Many of the experiences that are created during the process will enable visually impaired and other audiences to have a shared experience through tactile forms of interaction.

6. Research Methodology

As the book "*Losing Touch*" was the inspiration and starting point for this research, it also directed me towards certain methodological frameworks. The first one being literature review and encounters with medical experts to understand more about the medical concerns around touch.

The second research methodology is closely connected to Brad Haseman's concept of Performative Research, which manifests itself by doing artistic interventions, whereby makers, researchers and audience meet and exchange, and can experience new collaborative forms, share and experiment together."

In the book *Losing Touch*, next to Ian's personal story, several scientific experiments examining this specific bodily condition that were conducted with (and on) Ian, are vividly described, both from the side of the researcher as well as by Ian himself. These descriptions raise questions about how to conduct 'objective' scientific experiments on a 'performing' and embodied human being²⁹. Only when the observations of the researcher, de video and audio devices AND Ian verbal descriptions were put together, the test results got closer to the experience of the group people performing the tests.

That's why I believe a live experiential and performative set up is necessary to assemble a verbal and sensory archive that describes and *gives shape* to how we learn tactility in relation to technology-induced *touch*. With the term *performative*, I paraphrase Butler; who underlined the idea that we *perform* our bodies, in other words our bodies shape our perception³⁰ and as such need to be physically present in the set up; as a result each situation will not only represent society but will have the ability to build its own unknown reality.

²⁹See Schrader on response-ability as a kind of practice, including laboratory practices, that enables the organism or object of study to respond. In: *Social Studies of Science*, 40.2 (2010), pp. 275-306

³⁰ We perform our bodies but we are never in full control, our history conditions and limits possibilities. But it also happens the other way around: our bodies shape our perception emanating in a bottom-up direction from the cognitive functioning of body/mind towards culture. Vlugt, M. (2015) *Performance_As_Interface/ Interface_As_Performance*, pg. 22

This experiential and performative set up facilitates the participant to overcome the sort of interaction in which body and technology are seen as two separate unities, but surrender to what Barad calls 'intra action'; where knowledge is fluid and constantly changing in the moment. Following this concept of Barad; knowledge can't be separated from doing, words can't be separated from objects etc. In short as I see it; to assemble strategies for touch, that can be used and build upon by other makers, can only be done by putting people in 'direct intra-action' with the technology itself while expressing (in words, gestures, mimicry, movement, choices etc) what they experience.

The third methodological pillar is situated within the larger framework of artistic research. As I research in and through my artistic practice the roles of Artist and Researcher are constantly merged. While designing the process, conceiving the workshops, co-design sessions and creating the interactive performative installations, I also observe the process and translate the outcomes to others through/by means of videos, texts, articles, website and documentation.

Another interesting topic, regarding my goal of translating Ian's experience of the 'loss of conscious touch(ing)' into an interactive experience for an audience, is the chapter about Peter Brook. Ian describes in detail how an actor translated his physical experience into movement and performance.

Ian worked with famous director Peter Brook on the performance '*The Man Who...*'³¹ The play premiered as *L'homme qui* in 1993 after an extensive period of research, improvisation and exploration. The initial inspiration for the play was the 1985 book *The Man Who Mistook His Wife for a Hat* by the neurologist Oliver Sacks. The only added 'case' to the line up of patients taken from the book of Sacks, was Ian's story that as such became part of the performance. Ian's description of seeing the performer 'rehearsing' and 'depicting' him provides an extensive example to reflect on the relationship between performing on stage and performing 'real life', especially considering the second method of learning tactility: by analogy. How close can an actor/dancer get by representing someone else's experience?³² Methodologically this means that I will do practical (with performers) and dramaturgical research (literature, video review) on this specific theatre work of Peter Brook.

Remarks

How can an interactive artwork research the subjective experience of a participant while being materialized by the participant himself? A work of art that is interactive resembles a half-finished product. Here, participants are needed to "finish off" the work. This process requires a certain attitude from the public; just observing a work is, on the whole, not enough. Something or someone must take action - and invest

³¹The Man Who: a theatrical research is the English text of this play by Peter Brook, co-authored by Marie-Hélène Estienne, and created in Paris with Brook's troupe at The Bouffes du Nord Theatre.

³²For a thorough account of a similar research see the book: Dorr, H, Hubner, F. (2017) *If you are not there, where are you?* HKU Professorschip Performative Processes & IT&FB

time - in order to shape, and experience the “final” product. Here lies the crux and maybe the beginning of an answer: an interactive work reflects our own actions, our decisions and their consequences. Here, interactive technology acts as a mirror, a mirror that reflects not only ourselves as participants, but a mirror that processes our actions as a form of input; and edits and responds accordingly.* The interaction, therefore, says something about ourselves in relation to our environment, and allows us to experience this relationship.

Another question that is addressed during the research is the following; how does this research challenge the idea of ‘the aesthetic distance’ one is supposed to have for appreciating an artwork?

Why is there no art specifically made for our sense of touch? We have visual arts for the eyes, music for the ears, combination of flavors to savor our taste and amazing perfumes for our sense of smell. Sure, we can have a creative massage, *but is it possible to create an aesthetic experience for our sense of touch?* “There is something excessive in that we touch with our whole body, and that touch is there all the time – by contrast with vision, which allows distant observation and closing our eyes.”³³ As a result of technology, it is now possible to create virtual touch(ing) or mechanically touch somebody at a distance. Does this mean it becomes possible to step back from touching and being touched, thus creating a certain aesthetic distance?³⁴ What could be the aesthetics of touch?

7. Research Plan

The manners of learning tactility, executed and described by Ian in the book *Losing Touch* are prominently present in the construction of my research plan:

1. using objective, measurable criteria like soft, hard, temperature, distance
2. by analogy, through the (earlier) experience of similarity and difference
3. combining with sensory input (spatial, temporal, material, olfactory, acoustic etc)
4. using or adding vocabulary (words)

These manners can't be totally separated, as they are obviously influencing each other continuously. However they do provide clear perspectives for setting up tests, while they research 'touch' from different starting points.

Considering the end goal of this research: artistic strategies to create technological induced tactile experiences that evoke and discuss their embodied, social and political implications in order for (performance, visual arts, interaction design) makers to question, build upon and engage themselves with these topics, I focus on the following questions in relation to the (being) touch(-ed):

- a. the *influence* on our bodily perception and body schema,
- b. the *affordance* of affective qualities (moods, feelings, attitudes)

³³ Idem

³⁴ The question: where is the Art? See book: *If you are not there, where are you*? (nog uitwerken)

c. the evocation of *political, social, historical and personal* narratives.

The structure of the book gives concrete starting points of the different phases. All along the research period the learning tactility is given shape and is tested in workshops, design sessions and the creation of interactive, performative installations.

Phase A

Focus on 1. using objective, measurable criteria like soft, hard, temperature, distance

Chapter 1 describes the main character's (Ian) loss of his inner (felt) sensation of touch.

a. To assemble a working definition for what this 'inner (felt) sensation of touch' entails, a close reading of the text in chapter 1, *Losing Touch* is conducted, leading to a first list of words used to describe this sensation.

b. Based on these verbal descriptions of Ian, one ultra short performative experience is created, using haptic technology. This experience will translate my associative, aesthetic view on Ian's descriptions.

The participants of this experience will be observed, filmed by video camera's and interviewed in order to come to a vocabulary about this 'felt' sensation.

c. The experience will be conducted twice with every participant while the act of speaking about these sensations will influence the outcome and the time of 'talking' will change every performative research cycle.

d. The outcome will be the start of a lexicon on touch in relation to technology that will change and will be adapted during the full research period.

Phase B

Focus on 2. by analogy, through the (earlier) experience of similarity and difference

Chapter 5 and 6 describe how the main character Ian gets to work with theatre director Peter Brook and choreographer Siobhan Davies.

a. Assemble narratives: Ian's description of seeing the performer 'depicting' him provides an extensive example to reflect on the difference between performing the loss of touch on stage and performing the loss of touch in 'real life', a close reading of the text in chapter 5 and 6, *Losing Touch* is conducted, leading to a first list of

words used to describe the similarities³⁵ and differences.

b. Reading interviews and watching video material of the particular works of Peter Brook and Siobhan Davies

c. Based on these verbal descriptions, one performative experience is created, using haptic technology. I will re use technology of DUETS and use the audience installation to pinpoint the core experience of the gap between having and being a body.

The participants of this experience will be observed, filmed by video camera's and interviewed in order to come to a vocabulary about this 'felt' sensation.

The experience will be conducted twice with every participant while the act of speaking about these sensations will influence the outcome and the time of 'talking' will change every performative research cycle.

e. The outcome will be added to the lexicon on touch in relation to technology that will change and will be adapted during the full research period.

PHASE C

Focus on 3. combining with sensory input (spatial, temporal, material, olfactory, acoustic etc)

Chapter 2 describes how the main character Ian is invited to a research lab, where physical research is done *on* his condition, while the experiments are conducted *with* him.

a. To assemble a working definition for how this 'research on his condition' is related to Ian's thoughts and emotions as a person (being and having a body) in relation to touch, bodily perception and body image entails, a close reading of the tekst in chapter 2, *Losing Touch* is conducted, leading to a first list of words used to describe these narratives.

b. Interviews with medical experts about 'this condition' called: **acute sensory neuronopathy syndrome**. Talks will center around symptoms, physical tests, treatments in relation to bodily perception and body schema.

c. Based on these verbal descriptions, one performative experience is created, using haptic technology. I will reconstruct and build one of the experimental set ups

³⁵ Think of kinesthetic empathy: an important source for the concept of kinesthetic empathy is Theodor Lipps' theory of 'Einfühlung'. Lipps (1851-1914) argued that when observing a body in motion, spectators could experience an 'inner mimesis', where they felt as if they were enacting the actions they were observing.

described in the book (the arm wrestling device and the bite bar that Ian needed to hold between his teeth in order to control the motor).

The participants of this experience will be observed, filmed by video camera's and interviewed in order to come to a vocabulary of body image and schema in relation to touch.

The experience will be conducted twice with every participant while the act of speaking about these sensations will influence the outcome and the time of 'talking' will change every performative research cycle.

d. The outcome will be added to the lexicon on touch in relation to technology that will change and will be adapted during the full research period.

PHASE 4

4. using or adding vocabulary (words)

Chapter 3 and 4 describe how the main character Ian meets another woman with the same condition as him, and her (quite opposite) reaction to this state of being.

a. To assemble a working definition for what these 'different expectations, descriptions and ideas' in relation to touch entail, a close reading of the tekst in chapter 3, *Losing Touch* is conducted, leading to a first list of words used to describe the differences.

b. interviews with people that experience touch related diseases like touch phobia or the opposite 'huidhonger'. Talk will center around expectations, symptoms, tests, treatments etc

c. Based on these verbal descriptions, one performative experience is created, using the sensorsuit of Series Patchmaker and other haptic technology.

I will research works of other artists that use technology in order to evoke or simulate 'touch':

Flatland <http://www.emiliegiles.co.uk/Flatland>

End of life Care machine of Dan Chen - <http://pixedge.com/lastmoment>

Inspired by this research I will build an interactive installation.

The participants of this experience will be observed, filmed by video camera's and interviewed in order to come to a vocabulary about this 'felt' sensation.

The experience will be conducted twice with every participant while the act of speaking about these sensations will influence the outcome and the time of 'talking'

will change every performative research cycle.

d. The outcome will be added to the lexicon on touch in relation to technology that will change and will be adapted during the full research period.

8. Research Environment

I am involved in a variety of platforms to develop and conduct the research.

1. My own artistic practice

Create new spatial installations, wearables and interactive set ups.
Adapting existing technologies of Series Patchmaker NO.1, DUETS etc

How to use haptic technology for performance / narrative design?

End Result: the Interactive Performative Installation “Losing Touch”.

2. The Performative Processes Professorship at HKU University of the Arts

Set up Research Methodology and criteria
Doing performative research with Co-researchers | Co-creation |
Testing performative and interactive set ups with audience |
Lecture performance |
Write articles |
Dramaturgy | New Narratives
Digital Interactive Performative practices | Mixed Reality
Translating the Research / Artistic process into didactic strategies

3. Interactive Performance Design HKU (and master classes at Artez, AHK)

In my ‘performative research’ classes, I propose students to work with simple touchboards (Makey Makey) around questions concerning touch and movement. The question I pose is, what does the specific embodied knowledge - encapsulated in touch - entail? How do speech, touch and movement relate to each other? “The unfolding of thought and language takes place coupled together in - and by - the unfolding of gesture.... Speech, of itself, seems incomplete without gesture. Language is inseparable from imagery and the imagery in question is embodied in the gestures that universally and automatically occur with speech.”³⁶
What do we mean if we listen to our intuition? Or when we feel balanced? When we have butterflies in the belly or we orient ourselves on our 'gut feeling'?

³⁶ Mc Neill, D. Gallagher, S. (1998) ‘How the body shapes the mind’

The touchboard the students work with, is threatened as a piece of technology that – together with the object it is attached to – becomes the active and dynamic mediator between a personal question, emotion, thought or feeling and the objects, people and space around. Like this the impact and layers of embodied touching come to the surface. Moreover the dimensions (quality, duration, temperature etc) of touch become as important as the narrative itself.

Can watching somebody touching or performing the touch oneself evoke a similar experience?³⁷ How are we culturally inscribed in engaging with and the articulation of touch?

How do other sensorial stimuli effect the sensation of touch? For instance what is the impact of music on the sensation of rubbing one's hands, or eating a sweet candy on the effect of touching a spikey surface.

I assemble these examples and classify them around questions like: What is a touch - except for closing the gap - communicating by itself?

4. Textiel Factorij

<http://www.textielfactorij.org/profile/marloেকেvandervlugt/>

5. Books and performance research

Other projects that investigate how technologies centered around touch and bodily perception can form a new sensory means for audiences to engage with dramatic installations.

<http://www.emilie Giles.co.uk/About-Me Flatland |>

<http://www.maggieorth.com/index.html>

The alert shirt: Sharon Baurley describes the heat sensation of the hug shirt as 'symbolising'. The symbolic experience is thus different and distinguishable from the 'real' experience. This is good in the sense that new experiences are possible, experiences that symbolise something important that may not currently be possible on an everyday basis, or that symbolise someone else's experience in a way that enables enhanced empathy or engagement e.g. the alert shirt. The symbolic becomes more questionable if it develops to increasingly replace and ultimately threaten commonplace human-human touch. What is important is that we develop a better understanding of what 'touch' and 'digital touch' are and the role they each play in human-human communication not 'simulating' the warmth of a touch/hug. This seems like a crucial distinction to make, especially for those that become concerned about technology 'replacing' the human-human, which is considered central to human communication and well being.

Claudia Castaneda – future of touch / robotic skin

³⁷ see note 32

