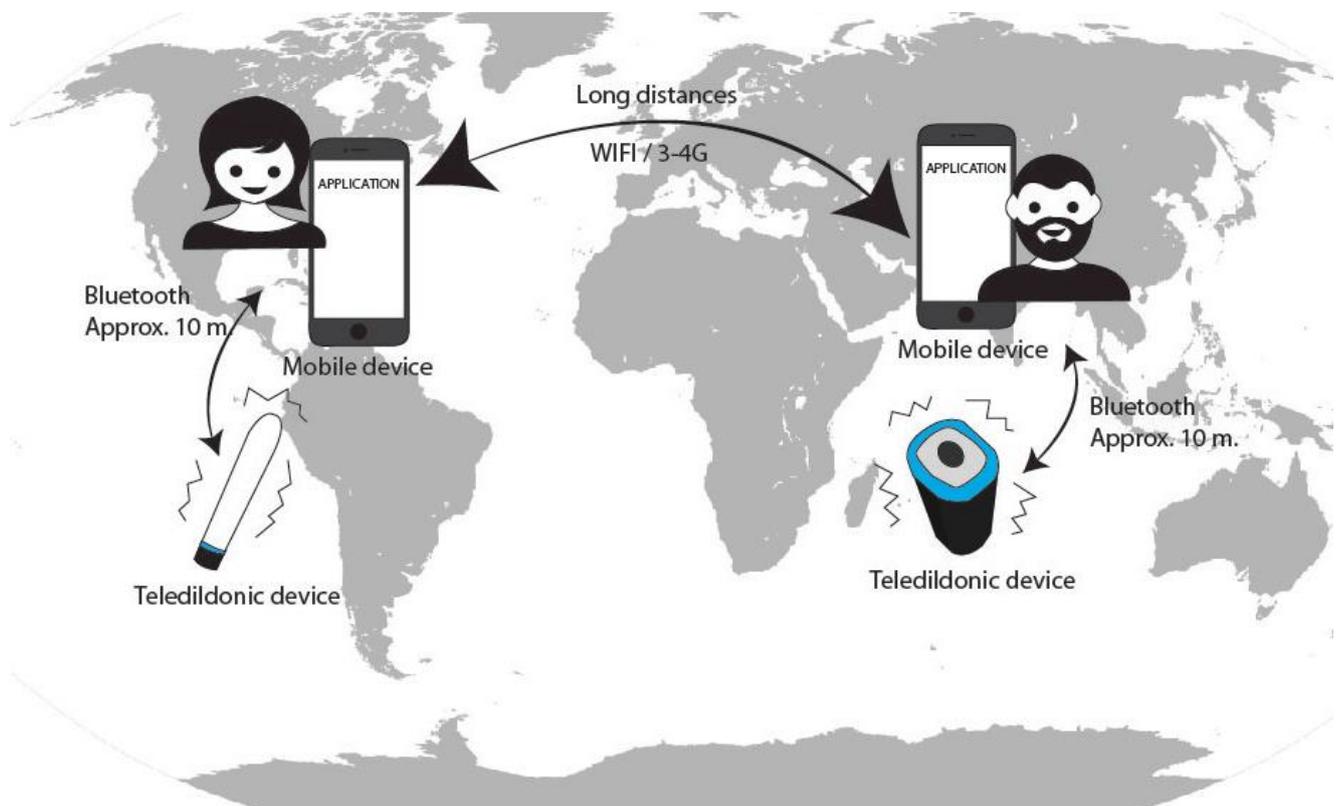


Intimate Sensory Technology in Long Distance Relationships

A Thesis Study in the Sensescape of Teledildonics

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Abstract

With this report we aim to further our understanding of how new technological solutions are influenced by our sensescapes across both cultural and national borders. We have identified some of the pitfalls and elements that will play a role in identifying how the future will be imagined.

We wished to examine how the technology of teledildonics is perceived by various actor constellations and how they actually use teledildonics now.

The objective of the report is to identify current issues existing in relation to the use of teledildonics in long distance relationships and discuss how these issues are accommodated in such a way as to evolve the Sociotechnical imaginary regarding teledildonics. This is done by analyzing empirical data collected through anthropological fieldwork. We wish to give the reader an understanding of the area through a discussion of our methodology and data collection process. We will shed light on some of the challenges and concerns that are delt with by users of We-vibe teledildonics and try to give an answer on how these issues will affect the future.

Finally we conclude that our participants view teledildonics as regular sex toys and they are concerned with whether teledildonics will supplement or replace physical sex.

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Intimate sensory technology in long distance relationships

- *A thesis study in the sensescape of teledildonics*

Through this thesis, our goal is to unveil some of the issues surrounding the use of teledildonics in long distance relationships. Teledildonics are sex toys which can be used at long distance using Wi-Fi or 3/4G. We will specifically focus on the use of the couple's vibrator *We-vibe* in long distance relationships. As methods for communicating have evolved and our everyday lives and work practices have gone global, more and more couples engage in what can be described as long distance relationships. In this field, we wish to research how couples can maintain a sense of intimacy and what role, if any, teledildonics can have. Therefore we are engaging several couples through a series of interviews with the aim of uncovering how they act in long distance relationships. We have been able to collaborate with the sex toy shop *winkwink.dk* to use some of their customers as our participants.

What are teledildonics?

In this presentation we will initially shed some light on the context within which we are working. Teledildonics were first imagined in 1991 by author Howard Rheingold who was speculating on how people in the future would interact with each other and how human interactions would be expressed through robots (Rheingold, 1991).

The lack of interaction with a significant other in a long distance relationship poses a hurdle for the sustainability of a healthy relationship. *"Long distance couples often face challenges in maintaining some semblance of intimacy given the physical distance between them"* (Greenberg & Neustaedter 2011, p. 37). Part of fostering a feeling of connection has been to communicate via traditional media such as written letters, telephones and more recently emails and instant messaging. Video chat has also been incorporated into the arsenal of remote interaction technologies allowing couples to "hang out", e.g. in chat. By incorporating video communication applications into their everyday lives, couples seek to feel a sense of involvement and presence from their remote partner (ibid.). By being able to "see"

and “hear” your partner for extended periods of time even while doing separate things couples are able to maintain a sense of intimacy via video chat (ibid. p. 38). For couples in long distance relationships, an aspect of their relationship that has been broadened by the use of video communication is sex, or more correctly cybersex, in which the couples engage in activities ranging from kissing to masturbation. For many, cybersex is not about sex itself, but an extension of intimacy between partners (ibid, p. 50). Many hesitate to indulge in sex acts either from awkwardness or fear of security breaches when broadcasting their private sex videos. Video communication applications lack the ability to truly give a feeling of physical connection between partners. The lack of physical connection and design aesthetics of video communication that are not designed towards cybersex give rise to a social issue in which couples feel awkward or embarrassed about engaging in cybersex (ibid, p. 51). When engaging in cybersex, sex toys play a role. Unlike video communication applications, sex toys are designed with an aim of promoting the intimate experiences of the users through aesthetics and embodied pleasure (Bardzell & Bardzell, 2011). In connection with being designed to promote intimacy, sex toys are also starting to incorporate Bluetooth and Wi-Fi/3-4G connections. With online connections the sex toys can be controlled remotely by others or follow a prepared script that is synced with either a movie or audiobook. These kind of sex toys are called teledildonics. By adding teledildonics to video meeting tools such as Skype, cybersex may possibly gain a new dimension involving physical sensations in response to actions taken by a long distance partner. Figure 1 is an illustration on how a teledildonic device works.

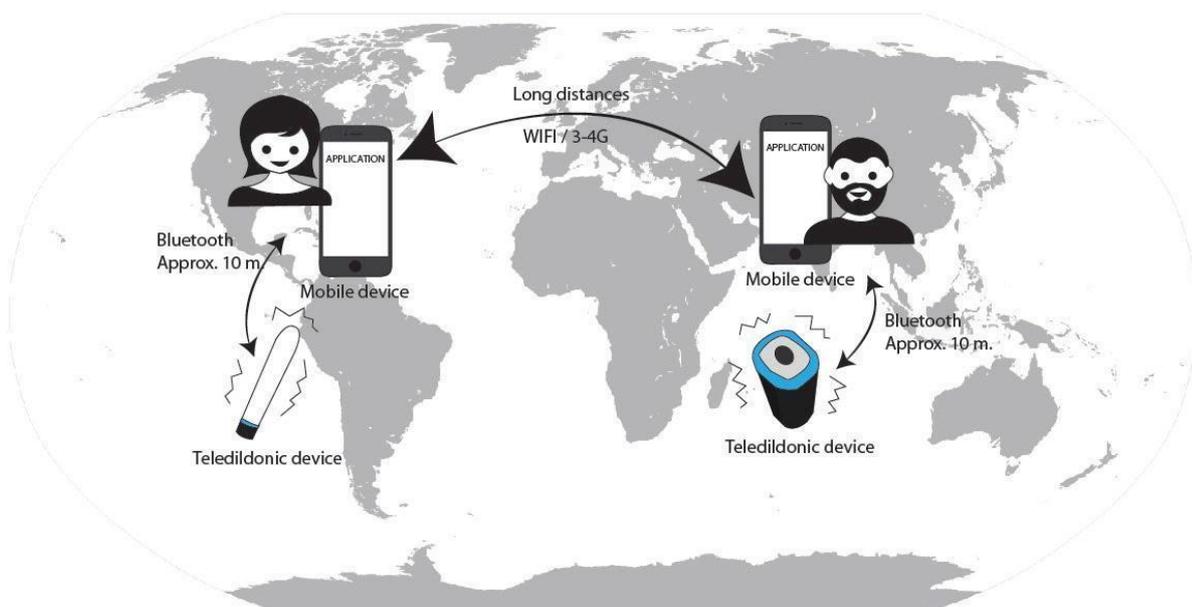


Figure 1: Illustration of the technology of teledildonics (author's own production)

Our interest in the field

In this project we seek to understand how the use of teledildonic devices is perceived in long distance relationships through an understanding of how our sociotechnical views are influenced through the use of the senses. We seek to discern the users' understanding of the technology of teledildonics and interpret in which way these products are being used and what values they are attributed. Are teledildonics bringing couples closer together, or are they alienating sex in physical relationships? We had seen a commercial online for a product called *Kiiroo*. We were intrigued by how this product was a masturbator and vibrator that were linked via Wi-Fi and could respond to input between them. We became intrigued as to whether it felt like having sex with a partner. While writing a thesis on sex toys may seem a bit avant-garde, the technology involved is almost mundane and is used in many other scenarios. We became interested in how this technology we see being taken for granted in everyday life is being assimilated into an actor constellation consisting of people that are perceived by the general public as being in a fetish milieu. Therefore we have formulated the following research question in an effort to better understand teledildonics.

- **How does the interconnected sensescape influence the imaginary of teledildonics in long distance relationships?**

This thesis builds on theoretical premises founded in Sociotechnical imaginaries as envisioned by Sheila Jasanoff and Sensory Ethnography as outlined by Sarah Pink. Imaginaries are a tool used to describe how actor constellations view a specific technology and Sensory Ethnography is a focus on how the senses play a role in ethnographic fieldwork.

Through this report we hope to delimitate the field of teledildonics and produce a project that can serve as inspiration for further work into the field of how teledildonics are incorporated into everyday life. We aim to clarify how teledildonics are viewed within society and clearly describe the imaginaries and how they can contribute to intimacy in long distance relationships. This thesis will be a contribution to the field through unveiling the motivations and attitudes held by the users of teledildonics. We will identify current issues relating to the technological view held by society as a whole with regards to the use of teledildonics and discuss whether sensory experiences can be created through the use of the

technology. We will accomplish this through analysis of empirical data, collected in anthropological fieldwork and qualitative interviews. Through a discussion on the methodology and our ability to collect data we wish to confer an understanding of our problem field to our readers. This report will help to shed some light on the challenges that are present for couples in long distance relationships and show a solution that might aid in shedding light on intricacies involved.

It is not uncommon for people to meet online through games such as World of Warcraft or simply hold a job that requires them to travel. Others are in their second marriage and because of circumstances they may live in separate houses, whether or not these houses are in the same city or not. The end results are the same, culminating in a situation in which a couple is unable to interact physically with each other on a daily basis. Therefore we have become interested in the breakthrough that teledildonics have achieved in recent years with several different types being produced by different brands. The reason being that teledildonics have the possibility to expand the extent to which couples communicate together.

Because of this, we see a potential for teledildonics to be used by people in long distance relationships to create a deeper bond between themselves.

The field of teledildonics

The sex toy business is a business in rapid technological development. New products and technologies are launched every day and engineers are trying to develop better or more efficient toys for sexual pleasure. One brand mentioned above is the Kiiroo brand. Kiiroo is one of the most advanced teledildonic devices on the market. The device consists of two parts that can connect through Wi-Fi: It can be a masturbator and vibrator, two vibrators or two masturbators, depending on the couples' sexuality. Both partners then interact through their individual sex toy (Kiiroo, 2016).

Another teledildonic device on the market is the *Lovense* device, which has some of the same features as the Kiiroo. Lovense can be used with a partner at long distances through Wi-Fi, or it can be connected with the porn site VirtualRealPorn.com, where you can use it while watching porn in VR, where the rhythm of the porn actor or actresses will be present in the movement of the device (Lovense, 2015).

Another example of how the teledildonic technology works is the *Durex fundawear*. This product is underwear with touch sensors which can be controlled from a mobile device. The mobile device sends vibrations that stimulate feelings of touch to the underwear, allowing the wearer to experience his or her partner's touch from a distance (Durex Australia, 2013).

We have decided to use the teledildonic device called the We-vibe as the case in our thesis. We will present the We-vibe in the next section.

Our case: We-vibe

We-vibe was established back in 2008 by the engineer Bruce Murison. He wanted to create a vibrator, worn by couples during sex. The first We-vibe vibrator was made as a U-shaped vibrator, with one end stimulating the external parts of the woman, and the other part stimulating the internal part. The

narrow form of the vibrator makes it possible to use the vibrator during sex, vibrating and stimulating both the male and female.

In 2011, the We-vibe was rated the top selling sex-related product of all times (We-vibe, 2015). Later the company received several awards for their couples' products. In 2014, We-vibe 4 with Bluetooth was launched. It got a lot of attention because of the new application connected to the vibrator. The application 'We-connect' made it possible for



Picture 1: We-vibe with We-Connect application (Amazon.com 2016)

couples to control the We-vibe from a whole new distance. The application works from phone-to-phone by Wi-Fi or 3G. One of the phones are then connected through Bluetooth to the We-vibe vibrator, as

shown in figure 1. This application makes it possible to control the We-vibe vibrator from all over the world, and has created a new way of using the vibrator for couples being far apart from each other (We-vibe, 2015). In October 2015, the application was developed further and made it possible for couples to video chat while using and controlling the vibrator directly in the application. The company develops new models of their popular vibrators almost every year, and have just launched two new single vibrators, which also connect with the *We-Connect* application. The products are designed by engineers and prototypes are tested in a large group of users and experts (Gillespie, 2015).

We see the We-vibe as an interesting case for further investigation because the company has gone through a fast technological development and is the company that sells the most teledildonics every year with their application based products.

Definition of concepts

As part of uncovering our own assumptions and creating a shared understanding of certain key words used throughout our project we found it useful to define some of the key terms: These are terms that we have used throughout the project not just in this thesis but during our interviews. We were aware that the people we were going to talk to might have other understandings of these terms and have sought to understand the difference, if any.

Long-distance relationship

As Greenberg and Neustaedter (2011) defines it, a long distance relationship is a relationship where the two parties are geographically separated in some way. It can both be in different houses, cities or countries (Greenberg & Neustaedter, 2011 p. 1). For many, the reasons for living apart can be education, work or family.

Living Apart together

Living apart together is a relationship in which a couple live separately but identify with being together. It is a subgroup of long distance relationships. There can be many reasons for being in a relationship like this and they can differ depending on age, occupation and so forth. Some may be young couples where one partner studies or works in a different city or it may be older couples who have been divorced and

found new love but still live apart to accommodate children of previous relationships (Strohm, et. al, 2009, p. 178).

Remote interaction technologies

Remote interaction technologies are referred to as a technology in which you can interact over long distances. Remote interaction technologies is an overall description and can be defined as both phone calls, conversations over live chat or video - and teledildonics.

Teledildonic

One of the first times the term *teledildonics* was used was in Howard Rheingold's book "Virtual Reality" back in 1991, where his futuristic look at "Teledildonics and beyond" was a way of looking at the future of teledildonics. Rheingold borrowed the term "dildonics" from the inventor Theodor Nelson, who was the first man to invent a device that was able to transform sound into a tactile stimulator back in 1974 (Rheingold, 1991, p. 345). Rheingold defined the term as a scenario of the future in this way: "*Through a marriage of virtual reality technology and telecommunication networks, you will be able to reach out and touch someone - or an entire population - in ways humans have never before experienced*" (Rheingold, 1991, p. 345).

When we use the term teledildonics, we will use it in a similar way - as a way for people to feel sensations and vibrations through an internet connection across the world, through a device, such as a vibrator, using a smartphone, tablet or computer. We will primarily use the term for describing devices that are used for sexual stimulation in some way or other. While the term teledildonics originated from a combination of dildos with the ability to communicate over long distance, it is now used to describe any type of sex toy that is connected over the internet. In an article from 1996, the writer Vladimir Edelman views teledildonics as a part of the virtual reality technology. He puts the virtual reality and teledildonic experience like this:

It's an average week night. Behind closed doors in his office, a young executive dons a lightweight spandex suit, straps on a pair of goggles and gloves, and sits back. With the push of a button, Cindy Crawford, or perhaps Naomi Campbell, attends to his every sexual whim. Welcome to the world of teledildonics, one of the most revolutionary and sophisticated forms of sexual recreation the world has ever seen. A high-tech blend of virtual reality (VR) and real-

life caresses, teledildonics promises to be more than the ultimate sexual experience, delivered electronically (Edelman, 1996, p. 59)

Sensory technology

Sensory technology is a term that we want to use as an overall description of technology in which one or more of the five senses are used. The five senses we refers to are: Sight, hearing, taste, touch and smell. We use the term to describe how the technology of long distance relationships have transformed and how it can advance in the future. A combination of multiple senses are used to create a sensescape. A sensescape is a combination of interconnected senses that create a rich and vibrant experience.

Intimacy

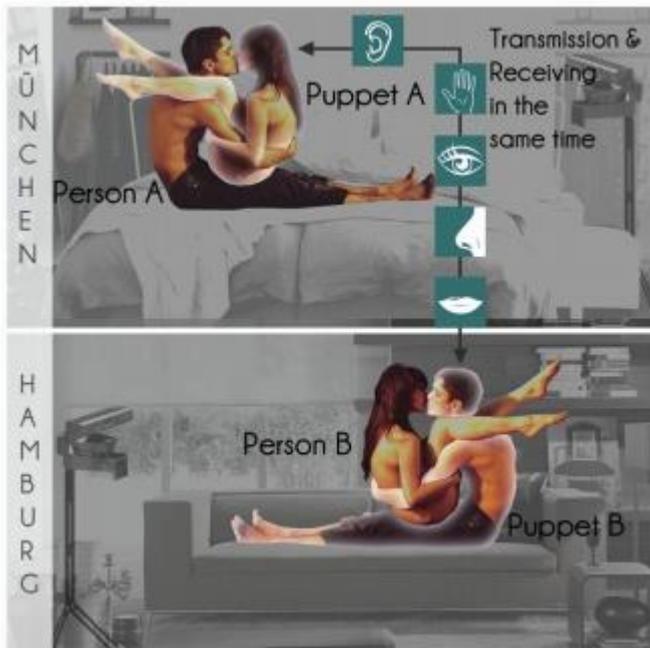
Intimacy is a term which is described by many authors. The term is described by some as *“an increased feeling of presence and involvement in each other’s lives”* (Greenberg & Neustaedter, 2011, p. 3), and by other described as *“the feeling of closeness with one’s partner”* (Herlein & Ancheta, 2014, p. 2). And mentioned by Schnarch (1997), *“Intimacy involves self-confronting and disclosing core aspects of self to a significant other”* (Schnarch, 1997, p. 17). Our definition of intimacy is not only the definitions above, but also as a sexual intimacy, which you only share with a few others, if you share them at all. Intimacy will also be described by our interviewees in their own way.

Literature study: Existing research in this area

To create an outline for this project, we will take a look at the existing research in the field of teledildonics and intimacy in relation to long distance relationships. Greenberg and Neustaedter (2011) investigate how video technology, such as *Skype*, has revolutionized the long distance relationships, by creating a new way of being intimate with your romantic partner (Greenberg & Neustaedter, 2011). Their research shows various ways of using the video technology for creating an audio and visual way of being with each other at a distance, in order to maintain a successful relationship (ibid p. 8). Cybersex is also a way to create a shared intimacy, and in the fieldwork research conducted by Greenberg and Neustaedter a majority of the couples participating were having some kind of sexual encounter online, but not with sexual activity as the main purpose, but using the virtual sex as an extension of intimacy (ibid p. 15). The field of using technology for maintaining relationships at a distance is also researched in Hertlein & Ancheta's (2014) study. Hertlein & Acheta maps some of the opportunities, but also concerns of the technological development regarding the use of technology in relationships. They mainly research the use of texting and 'sexting' in different relationships, not only long distance relationships, but also relationships in general, and they examine some of the nuances involved in using the technology as a way of establishing and maintaining relationships. One aspect of their research deals with how the users construct their own meaning of technology in their romantic relationships (Hertlein & Ancheta, 2011, p. 3). Another aspect is interactional technology, such as instant messaging and video chat. These applications both have relationship development, management, and enhancement skills, but can also be a way of creating distance in a relationship. This means that the applications could have the consequences of unclear and misinterpreted conversations and conflicts (ibid p. 4-8). This possibility is also mentioned in the article "*Online Life and Netsex or Cybersex*" (2006), where it is stated that the benefits of having cybersex can be the safety of not worrying about sexually transmitted diseases, getting pregnant or getting raped, but cybersex can on the other hand lead to addiction, electronic harassment, blackmailing and adultery (Marshall, 2006).

In connection with the 50th anniversary of "*The Society for the Study of Artificial Intelligence and Simulation of Behavior*" in 2014, the writers Matthias Wagner & Wolfgang Broll wrote an article derived from their study on "*The future of spatially separated sexual intercourse*". In the scenario they put before a focus group, an already existing teledildonic device was presented to the focus group, as well

as a scenario with a sex puppet which was constructed as a mock up for discussion (as shown in the illustration on the left). The sex puppets would transfer all movement and sensory experience from one person to another in a long distance relationship via a network (ibid. p 90).



Picture 2: Sex puppet scenario (Wagner & Broll, 2014, p. 90)

The sex puppet scenario was created as a mock up, but as Wagner & Broll say, the technology of transferring different senses at long distances is already a feasible technology (ibid. p. 92). The two focus groups expressed concerns about the sex puppet scenario. One important concern had to do with how the humanlike human should be perceived: *“If a person imagines a robot who behaves and appears as a human in all its particulars, he can only accept it as a human”* (ibid. p. 95). Another concern the scientist noted was the replacement of a partner.

Even though the mock up sex puppet was able to convey all of the senses the participants did

not see this as the same as having sex with their significant other. Other important notions in this project were ethical considerations concerning privacy, hacking and the fact that some people might replace the real life sexual experiences with the virtual (ibid. p. 96). In the VICE documentary “Digital Love Industry” the journalist Jo Fuertes-Knight is looking at intimacy in relationships with focus on virtual reality and teledildonics (VICE Media, Inc., 2014). The documentary describes how virtual reality has developed from the 1990’s until today and in which way people will meet porn related products such as teledildonics. The documentary takes the viewer to a virtual reality (VR) conference in Los Angeles, visits different producers of teledildonic devices, such as Kiiroo, and visits a porn star who has made some of the first porn movies in VR. The documentary puts Kiiroo to a test, where two testers use it teledildonically to find out how it is used. In the movie several experts and users are interviewed to shed some light on what the future of teledildonics could look like.

Our theoretical positioning

Imaginarities are used to describe the symbols, meanings and visions that communities hold with regards to something. In the case of sociotechnical imaginaries they have a broader impact as they do not just describe the imagination of an individual, but of the wider community. These imaginaries provide a means to producing systems of meaning and guide how the world is viewed and ordered collectively by the community (Jasanoff & Kim, 2009). Because imaginaries affect and influence how we view certain objects, sociotechnical imaginaries can have material outcomes that influence our behaviour and affect the identity of individuals, collectives and institutions. This means that future policies and the development of narratives are dependent on the imaginaries bound to a specific techno scientific assemblage, in our case teledildonics.

Sociotechnical Imaginaries

Sociotechnical imaginaries are useful as a theoretical concept. Imaginaries allow us as researchers to territorialize an effusive subject. Thus breaking it down into parts that are, if not measurable, then at least visible. By breaking bigger issues down into parts, we can then focus on different aspects that combine to make a whole. Where assemblages are ethereal and ever changing in their forms subject to the whims dictated by the now, the present, imaginaries are closely tied to how the future is perceived based on our past experiences. What this implies is that sociotechnical imaginaries is a concept that can lend credibility to explaining the why. This “why” is important as it is bound up in another Science and Technology Studies concept, that of co-production, which sociotechnical imaginaries are closely linked to (Jasanoff, 2004). The why becomes important in relation to co-production, as imaginaries allow us to explain why out of an infinity of possibilities, a specific possibility is chosen. Why it is being co-produced at the expense of others. Imaginaries can be used to explain how systems of meaning are produced and collectively shared, thus fostering a sense of belonging in a community. This means that an imaginary guides how a community sees and orders a world (Jasanoff & Kim, 2009, p. 47).

In this thesis, imaginaries become interesting as they also influence the material world, guiding a community in its behaviour, feelings of identity - both individually and collectively and the narratives and policies implemented by institutions (Jasanoff & Kim, 2009). By exploring the sociotechnical imaginary of teledildonics we can discuss the future assemblages surrounding teledildonics. What this

means is that by imagining the future, we can gain an understanding of what is happening in the present (Marcus, 1995). By imagining the future, perspectives are given to communities that help to inform and justify the individuals who are working within these confines, thus shaping the goals that they work towards. By influencing the collective outlook on what is imagined in the future, it is possible to control what the individual goals are. This is not just confined to scientists, engineers and designers, but also the policy makers who define their area of responsibility. When constructing policy, imaginaries can be used to decide and justify new investments that a state needs to make in collaboration with science and technology and the advances stemming from these policy changes help to reaffirm the state's ability to act responsibly. For policy makers, sociotechnical imaginaries become an never ending cycle both informing policy and acting as legitimation.

Jasanoff defines the essence of sociotechnical imaginaries as *“Collectively held and performed visions of desirable futures”* (Jasanoff & Kim, 2015, p. 19). What this means is that sociotechnical imaginaries are constructs born of the gap between our collective imaginings and the assemblages we as science and technology studies (STS) scholars use to contextualize reality. Moreover imaginaries' vividness, their sense of strength and vitality stem from their *“shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology.”* (Jasanoff & Kim, 2015, p. 19). Imaginaries thus move beyond the notions of simple ideas and gain a strength and stability that are enacted collectively while retaining a flexibility that allows imaginaries to be both temporally situated and culturally distinct.

The specific imaginaries that we are interested in are sociotechnical. As the term hints at, these imaginaries are both the products of the co-production between technology and society while being the instruments that construe the self-same production. In this fashion, sociotechnical imaginaries are associated with materialization through technology. Something that is achieved by striving toward potential futures that are encoded in material technologies and realized through action and performance. By understanding these material technologies, sociotechnical imaginaries provide a platform from which it is possible to discern the justifications and rationales used to produce the technologies. These properties mean that sociotechnical imaginaries differ from other STS work and enable the scholar to move beyond some of the earlier limitations that Jasanoff views in STS.

Moving beyond the temporal and the spacial

Jasanoff identifies four of these limitations and their solution through imaginaries as the issue of divergence in sociotechnical outcomes across diverse administrative systems where it could be expected for an event to create a homogeneous reaction globally. The reactions for different countries are all dependent on how policies and cultural sense-making that are distinct for the local system administrator have been imagined before. Imaginaries explain how the local constellation of actors integrate new experience into pre-existing and known imaginaries, preempting a chance of homogeneous meaning-making on a global scale (Jasanoff & Kim, 2015, p. 20).

The second issue is time and the inevitable change it brings. Where the past is what we build our understanding of what we expect from the future. The past is the foundation of our dreams for what lies ahead. This means that the past is open for constant reinterpretation based on the needs of the present. With the past constantly being reinterpreted as people's expectations for the future changes, how are stable and durable ideas maintained? Sociotechnical imaginaries overcome this by engaging the ethical regimes that people maintain with the materiality of the world that they inhabit. By looking at technological systems from the past, people are presented with former cultural achievements or gain a reference point they can use to imagine what the future holds (Jasanoff & Kim, 2015, p. 21).

A third limitation Jasanoff identifies is space. Space in a geographical sense of how ideologies are co-produced from ideas and practices across national borders. Views held by an individual can gain a foothold and become a dominant force that holds a territory across national borders. To understand the narrative of a technology, knowing the origins of its views and practices becomes essential for understanding how people identify with the technology and integrate it into their sense-making. While space can be understood through networks that give an insight into the actors' power relations. Imaginaries link space with scale in a normative coupling that gives a sense of spacial distinction. The spacial distinction denotes both depth and breadth of the system. The actors can be identified as being anything from local to global (Jasanoff & Kim, 2015 p. 22).

The fourth and last issue that Jasanoff deals with through imaginaries is the relation between collectives and individuals. Like assemblages, imaginaries are prone to change their constellation dependent on who they are represented by. This allows us a better understanding of what is presented by the collective formation, and what the ideas of an individual are. It also allows us to understand how people

who join a collective operate and how these collectives are maintained. It becomes important for science and technology studies (STS) scholars to remember that while non-human actors can have just as much influence on a situation as their human counterparts, human actors are more than just a small part of a bigger picture, (Jasanoff & Kim, 2015, p. 23) they are also subject to influence by the collectives they are a part of. The human actors are neither defined by their struggle nor with the material or the enactment of their hopes and dreams through a collective, but rather the co-production of these two.

The concept of sociotechnical imaginaries enable us as scholars to gain an overview of how our situation is defined and expressed across both time and space, local or national and individual or collective. Imaginaries are both abstract and durable (Jasanoff & Kim, 2015, p. 35) and are a means to shedding light on issues that could otherwise not be investigated. It can be difficult to identify whether something is an imaginary or maybe just policy or ideology. To operationalize sociotechnical imaginaries, we combine the concept with other methodologies that invoke interpretive research such as sensory ethnography, and we analyse our data by questioning the nature of structure-agency relationships and how this affects meaning-making. Sociotechnical imaginaries can be applied to our analysis through an understanding of how our participants represent the alternate futures, link the past to the future and define space (Jasanoff & Kim, 2015, p. 36). By comparing our actors' personal narratives we can see how they shape their future in accordance with how they have imagined "elsewheres and elsewhens"(Jasanoff & Kim, 2015, p. 36), how they have turned their imaginings into ideas that have become part of the social meaning-making of their communities.

While imaginaries can be derived from individual dreams and hopes, they are generally held by communities, such as nations, or held by assemblages; or in the case of this project our assemblage is constructed of people involved with sex toys and who have at some point in time been in a long distance relationships .

With the sociotechnical imaginary framework we are looking at not just the material instruments that actors are accumulating to promote their version of the future but also the symbolic and cultural resources that they produce to this effect. Such resources could be images, slogans or metaphors that evoke memories to something we can relate.

In this project, we are utilizing sociotechnical imaginaries to complete a bridging between how different social actors and science and technology become entwined through their imaginings. In 1995, George

Marcus articulated the notion of techno scientific imaginaries. While techno scientific imaginaries initially seem indistinguishable from sociotechnical imaginaries they vary in their scope. The techno scientific imaginaries focus much more on the local level versus the global level and the experts involved in the production of scientific achievements (Jasanoff & Kim, 2015, p. 37).

The context of the imaginary becomes tied to a specific workplace and thus limited to the dreams and imaginings of that locations. Sociotechnical imaginaries have a much broader scope and focus not just on a local level but expands to view an imaginaries' impact on everything from communities to nation states. Jasanoff describes her view of sociotechnical imaginaries as:

An imaginary is neither cause nor effect in a conventional sense but rather a continually rearticulated awareness of order in social life, and a resulting commitment to that order's coherence and continuity (Jasanoff & Kim, 2015, p. 38).

Teledildonics inhabit an assemblage that has its roots in several different assemblages such as sex toys and data security. Their association with regular sex toys means that teledildonics are subject to the same laws, policy and social taboos as sex toys. The differences in opinion that arise from the contestation of ethical regimes and administrative systems relating to these subjects necessitate a debate on the understanding of what is good for the community. These debates often centre around techno scientific issues, such as the data security of the We-vibe application We-connect. While as mentioned, sociotechnical imaginaries can be derived from an individual, they are often the property of state actors and are used to promote a specific outcome. An established sociotechnical imaginary that is functioning on a national level will often disperse from a national level into popular culture through mass media or popular authors.

Sensory ethnography as a theoretical framework

Which senses are you using right now? Can you feel the chair you are sitting on, smell the freshly-cut grass, hear the happy sound of children playing outside or taste the fresh toothpaste in your mouth, while you look at this text? We are not always aware of it, but our senses are all a part of creating an image of what we do, where we are and who we are. When doing everyday tasks we use all of our senses in an interconnected way most of the time without even knowing or realising it. An element of relationships that we found especially sensorial were sexual relations. Before we started on this thesis,

we were certain that the senses would play a large part on the subject of teledildonics and how they would be used by couples in relationships.

Our methodological and theoretical approach is based on the work of Sarah Pink's Sensory Ethnography (2015) and in this chapter we will elaborate on some of the theoretical terms of sensory ethnography that we found relevant in relation to the further examination and analysis of our empirical material.

Sarah Pink describes the importance of looking at the senses in this way: *"An acknowledgement that sensoriality is fundamental to how we learn about, understand and represent other people's lives is increasingly central to academic and applied practice in the social science and humanities"* (Pink, 2015, p. 3). Pink describes sensory ethnography as a developing field of practices (ibid. p. 6). She does not see sensory ethnography as going against traditional ethnographic methods as we know them, but rather as a natural evolution of seeing these methods both from the observing and reflecting ethnographer to the participating and sensing ethnographer. She furthermore describes this as a transition from participant observation to multisensory participation (Pink, 2010).

Pink notes in a lecture given in 2010, right after the publication of the first edition of her book "Doing Sensory Ethnography" that the difference between ethnographic studies and sensory ethnography is the interconnectedness of the senses, claiming that no senses are more important than others as it has been described earlier (Pink, 2010). This goes against other ethnographic notions that visual and auditory senses are the most important in ethnographic methods (Atkinson, Delamont & Housley, 2008, p. 180). Pink wishes to supplement traditional ethnography and acknowledges that all the senses are a part of understanding and interpreting our surroundings.

Ethnographic places in sensory ethnography

Pink claims that the five senses hearing, seeing, feeling, smelling and tasting are a modern Western way to describe the senses (Pink, 2015, p. 59). In this study we have not encountered any cultural clash in relation to the sensory categories. We have had to be aware that when describing "sensoria"(Pink, 2015), our interviewees can have different perceptions of how the senses are perceived. An example is

the sense of touch for which we have experienced that users distinguish this from the sense of feeling in different ways.

During our analysis we gathered empirical material concerning the sensory experiences of our interviewees. From these sensoria, we determined when they were articulated explicitly, and when they were talked about in a tacit way. We worked through our empirical material several times to get a broader perspective of our users' sensoria and to create a *place* for our research. Pink refers to this way of analysing as ethnographic places. Pink specifies this term as "*events that bring together combinations and interweaving of memory, imagination, embodied experience, socialites, theory, power relations and more*" (Pink, 2015 p. 142). When using the word place, we do not see it as a specific space or something material per se. It is a state of mind or a way to remember or communicate the senses as an ethnographer. Ethnographic places are also a world that we as researchers create when communicating about our findings and research (ibid. p. 48). Ethnographic places are always changing and it will never be places to which you can "go back". They will always change in relation to who are a part of the place-making, because different people will bring their own sensory experiences into play and will create spaces related to their own sensoria and the surrounding society. To create an ethnographic place, it is useful to look at future scenarios and imaginaries in the digital world. Pink sees digital media in a perspective of change like this:

Thus along with other forms of materiality and sociality, I account both theoretically and ethnographically for how digital presences and the senses are part of everyday life. By approaching research this way – to account for people, processes, things and environments – I seek to develop new ways of thinking about the worlds, the material, technological, social and sensory environments and the people who these are being designed for (Pink, 2014, p. 422).

Considering ethnographic places, we seek to gain knowledge of the imaginaries of our interviewees, so we can understand their world, perceptions and places in relation to the sensoria.

In the next paragraph we will look at how we have used sensory ethnography in the analysis process. We will expand on our analysis using sensory memories in relation to our fieldwork and interviews to create a space for our analysis.

Sensory memories

Memories are bound to all the senses, it can be a song on the radio, a certain smell, or a taste that reminds you of something. Individual memories can be very personal but are often related to collective and cultural memories. Pink divides sensory memory into three roles:

The first is to aid in understanding the meanings and nature of the memories that research participants recount, enact, define or reflect on for researchers. The second is to help us to understand how ethnographers might generate insights into ways other people remember through trying to share their emplacement. The third is to assist us to comprehend how ethnographers use their own memories in auto-ethnographic accounts (Pink, 2015, p. 44).

Sensory memories and ethnographic places are linked together by these three roles, in which the place making of sensory experiences are interconnected. In our analysis the sensory memories are relevant to all our empirical material. By creating visual sensory cards that entail a series of cards with pictures representing the five senses, we acted in accordance with the roles as outlined by Sarah Pink with regards to sensory memories. In our ethnographic field work, we incorporated Pink's thoughts on how to generate insights into the field and how our own memories contributed to our understanding of the field. This was done through emplacement with the people at the Erotic World Expo, and by trying to relate our own memories with the sensory experiences we encountered at the Expo. At last, it is worth mentioning that memories can be very material, through memory objects. We have used memory objects to re-encounter sensorial memories in order to re-create new dimensions in the analysis (Pink, 2015, p. 142).

In this paragraph we have looked at sensory memories as a way of analysing data from interviews and fieldwork. We have established that both individual, shared and cultural memories are bound to both materials and senses.

Who? What? Where and why? - Thematising our project

When initiating a new research project there are several stages to work through. These stages are thematised through several key questions that we as researchers must resolve before we launch into our interviews. These questions cover the *who, what, where and why* of the project. An understanding of these underlying questions is essential for formulating a systematic production of new knowledge (Kvale, 1997, p. 102). We must be able to identify whether or not our interviews are producing new knowledge. In order to do this we will present the methodological nature of this project and the considerations we have had along with the choices we have made throughout the process of gathering empirical data. By formulating a research question we defined the what of our situation. Our problem statement allowed us to reach an understanding of the topic that we aimed to uncover through our research. In our introduction, we explained why we find this subject to be of interest and why this project will contribute new knowledge to the field. As to how, we will in the following present our methods of gathering data: Field study, sensory ethnography, user interviews and an expert interview. Furthermore, based on our problem statement and the knowledge that we seek, our main goal will be the collection of empirical data through exploratory interviews (Kvale, 1997, p. 104).

We will also take a look at the ethical considerations which play a big role in this project. The reasons that our moral and ethical compasses play such a big part, are the sensitive nature and tabooed theme surrounding the use of sex toys. Because of the intimate and sensitive nature of the project, we are aware of the pitfalls that these personal themes will have; both to users and to ourselves.

In this project, observations of We-Vibe being used in a relational setting was outside our comfort zone. We also considered personal usage of the toy to create our own sensual experience that we could then encompass in the project. These considerations were rejected as being too personal a barrier for us to surpass. This is the reason that we chose qualitative interviews as our empirical data collection method.

To wrap up our methodological considerations we will make a short presentation of our gathered empirical data so as to give an insight into the empirical framework used for further analysis. Our project aims to be as transparent as possible to create a valid and compelling empirical foundation for our analysis and results.

Sensory Ethnography

After defining the goal of this thesis we established our theoretical approach. A clear understanding of the theoretical platform used throughout the project was necessary not just during the analysis stage, but also during the initial interview stages. This was because our theory became the reality from which our questions were framed (Kvale, 1997, p. 103). This reality enforced certain constraints throughout the interview that patterned not just the direction of the interview, but the type of data we got. Our research question was focused on the relation between couples and their use of teledildonics, so we felt that sensory ethnography, with its aptitude for all the senses, was a good fit.

Why senses?

In this project, our aim was to understand the way couples in relationships perceive the technology of teledildonics, such as the We-vibe vibrator. As described in the Greenberg & Neustaedter (2011), the evolution of long distance relationships has developed from writing of letters, to telephone conversations, and today the act of being able to see each other in real time over video chats, such as Skype (Greenberg & Neustaedter, 2011, p. 2). This evolution has created new ways for couples in long distance relationships to be together and has gone from the simple sense of looking at a letter, to hearing each other in real time, to seeing each other. This made us wonder if the next level of being together, without being together, could be to introduce another sensory experience. In the futuristic scenario of Howard Rheingold (1991), he describes the teledildonic technology as a communicative device that is able to showcase tactile stimulation (Rheingold, 1991, p. 345). In this regard we found it interesting to look at the new sensory experience that teledildonics could contribute for couples in long distance relationships and what effects it could have on intimacy. We came across the methodological perspectives of Sarah Pink; *Sensory Ethnography*. In this project we both use sensory ethnography as a theoretical and a methodological framework, to create an understanding of the sensory experiences of using teledildonics. In this paragraph we will introduce how we have used sensory ethnography in the making of interview guides, during interviews and during our observations at the Erotic World Expo.

What is Sensory Ethnography?

We have investigated how the technology was experienced on a sensory level. We have tried to focus



Picture 3: Sensory cards used during interviews

on the tactile way of sensing and using the technology. For this we have used sensory ethnography.

According to Sarah Pink (2015) the classical ethnographic methods contain a sensory aspect. As the classical ethnographic method is a way to look beyond pure observations and see other people's values, social worlds and experiences (Pink, 2015, p. 6), Pink sees sensory ethnography as 'embodied experiences' where "the researcher learns and knows through her or his whole experiencing body" (Pink, 2015, p. 27). This means that the senses are creating a way to see and understand things around us on another and embodied level.

Through our focus on sensory input, we approximated our participants' "places" and were able to share their experiences. We created five visual cards that indicated the five senses and used them during the interview to explain which senses were used when intimate with a partner in a long distance relationship. By participating at the Erotic World Expo, we also created our own "places", through sensory experiences such as smell, touch, sound and sight. These experiences helped us to better understand our participants and decipher the information they gave us.

Challenging sensory ethnography

Sensory ethnography has been useful on several levels, both in our way of gathering material, and as a theoretical framework for this thesis. In relation to our intimate topic we found it crucial to talk to our interviewees about sensory experiences, because we were not able to experience the use of teledildonics ourselves. It has been helpful to look at the senses, not only by asking about them in our interviews, but also while we were focusing on places, memory and the tacit use of sensory experiences when processing our empirical material and conducting field work. Sensory ethnography is effective for creating an extra dimension in the ethnographic field work. Throughout the project, a major challenge for us was to be aware of the interconnected nature of the senses. We believe that sensory ethnography can be comprehensive in its nature. It can be difficult to differentiate and be aware of every sensory element in our empirical material. We noted that some senses were harder to discover than others. We gained the insight that not all senses are easy to discover and we found this to be very true in practice. An example of this was the sense of taste. Taste was a sense that none of our participants put any focus on and thus we could not find it in our empirical material. The theory of senses has been a very abstract concept for us to work with and at times we experienced in our fieldwork and interviews that it was difficult to master.

Project design

Our next step involved figuring out just how we in practicality could furnish the necessary empirical material for our research. This stage of our project encompassed deliberations on how much time we had and how to best use that time. By creating a project design that encompassed our choice of theory, time budget and interview guide (appendix 1) and more, we hoped to answer our own questions of *how*. Through a simple Gantt map we were able to budget how much time we imagined was needed for our different sub goals. By being aware of our sub goals we could set specific dates for milestones and thus gain an overview that helped us not lose track of where we were going. It was at this stage as well that we decided on conducting qualitative interviews rather than using other methods, such as embedded field work or questionnaires.

Interviews

Throughout the project we have conducted several interviews with both users and an expert. We have recruited participants through the newsletter subscribers at the web shop Winkwink.dk - a Danish online shop which sells sex toys and lingerie. We made an agreement with the company behind, K.H. ApS. They distributed our inquiry for participants through their online newsletter, which has more than 3000 subscribers, mostly customers from the shop. We are aware that recruiting participants by this method attracts a special kind of people. We will elaborate on this in the chapter concerning ethical considerations.

We found inspiration for the interview guide and guidelines for our fieldwork from Sarah Pink's book "Doing Sensory Ethnography" (2015). We found this method very useful, because the sensuous experience forms a big and a significant part of our research field.

As mentioned above, we did not wish to observe the use of a teledildonic device or experience it ourselves. Therefore we found it necessary to conduct interviews with users and experts in the field of teledildonics. We were uncertain of the difficulty of getting access to people who had been or currently are in a long distance relationships and who have experience using a teledildonic device; in our case the We-vibe. We decided to search for both couples who had used the We-vibe and couples who had been in long distance relationships. We found that couples in long distance relationships who have never used the device could be helpful by informing us about the different elements of being in a long distance relationship. We did not want to narrow our search for participants to couples in long distance relationships only, because any couple that had some kind of experience with the device and the application would be within our field of interest.

Our method for finding participants involved a request for an interview in the newsletter of winkwink.dk. The founder of the sex shop contributed by allowing us the possibility of giving every couple that participated a gift card of 200 DKK for the shop in exchange for an interview. Only a few hours after the newsletter had been distributed, we were contacted by several couples who wanted to participate.

Interview guide

Our interview guide was based on the principles of Steinar Kvale's *Seven Stages in an Interview* (Kvale, 1997, p. 95). Mainly the first two stages: *Thematisation* and *Design*.

We drew on the knowledge that we had already acquired through clarifying our what, how and why in our project design and moved on to narrow it down to our most relevant concepts, such as long distance relationships, teledildonics, intimacy etc. This was done through a comprehensive literature study by means of which we narrowed down our field. The literature that we read allowed us to come closer to *what* we wanted to study, in this case the relation between the senses, teledildonics and long distance relationships.

Through the process of creating an interview guide we further formulated how we intended to illuminate our research question and discussed how many people we needed to interview. Our interview guide was a tool in which we prepared and decided on what topics we wanted to discuss with our participants based on the thematisation of our project (Kvale 1997, p. 95). As mentioned earlier, the different stages of a project are dependent on each other which is why we worked to incorporate sensory ethnography into the way we formulated our questions.

We experienced this during our first interview. We had prepared sensory cards displaying the different senses. It turned out to be tough to get our participant to answer which senses he used. Both when he was with his girlfriend in real life and which ones he missed when they were apart. Then Jacob asked if it could be a perfume or shampoo that could help recall memories or feelings. This was just the right way to put it for our interviewee, who recalled a detailed memory with him and his girlfriend and the smell of her perfume. We learned a lot from conducting the first interview and we found it necessary to revise and evolve our interview guide based on this experience. This resulted in writing new and specific questions based on prior experiences for each new interview we conducted. We also designed a specific interview guide for our expert interview as our expert was in a position to answer our questions from a new perspective (Expert interview guide appendix 2).

Ethical considerations when conducting a research project

It was vital to be aware of the ethical considerations concerned with our interviews and field work and how they would affect not just our participants but also ourselves. We needed to be aware that just as

there were several stages to completing our project, each stage had its own distinct ethical guidelines that must be identified and discussed. In this paragraph we present all of our ethical considerations relating to the different stages (Kvale, 1997, p. 117). We define ethics as moral choices that we made throughout this process that would influence not just ourselves but also others. We had to reflect on whether the choices we made would contribute to the production of knowledge in a way that will help mankind and if we used that knowledge to strengthen the dignity of mankind and whether we risked damaging our informants or ourselves (Kvale, 1997, p. 115).

In this process we have been aware that there might be special considerations to be taken into account when working with informants who share intimate information regarding their sexual interactions. We had to be aware that not only were the informants working outside their comfort zones, but also that we, as interviewers, might be put into situations where we had to leave our comfort zones. We asked ourselves: How do we deal with these situations and how do we react? Because of the subject matter we felt it was even more important to have an informed consent from our participants, and we spent some time before each interview explaining the process and how we planned on keeping them anonymous. All of our participants were anonymous and we have chosen not to use any knowledge gained through the interviews that could be used to identify them. We have chosen to do so to be sure that the participants will not be affected by our project in the future, by employers, families etc. We have recorded all of our interviews with consent from all of our participants. The recordings will only be accessible to the authors of this thesis and will be kept confidential.

We have also been very transparent and honest with each other about our own boundaries. Both of us found it very transgressive to talk to people about their sex life. We carefully made an interview guide that we felt comfortable with and, as mentioned before, we revised it after every interview to make the questions more specific but also to adapt to our boundaries. Our boundaries have been tested throughout this project, but they have also been pushed further. We have both experienced that the more we became immersed into the topic, the less we found it embarrassing to talk about and discuss.

We have chosen not to make our interview with the sexologist Maj Wismann anonymous because we are using her as an expert. We have done so with her consent.

Another consideration is the way of collecting participants. We are aware that this way of recruiting users for interviews attracts one group of couples. We know that the participants have all made a purchase on winkwink.dk. This has not been a requirement for participating, but we know that most of the subscribers to the winkwink.dk newsletter have been customers in the shop. We are aware that the users we have recruited all have a natural interest in sex toys, but we have assessed this as an advantage for our interviews, because all of our participants have been very open about the intimate topics we have presented before them.

Through our ad in winkwink's newsletter, we were contacted by a young couple stating that they were 15 and 16 years old, and that they are in a long distance relationship in which sex toys play a significant role. The girl who contacted us said that of those within her age group in her social network several experimented with sex toys.

We have chosen not to include this couple in our study, for several different reasons. Firstly we found it morally ambiguous to interview a couple so close to the age of consent. We were intimidated by the thought of listening to somebody that young explain intimate details of their sexual life. Although they are both over the age of consent, the experiences that we could expect them to tell about would inevitably transcend a time when they were younger. By diving into these experiences, finding the narratives that would drive our research, we felt that we would cross a line morally. All in all, we felt uncomfortable about interviewing a 9th grader on her sexual escapades. In response to this incident, we chose to set our age limit to 18+ so as not to place ourselves in a situation too far outside of our comfort zones.

While many of our ethical considerations were based on how to interact with our participants, we also had to evaluate the strength of our empiricism and how critically we could faithfully push our data during the analysis. Furthermore we decided that while our participants should be allowed to view the citations we use, their say in how we have interpreted them are limited.

Personal relations

Author Anna Lilja Steensig has been a part of our collaborator Winkwink.dk as a student worker for several years. This means that we have a personal connection that plays a role in our own assumptions on the topic. The company behind winkwink, K.H. ApS is also founded by her boyfriend Kristoffer Hjerrild Ovesen. We are fully aware that Anna can be biased, but she also has a lot of knowledge from the field, which we have found useful.

Winkwink.dk as a collaborator

Through the connection between one of the authors and the sex shop winkwink.dk, we managed to establish collaboration with the shop. We found our users through the newsletter subscribers from winkwink. These subscribers have then contacted us through email and telephone. Winkwink has also sponsored gift cards for all participants and one We-vibe as a prize that could be won by one of the customers through a competition. We have not received access to any customer database or sensitive information from the shop and every interview we have made has been with the informed consent from all of the participants who have all contacted us themselves. CEO Kristoffer Hjerrild Ovesen has been very supportive in helping us with information on products and contact information to distributors etc. In return we have given the shop permission to use our research material. The results of our research will only be made available to winkwink after we have defended our thesis. While they will have access to our analysis, they will not have access to the raw data.

Presentation of data

The interviews we have conducted throughout this project are the foundation on which we have acted. Our empirical background acts as the basis from which we created the analysis. Through the analysis, we can contribute to the academic investigation of this field.

We have conducted five interviews with participants throughout this project. Of the five, three were with couples whom we were able to interview together and two were with only one part of the couple present. Because of the nature of long distance relationships, we were not able to hold the all of the interviews on a face-to-face basis. While two of the interviews were conducted face-to-face, by visiting

the couples in their homes, two of the interviews were completed over Skype, where we talked using video chat. In this thesis Skype was viewed as a method of interacting with couples who were geographically unavailable for face-to-face interviews. Lastly we conducted one interview over the phone, because the interviewee was unable to use Skype.

The duration of our interviews varied from 30 to 45 minutes (See transcribed interviews in Appendix 3).

Details of our user interviews

As discussed earlier, our topic is of an intimate nature. Therefore, we have chosen to make all of our user interviews anonymous. In Figure 2 we give an overview over the participants, without giving any personal details that might contribute to recognising the specific informants. In this figure, the aliases we have used will also be presented. The aliases will be used as references throughout the rest of this thesis.

Informant no. Alias	Relationship status For how long?	Long distance relationship Current? Where? For how long?	Age Male: M Female: F	Sex toy experience We-vibe owners?	Interview
1 Chris Rachel	Boyfriend-Girlfriend 7 months	Yes. Different countries. During	M: 25 F: 18	Not very experienced Have not used a We-vibe	Face-to-face Only the male
2 Bob Pat	Married 12 years	No. Different cities (approx. 75 km distance). 2 years.	M: 50 F: 55	Very experienced Have used We-vibe	Face-to-face Both at the same time
3	Boyfriend-Girlfriend	No. During job as a	M: 32 F: 31	Very experienced	Video-chat over Skype.

Dale Tammy	10 years	truck-driver. On-off in two years		Have used We-vibe	Both at the same time
4 Matthew Claire	Boyfriend- Girlfriend 3 years	Yes. Different countries. Ongoing	M: 36 F: 34	Moderately experienced. Have not used the We-vibe	Video-chat over Skype. Both at the same time
5 Erica	Boyfriend- Girlfriend 4,5 year	No. Different cities (approx. 40 km distance). 0,5 year.	M: 34 F: 33	Experienced Have used the We-vibe	Telephone interview. Female only.

Figure 2: Anonymous presentation of our Participants

Expert interview

Along with interviewing couples on their experiences with either We-vibe or long distance relationships we also interviewed a sexologist. The aim of this interview was to get an expert perspective on long distance relationships, intimacy and sex toys. We interviewed sexologist Maj Wismann. Wismann is educated as a clinical sexologist and couples therapist and has been a member of the board of the Danish Sexologist Association. She has been a sexologist since 2006 and has her own therapeutic clinique (Wismann, 2016). We interviewed Maj Wismann over the phone and used a separate interview guide that focused on her as an expert in the field. While we were unable to gain access to the designers of We-vibe, in the company “Standard Innovation Corporation”, based in Canada and the Netherlands, we were able to speak with one of their employees during the Erotic World Expo.

Fieldwork

As a supplement to our interviews, we attended the “Erotic World” Expo in Valbyhallen on the 8th-10th of May 2016. Erotic World is an expo where a lot of sex toys companies and shops present their products. To get a better understanding of the field we were studying, we needed to create our own

sensoria relating to sex toys and the world their users inhabit without actually engaging in any of the scenarios that are usually related to the use of sex toys.

Our aim for the Expo was to get a sensory image of our field and to have casual conversations with different experts in the business.

We visited on the 8th of April. It was against the Expo's rules to take pictures and the ambient noise from the many people and shows made it impossible for us to make audio recordings. Because of this we documented our experience through field notes.

Throughout the project, our focus has been sensory ethnography. Therefore our sensoria were the focus of our observation and participation during the expo. We especially drew upon Pink's term *place making* in which she defines a "place as a coming together an 'entanglement' of persons, things, trajectories, sensations, discourses, and more" (Pink, 2015, p. 48). Places are momentary and constantly changing. In a sensory ethnographic study it can be beneficial to be acquainted with informants and participant's places, to have an overall aspect of the sensory experiences the person makes. Another notion is to be aware of your own place-making as an observer and participant in the field (Pink, 2015, p. 49). In our fieldwork we were very aware of our own perception of the field and our field notes are made from our own place-making, by being aware of our own sensory experiences and prejudices. Because of their private nature our field notes have not been attached as an appendix

Our role in the field

We were both very excited to go to the Expo. Neither of us had ever been to anything like Erotic World so we had no idea what we were going to experience. We tried to be as open as possible, but knew before going, that this could be especially challenging as we both were subject to the meaning-making of imaginaries dealing with sex toys. Because the field for us was rather transgressive, we were both aware to try to meet the field without prejudices. As a part of our own place-making we were aware of how other people would meet us: As a couple with no other agenda.

While at the Expo, our experience was that contacting people and immediately informing them about our project and our role as students was impossible. There was simply too much going on and we would be too far along in a conversation before we had the ability to explain who and what we were. To define

our role at the Expo it was as observers, but also as participants where we wanted to interact with other people and engage them on our topic of teledildonics. We were aware that revealing that we were students, writing our thesis on teledildonics, could potentially scare people from talking to us, but we also feel that we would not be able to defend using their information ethically without their knowing consent. Therefore instead of conducting interviews we recorded our conversations as a part of our fieldnotes.

Transcribing

As a part of being able to use our interviews as empirical data for our analysis, we transcribed all of our interviews from the spoken word to text. *Transcription* is a way to transform the sound from the recorded interviews into written text (Kvale, 1997, p. 161). Transcribing interviews also acts as a precursor to the analysis by offering an ability to thoroughly go through the empirical material. It is in this stage important to be aware that there will always be some decisions and assessments that will be taken through the transcribing process. It is vital to note that the raw empirical data is not the transcribed interview because through the transcribing process sentences will be transformed from spoken language to written (Kvale, 1997, p. 167). Through transcribing we have been aware of trying to create the same meanings of the sentences as we assess the interviewees have had in the interview as it is our main goal to portray the participants' opinions, views and experiences (Appendix 3).

Field notes

Another essential aspect of our field study revolves on the art of taking/jotting field notes. As described in Emerson, Fretz and Shaw's book *Writing Ethnographic Field notes* (1995), it can be a challenge to find the right time for writing field notes. Therefore before going to the Expo, we discussed in what way it would be most appropriate to obtain field notes. Our objective with the field work was to gain a broader depth of the sensory stimulus experience by our participants in the field, without actually using teledildonics. We then devoted attention on the sensory experiences that the Expo could give us thus assimilating into the imaginary of sex toys. As mentioned in Emerson, Fretz and Shaw, an ethnographer has to decide for him or herself, when it is most appropriate to jot down notes (Emerson, Fretz, & Shaw, 1995, p. 23). In our case, we did not find it appropriate to write notes while talking to people, even though they knew that we were students. We went through several walks in the Expo area before

talking to anyone. After every walk, we went to the café area to write down our thoughts and observations. At the café area it did not seem abnormal to sit down and write. We both took some short notes on our smartphones, while walking, but found it useful to jot down on a pad when we sat down at the café. Noticing and writing down key events, incidents, citations and our own feelings were part of the process. This was a way for us to remember the specific situation better, when we went through our field notes again (Emerson, Fretz & Shaw, 1995, p. 27). This way of jotting is called to do a *mnemonic phrase or word*. The purpose is to recall one's own emotions at the time (ibid., p. 31).

Right after ending our field study, we both went through our notes to see if we had left some experiences out.

Situational analysis

To gain an overview of our data we leaned on precepts of situational analysis. Situational analysis is a tool that through mapping of data allow researchers to dissect acquired data and understand what was being said or not said. From this perspective we could then see new angles and gain new perspectives on discourses of interest. As our situation changed so did our maps, and thus we could continuously reflect on the changes in our own assumptions as well as our empirical material. By identifying key elements through mapping, we found stories that were worth telling.

Situational analysis is based on grounded theory but was designed by Adele Clarke (2003) to move beyond what she viewed as inaccuracies of grounded theory. It is meant to be a tool that allows a researcher to gain situational views on postmodern theoretical and methodological concerns and help resolve and unwind the complexities that are encountered (Clarke 2003, p. 554).

After transcribing our interviews we reread them, highlighting any passages that we thought relevant to the discourses in our research question. These passages we then cut out and used to create a massive relational map. Based on this relational map we then located groupings that were of interest, either because of their relations or lack thereof and created new maps based on these findings.



Picture 4: Situation analysis map for our study

The Technology of Teledildonics

Throughout the project our goal has been to uncover the imaginings that transpire between the use of teledildonics and long distance relationships to determine which role, if any, senses play. By utilizing mapping techniques we have sought to uncover how the teledildonic imaginary has been stabilized through re-enactment and co-production. We were interested in how the stabilization of the sociotechnical imaginary concerning teledildonics affected the relations for couples in long distance relationships with regards to intimacy. By creating a messy map from our data we sought to identify and describe the relations between elements, thus gaining an overview of the different elements involved. This also allowed us to gauge which elements played a role, or if any of these elements had become marginalized. By discovering which role our elements played in relation to each other we began to understand the discourses involved (Clarke, 2003). This helped us unfold the narrative behind intimacy in long distance relationships and what ideologies and interests were held by the actors. By working with different levels of analysis such as messy maps and imaginaries we were able to discern heterogeneous aspects of sensory analysis. Imaginaries have helped by giving structure to the situations that we constructed through our sensoria. We have been interested in analysing the sensescape created around the use of teledildonics and what if any affect they would have on long distance relationships. We looked at how teledildonics are imagined and at the materiality and sociality involved in their use. Our analysis has been situated both spatially and temporally away from our fieldwork sites. In sensory ethnography we seek to construct connections between our materials and the associated knowing of their production (Pink, 2015, p. 143). Therefore it was of no consequence that our analysis was separated from our work site. Our materials became texts that functioned as aids that were evocative in helping us reproduce the sensorial experiences of the “situation”.

In this analysis, sensory ethnography was used to define the reality that we worked within. Sensory ethnography became the tool that explained the context within which we were working. Sociotechnical imaginaries were used as a tool to present how our sensoria were interpreted through both time and space. Through sociotechnical imaginaries we can explain how imagining the future not only shapes it but also affects the past. Sociotechnical imaginaries are co-produced through our sensory experiences and the technology that forms our everyday lives. The way in which our participants have experienced not just each other, but also online communication, phone security, sex toys or porn, all affect how they

relate to teledildonics and how they imagine what the future will hold. Sociotechnical imaginaries became a method through which we analysed the nature of the relationships our participants expressed through their experiences. From this we inquired into their meaning-making.

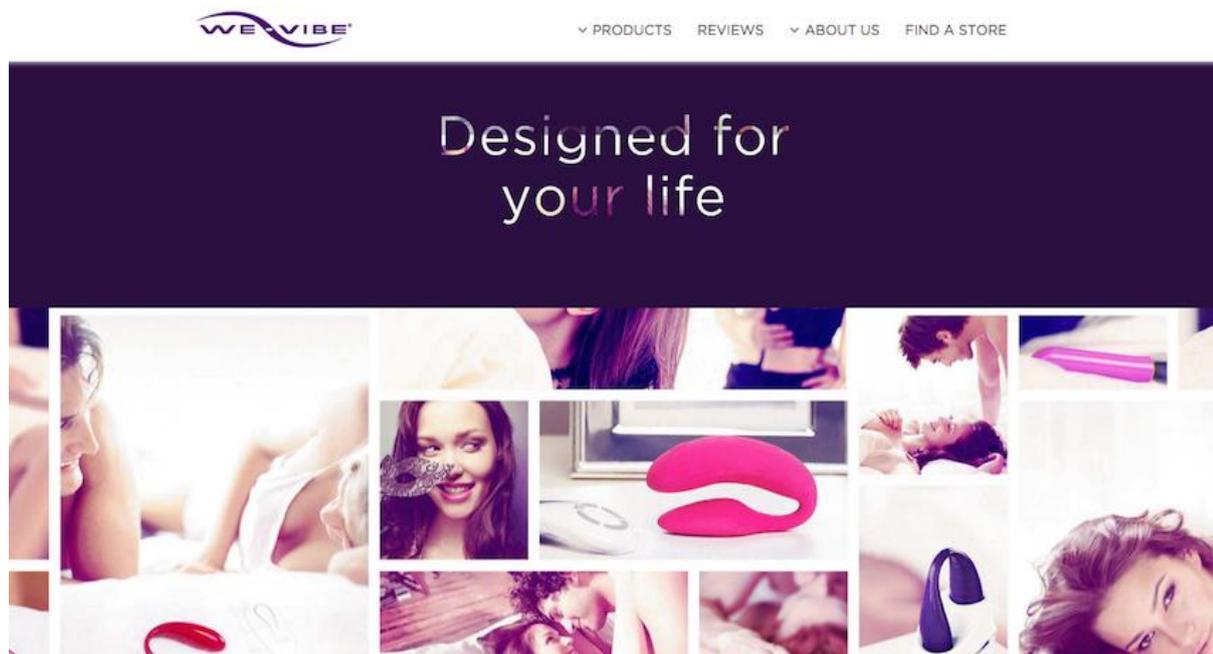
We used sociotechnical imaginaries to express how our participants sensoria influenced the greater sociotechnical imaginaries of teledildonics. With sensory ethnography, we acknowledge that our earlier experiences are bound to our senses and can be conjured or invoked when we are introduced to something similar. Therefore the reality we are working within in this project cannot be reduced to just sight and sound as in classical ethnography (Atkinson, Delamont & Housley, 2008, p. 180; Pink, 2010). All our sensoria contribute to how we experience the world and this means that we complete rehearsals that are integrated into many different imaginaries every day. When initially embarking on this project our own experiences limited us in how we could imagine the project. Without any personal experiences of teledildonics to thematise our project with, we were bound to imagine something within our own frame of reference.

The public's imagination of Teledildonics

The initial design thoughts of We-vibe were for use between couples during sex (We-vibe, 2016). This aspiration has also been incorporated into the design of the We-connect application. A We-vibe representative expressed the dimension of the product concerning couples as follows while at the Erotic World Expo

That's why the application is not made for "casual dating" like Tinder. Instead it is made for couples in solid relationships. In this fashion, We-vibe is a bit prude (Fieldnotes: We-vibe Representative, 2016).

She defined the design and the marketing of the device as "prude". She notes that the application is not to be used for casual dating as seen in applications such as "Tinder" or "Grindr". These are two examples of applications that are mostly designed for connecting with available random sex partners. The design of the We-vibe vibrator and we-connect application is according to the We-vibe representative made for couples in devoted relationships. This representation is strengthened by the material that is presented on the homepage of We-vibe. Picture 5 is a screenshot of the front page of the We-vibe homepage.



Picture 5: Screenshot from We-vibe homepage - We-vibe.com

Through the invocation of slogans, marketing material and imagery focused on discourses promoting values that are based on high quality while maintaining a sense of puritan morality, We-vibe are strengthening an imaginary that is divergent from its parent imaginary in sex toys. We find this divergence intriguing as it showcases how We-vibe wishes to move itself away from an association with the porn industry to something more normative. Thus allowing the actors involved with sex toys to reveal this fact without shame or embarrassment. *“Because of the design, I can say to my mother-in-law that I work for at sex toy company without feeling embarrassed”* (Fieldnotes: We-vibe representative, 2016).

One of the rehearsals used to promote an imaginary of teledildonics was an inclusion of We-vibe vibrators in the Oscars swag-bag that was handed out during the 2010 Academy Award (the Oscars) to all the guests (We-vibe, 2010). This inclusion helped promote We-vibe as something that is not only acceptable but also glamorous. This then references We-vibe in a broader narrative that in our minds align We-vibe with the prestige involved in the Oscars. Through media interpretation the We-vibe then became tied to other popular culture. Through repeated exposure at the Oscars, a gradual stabilization of the imaginary occurred via the creation of a standardized history (Felt, 2015, p 15.)

We have considered the sociotechnical imaginaries of teledildonics and why the porn industry and sex toy business are reproducing the use of teledildonics through rehearsals and stabilisations of imaginaries. Based on this information we have argued that many factors play a role in how the future of teledildonic devices are imagined. One of these factors is the use of our senses and the role they play in how we perceive experiences. Later on we will look more thoroughly at the use of senses and the notion of intimacy in relationships, in order to delve into the physical elements of teledildonics.

Is We-Vibe a Teledildonic?

In August of 2014, We-vibe launched an application, called the “We-connect” that works with their selection of sex toys, among others the We-vibe vibrator.

A combination of the We-vibe products and the We-connect application form a teledildonic device. The vibrator is not by itself a teledildonic device, but when connected with the application it creates the interactional dimension that is characteristic for the definition of teledildonics. The father of the term, Howard Rheingold defined the use of teledildonics as this: “most people will use them to have sexual experience with other *people*” (Rheingold, 1991, p. 345, *italic* in original text). Rheingold saw teledildonics not as a way to allow us to have sexual experiences with robots, but as an interactional device with which people could communicate and sexually stimulate each other from a distance (ibid.). The We-vibe vibrators in combination with the application are able to do exactly this. When we spoke to a We-vibe representative at the Erotic World Expo she shared with us some of the thoughts behind the design of the We-connect application.

She says that the application is primarily created to be used by younger people (18-25 years). It does not come as natural for older people to use their phone for these kinds of activities as it does for younger generations that use their smartphones for everything. For them their phones is an extension of themselves and not just used for calling or texting. They use it for everything like listening to music, watching movies, catching up on the news or going on social media. (Fieldnotes: We-vibe Representative, 2016).

She noted that the application was primarily contrived for young people who are already using their phones for a myriad of purposes beyond calling and texting. The application is then seen as an extension of the young user’s life, becoming incorporated into existing reference sources. Jasanoff implies that imaginaries can only be stabilized through previous experience of reference, which in this case is the use

of a smartphone. With this the technology of using an application for communication will be co-produced and rehearsed as part of the overall imaginary every time they use a similar application such as *Skype* or *Facetime*.

We-vibe is defined by the company behind it, Standard Innovation, as the number one couples' vibrator, with over 2 million vibrators sold worldwide (Standard Innovation Co., 2016). The representative from We-vibe stated the application has been downloaded 2.5 million times worldwide. To use the We-connect application as an interactional device it has to be installed on two smartphones/tablets. This may be one of the reasons why the number of downloads for the application is distorted when compared to the sales figures of the vibrator. While the numbers indicate that there is an interest in exploring We-vibe as a teledildonic, this was contradicted by the responses we received from our interview participants.

During our interviews with users of the We-vibe products we did not find any couples who had used the application to interact over long distances.

We tried setting the application up and stuff like that, but we have not really used it. Mainly because we have not been apart. And I feel that it would be kind of weird to be standing around and then pulling out your phone to start tapping away to get it to work. That for me could ruin the intimacy. (Interview: Erica, 2016).

While this couple is using the We-vibe vibrator without the application, they have also downloaded the application and have tried it "for fun" when being together. The couple lives together and they have not felt a need for using the application over long distance. They have tried the application, but viewed it more as a form of fun gadget. Another couple found that they could not get the application to work at all.

Well, really it worked fine initially. But I don't know if it it was me who did something wrong because it stopped working. It does not register the things we tell it to do via the application. (Interview: Dale & Tammy, 2016).

This couple has had problems with using the technology, they have experienced technical errors which have put an end to their use of the application with the vibrator. The woman blamed the problems on her own anatomy, based on the fact that the couple have had previous experience with technical errors

using other vibrators: *“We have also had the same issue with a LELO, so I do not know if it's me who is doing something wrong. We did not get the whole range of function out of that either”* (Interview: Dale & Tammy, 2016). When the couple are having issues with the vibrator itself they reproduce the thought of them doing something wrong with the technology.

Even though the combination of the vibrator and application ticked all the boxes of a teledildonic, the users we have interviewed do not employ it in that combination. They do not view the We-vibe as a teledildonic and instead liken it with a standard sex toy. This association can be viewed as transference of an integrated element from the sex toy imaginary that blinds our participants from seeing the potential of the technology. Before the We-connect application was developed the We-vibe vibrator was not designed to be used teledildonically. This may be another reason why the couples we have interviewed view the We-vibe vibrator as a separate product and not as a teledildonic device. There is no doubt that the couples like the vibrator itself and have used it as a couples toy when they are together.

(...) If I'm using a vibrator, then it's ME using a vibrator and either he needs to fit inside at the same time or I use the vibrator without him. But this way, it fits on its own, so I do not need to hold it. Also it fits in a way so that there is room for him and he gets to enjoy the vibrations, plus he hits it in a way that makes me feel the vibrations even stronger. That way it really gives something extra. Something that is not there usually. I think that is super cool. I mean I'm crazy about the We-vibe and I believe it's a genius invention (Interview: Erica, 2016).

Our general impression was that the participants who employed the device were not utilizing the application to its full potential. Instead they have incorporated the vibrator as a toy used to supplement physical intercourse.

Throughout the project our perception of We-vibe has evolved. At the beginning we decided to use We-vibe as a case because it was the most popular teledildonic device on the market. As we have progressed we discovered that the device only incorporated the teledildonic subskill when the vibrator was used in combination with the application.

Through our interviews it became apparent that our users do not use the We-vibe vibrator in conjunction with the We-connect application.

We believe this to partially be a result of the design of We-vibe. The original branding of the We-vibe products was geared towards couples having sexual intercourse. Before the launch of the application, the stated aim of the vibrator as a sex toy was as far away from a long distance relationship toy as possible. This is shown through the shape of the We-vibe vibrator which has been designed to be worn during sexual couples activities and not from a long distance. Before the launch of the application the vibrator was therefore designed for being intimate and close to each other and not for use by couples who are apart.

Our participants have expressed that they used the We-vibe vibrator as a couples toy to enhance their standard sexual practices. While some of the couples had played around with the We-connect application they had not felt any need to use it to interact while being apart. By eliminating the We-connect application from how they have used the sex toy, We-vibe reverted from a teledildonic to a standard sex toy. This was surprising, since our assumption had been that the application would become a new method to connect and be intimate while apart. So is the We-vibe a teledildonic? We argue that technologically it is. When the We-vibe is viewed as a sum of its whole it has the ability to be controlled from afar, fulfilling the role of a teledildonic.

If the We-vibe is broken into its constituting parts with a separation between the application and the vibrator, then the vibrator becomes just another sex toy. This is what appears to have happened for those of our participants who have been using a We-vibe.

The fact that We-vibe is marketed as a teledildonic but that our participants have yet to use it in this fashion indicates that there is a communication gap between We-vibe and its users. Is the way our participants use We-vibe wrong? Of course not, they all fulfil their needs through its usage. But it does mean that We-vibe does not act as an element that is a part of a teledildonic sociotechnical imaginaries for our participants. For them it has reverted to a standard sex toy imaginary. Still We-vibe functioned as a focal point during our interviews. It became a memory object that our participants could see as a physical reference point. We invited them to imagine what a teledildonic is or could be and here our participants could use We-vibe as a physical reference point.

Teledildonics as a sociotechnical imaginary

The way future imaginaries concerning the technology of teledildonics are formulated are highly relevant as Jasanoff (2015) describes. A lot of elements in the present state of the technology will be influenced by how they are imagined. Not just by experts or policymakers, but also by the general users.

There are still avenues open to how teledildonics will impact long distance relationships in the future. While this is dependent on factors such as usability, price and other such design elements, it will also be determined by how the socio-technological imaginary surrounding teledildonics stabilizes. We saw from our users that teledildonics may not prove to be much of a contribution to intimacy as of yet. Depending on how teledildonics are combined with other forms of technology such as virtual reality, this paradigm may change and evolve in the future.

Following Jasanoff & Kim's (2015) line of reasoning with regards to imaginaries, we view teledildonics as an assembling imaginary that is being transferred and integrated of off elements from the imaginaries of porn and sex toys and is in the process of being assembled. The figure below shows how our newly emerging teledildonic imaginary is being assembled through rehearsals of elements from both the normal sex toy imaginary and the porn imaginary. The first stage, which consists of the porn imaginary has gone through multiple rehearsals and is constantly anchored in our opinion through mass media and reinforced through other public arenas. News outlets such as the Danish tabloid Ekstra Bladet continuously promote an imaginary of porn being slightly scandalous through their section called "Sex og samliv" and their page nine girl which is a page dedicated to showing topless pictures.

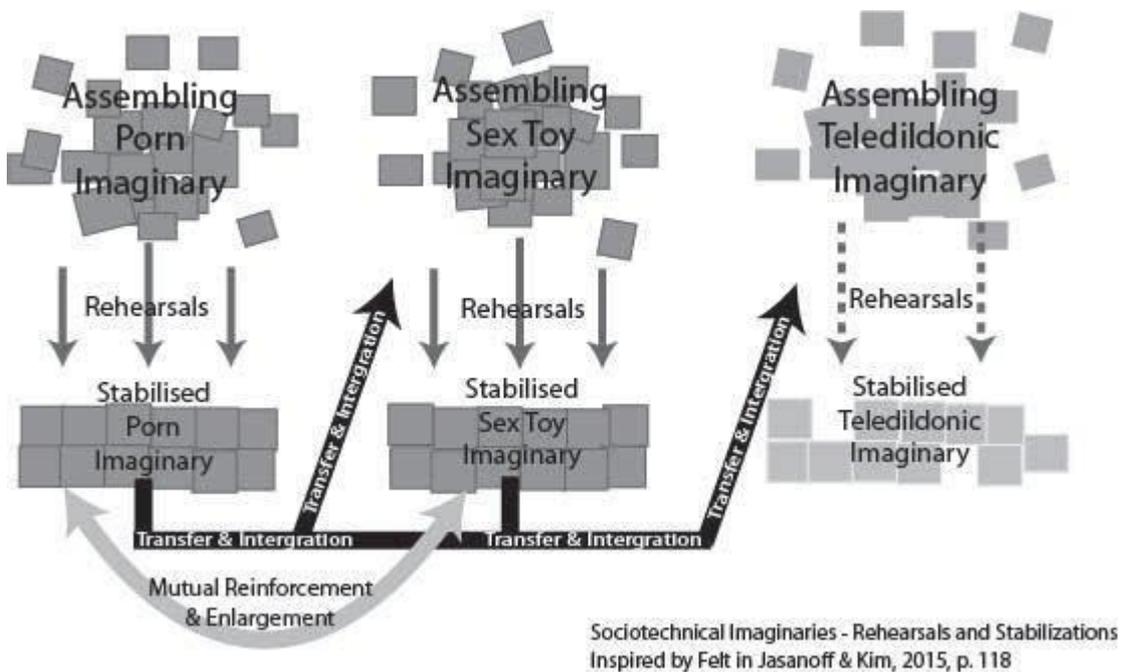


Figure 3: Sociotechnical imaginaries, inspired by Felt in Jasanoff & Kim, p. 118

The porn imaginary shown in figure 3 is very entrenched in our cultures and many of its elements have been transferred and integrated with the sex toy imaginary. In Ekstra Bladet, articles on sex toys are seen side by side with articles on stripping, porn and the like. Because of the setup in mass media and how both porn and sex toys get discussed in public forums, they help to reinforce and strengthen how we view both.

In our own experience from the Expo, Erotic World became a forum through which both the porn and sex toy imaginaries were reinforced in a way that strengthened how sex is viewed as a taboo. The whole setup, where sex toys were promoted alongside strip clubs, strip shows and swinger clubs and where naked women were whipped for the amusement of the public, showcases how both imaginaries are entwined. The debauchery that was showcased here only served to reveal the difference between actor constellations that revel in a fetish lifestyle and those that are seen as normal. The picture below is a media photo from the Erotic World Expo 2015 and it is an example of what the Expo looked like and how we perceived it when we were doing field work. For us the picture functioned as a memory object that has contributed to our place-making regarding the field of sex toys. The photo is an example of the

imaginary in which the Expo is reproducing a certain view of the sex toy business - colourful and a bit tacky, at least in our opinion.



Picture 6: From Erotic World Expo 2015 - Picture from BT, Simon Skipper (Skipper, 2015).

One of our participants explained how when they went to the Expo, they told everybody else that they were going to a kitchen expo.

That's when it's called a kitchen Expo. I think. I don't believe that you should be closed off to the idea. Just be open. Because again, like I said, which home does not have one? Name me one.

(Interview: Chris & Rachel, 2016)

While Chris and Rachel do not feel any unease over how their choice in lifestyle has made them part of an assemblage that in general is looked askance at, we personally felt uncomfortable about how the Expo combined sex toys with strip shows. We felt that the negative aspects that were attributed to porn were exposed at the show. Chris on the other hand only referred to it as the kitchen Expo out of respect

for others. For this couple the expo is a sober place where they can learn more about how toys are best used and get tips from others likeminded.

The imaginary of teledildonics ties into a mosaic or tapestry of social order and ways of living centred around users involved in long distance relationships or perhaps the more modern form, “living apart, together”. These ways of living are then built upon the development and implementation of specific techno scientific projects that accommodate this lifestyle. Through multiple rehearsals, the debate and subsequent view on porn and sex toys have been cemented in different public arenas and around different constellations of actors (Felt, 2015, p. 117).

These elements all become part of the structure that is part of territorializing the socio-technological view on teledildonics. These elements are able to influence people's imagination and challenge how they perceive the differing relations between technological innovations and their way of living. We have split these elements into three parts to more easily distinguish between their diverse nature. There are 1) ethical regimes construed primarily around the porn industry, 2) techno scientific point of use and 3) the administrative system.

When looking at the teledildonic imaginary we see an integration of some of the ethical regimes surrounding the porn industry, such as how using teledildonics is almost linked to being in porn. Questions surrounding the security of the technology itself are called into question, thus destabilizing the imaginary with doubts about the ability of strangers potentially gaining access to your sex toy while it is in use. Lastly, there are elements that consist of administrative systems, these lead to questions of data logging and how that is done across borders. By being linked so heavily to normal sex toys, which in turn is being enlarged by the rehearsals applying to the porn industry, teledildonics are subject to moral idiosyncrasies that are possibly unwarranted and which may contribute to a stabilized imaginary in an unwanted form.

The techno scientific point of reference for the technologies involved in creating teledildonics is well defined. If the imaginary gets further tied to the porn industry then what they imagine as the future will become more prominent such as teledildonics being used for camshows. Camshows are pornographic shows hosted by either men or women from the privacy of their homes, with the aid of a web camera and affiliation with a specific website. Camshows are live and depend on interaction from viewers in the form of payment for services rendered throughout the show. The shows are not just pay-per-view but

also rely on “tokens” which can be bought for money and then used to buy time with a model. When using tokens a viewer can then via chat request something from the model like the removal of clothes or the use of a specific toy (Richtel, 2013).

Because of the fact that so many different actors are involved, the future imagined will come down to the constellation of actors that most efficiently broadcast their views through slogans, iconic pictures and stories (Felt, 2015, p 118).

The attitude of the users of teledildonics will thus be based on different factors, not only on personal experience of similar technologies, but also competencies in using digital technologies and personal curiosity. The ease of use for both the physical toy and the controlling application will become paramount in developing a product. Being comfortable communicating over digital media must be seen as a prerequisite for the use of teledildonics.

When looking at these elements in sum, we view the teledildonic imaginary as an imaginary that is still unformed but is on the cusp of being stabilized into something new. We see it as going in two separate directions that, while not dissimilar, imagine two vastly different outcomes for teledildonics. Independently of how the teledildonic imaginary stabilizes, the porn industry will have an impact on the future of teledildonics.

An example of an imaginary that was influenced by the porn industry was the battle between the two video formats Blu-ray and HD dvd. Both formats were launched at the same time and have similar capabilities. While there are several factors that played a role in Blu-ray emerging as the dominant format, amongst them major movie studios and other electronic giants, the porn industry also threw its backing into Blu-ray (Mearian, 2006; Terdiman, 2016). This example is relevant based on the fact that this video technology in and off itself has no connection with the porn industry. Despite this, the porn industry still played a pivotal role in determining whether Blu-ray or HD dvd became the standard video format.

When reflecting on the territory that is being defined by the emerging imaginary of teledildonics and the situation, defined by our research question: *How does the interconnected sensescape influence the imaginary of teledildonics in long distance relationships?*

We note that there is lack of understanding or even seeing a need for teledildonics amongst our users. For teledildonics to become “prude”, they must separate themselves from the imaginary of porn. With a clearer picture of what the producers of teledildonics’ goals are and what they wish to achieve with teledildonics, it will become easier to create a stabilized imaginary. This can contribute to allowing a broader audience to use the product without fear of stigmatisation due to bad associations. Because teledildonics are such a new combination of known technologies, combinations that are still evolving and trying to claim their place in the world, we have found socio-technological imaginaries to be an apt way of viewing how they are seen by the different actors. Through imaginaries, a novel view of how teledildonics are viewed can be achieved. By looking at not just users of teledildonic but also other social worlds that the users interact with.

As mentioned above we asked our participants to imagine what they thought the future of teledildonics would look like. Sex toys and virtual reality as seen in sci-fi movies were then used as elements to create a shared frame of reference that allowed our participants to provide suggestions as to what they thought would happen. Through this process we came to an understanding of what they imagined the future would hold for teledildonics. A future that would involve 3D technologies and other advancements that would allow for a more complete emersion of the senses than what is currently possible.

In this chapter we have explored the socio-technical imaginaries of teledildonics.

Based on material from We-vibe and the ideology of their products, we have explored the imaginaries of We-vibe as a normative product for couples. This view is not reproduced through the media and the Erotic World Expo. Instead, from our viewpoint popular media and Expos like Erotic World are representing sex toys based on imaginaries of porn. We then questioned We-vibe as a teledildonic device and concluded that our interviewees have used the We-vibe products in a non-teledildonic way -

as a sex toy without the aspect of connectedness. The users we have interviewed have problems connecting We-vibe as a sex toy with the use of it as a teledildonic device.

How do teledildonic devices play a role in the creation of intimate relations in long distance relationships? In the next chapter we will delve on how intimacy is maintained in long distance relationships and to which degree sensory experiences influence the intimacy in relationships. We will seek to answer how the sociotechnical imaginary of teledildonics affects the sensory experience of intimacy in relationships.

Intimacy and the senses

In this section we delve on the interactions surrounding the physical manifestation of our couples' relationships and how they connect both when they are together and when they are/were in long distance relationships. We reflect on our understanding of the term intimacy and reflect on how our interviewees defined intimacy in a sensory context. At last we will define and use the term Skin Thirst to get a broader understanding of the different sensory experiences that are present in long distance relationships.

Pink discusses how ethnography no longer has a scope that is broad enough to describe the situations that we strive to uncover. Through sensory ethnography we gained an understanding of the interconnected senses, realised that we needed to use other methods to experience than just listening and watching and gave us new ways of engaging with research participants that went beyond just text (Pink 2015, p. 141).

We examined the responses our interviewees had given with regards to how different senses were perceived. One of our main focuses was on how physical contact through the sense of touch played a role in how our couples interacted, and how bodily reactions could cause unconscious reactions. It was clear that for our participants the senses of touch, sight and sound were dominant when the couples talked about senses. Considering how their other senses contributed to their relationships was a struggle for many of the couples and they had issues with producing examples of how senses such as smell or taste were a valid part of their interactions until we prompted them regarding other senses.

When prompted, most of our users were reminded of situations in which smell played an important role as a precursor to intimacy.

Yes, yes, definitely, it was one of the first times I met her. We were sitting by a canal near where she lives and she was sitting in my lap and we were just sitting and hugging. And I could also smell her shampoo, and I was really just, it was such a different experience. It was not something I had tried before, I mean exactly it was just a shampoo, but it was her shampoo and it was her who smelled like this, that made it something else. It is something that you notice but not something you actively engage in. It is not as if when we meet that we smell each other, instead we touch (Interview: Chris & Rachel, 2016).

From this quote it becomes apparent that although the conscious focus is not on senses such as smell, senses unconsciously play a role in how experiences are stored. The senses can act as triggers for emotions that are tied to how these experiences can be re-enacted. This was something that we found was very relevant for us to get an understanding of how these couples used their senses in relationships.

When interviewed, our users all shared experiences regarding how they communicated while either apart or together. Some texted, others skyped and the rest did something completely different.

I think senses are a part of the whole person. I don't think it is just one of those things (Editors note: sensory elements) it's more the whole thing. But they sometimes spark something. So like soap we got in Greece, and its untouched, a year later, unopened. But I'm looking at it and thinking: We got that in Greece. We had a lot of fun there. So it is part of a connection with my memory (Interview: Matthew & Claire, 2016).

This citation is an example of sensory memory where memories are brought back through sensoria. In this example the smell of a soap the couple bought together on vacation, became the focus for a happy memory. This memory is experienced again when they smell the soap. In our interviews many of our users brought back memories from different events in their relationships. By reflecting on how the users perceived the use of senses we also took a look into how the couples expressed sensory experiences regarding intimacy.

But what is intimacy? In our study we quickly realized that the term intimacy was perceived very differently from couple to couple. For several of our interviewees intimacy was not something that was gained through a single sense but was a multisensory patchwork. This is supported by Pink, who states that sensory experiences are always interconnected (Pink, 2015). A common theme for the participants in our study was how their sense of togetherness was tied up with intimacy. Intimacy is a manufactured term that is interpreted very subjectively. Because there is no golden rule on how to be intimate with somebody else, we were interested in how our participants constructed intimacy. For some of our interviewees intimacy was bound up in a sexual relationship

It has something to do with touch, a lot of caresses and lots of kisses. A lot of, well intimacy. Everything I do not do with my friends you could say I do with him right? (Interview: Erica, 2016).

One assumption about intimacy that these couples held, contingent on their own moralities and values and sensoria, was that intimacy was an important aspect of what differentiated a relationship from a friendship. Thus understanding how intimacy was constructed was important in fathoming how it was rehearsed by the involved actors to create a stabilized imaginary. Our participants expressed that for them intimacy was constructed around sensoria involving not only the touch of a loved one or visual cues but a combination of all five senses.

...You are more open minded and it becomes more personal and it's not just the sex act for me it's also the other person and the skin and that you can feel and it's completely different. For me it's everything about the other person that is closeness and intimacy. For me that's intimacy (Interview: Matthew & Claire, 2016)

We found this to be somewhat of a contradiction as for many of our participants they revealed how intimacy was entwined with the physical tactile touch of the their partners. Our observations of how our interviewees described their intimate relations revealed that physical touch was a dominant factor of how they viewed being intimate.

So, for me at least my sense of security has a lot to do with my sense of touch. Again it is about closeness. My boyfriend and I touch each other a lot, all the time. Even though we have been together for a long time, we still hug and kiss every day. And we kiss each other hello and goodbye and stuff like that.

(Interview: Erica, 2016).

We initially started this project with the assumption that teledildonics held the ability to contribute the sense of touch during cybersex and in this fashion supply a missing element for intimacy in long distance relationships. Through a continuous and incremental process, our views and values were challenged and we had to rethink our own assumptions as we went along.

We experienced that our participants doubted the ability of teledildonics to fill the void of not being touched.

I just wonder how it would replace the real touch with a fake touch because everybody has a different touch yes? A different feel. One person has harsh hands and another has very soft hands. I just wonder how you can imprint the real touch into the fake touch, to make it as close to it as possible. For instance I think there will always be somebody who will buy it. That's for sure (Interview: Matthew & Claire, 2016).

For Matthew and Claire, teledildonics were lacking the ability to recreate the sense of being touched. Because teledildonics were unable to simulate the softness/hardness of a touch or in other ways differentiate between the myriad of other materiality that they have deemed essential to creating something that is similar to being touched by another human being.

Above we have gone through how senses contributed to the feeling of intimacy in relationships. We saw that the couples we interviewed defined intimacy differently, but how was this expressed in their way of being intimate? In the next section we will take a look at the term Skin thirst which we discovered during our expert interview.

Skin Thirst

We initially had a hard time understanding the feeling of intimacy for couples in long distance relationships. During our expert interview with sexologist Maj Wismann she used a term we had not heard previously: Skin thirst. *"We have a term in my professional terminology, to have skin thirst. To thirst or long to be touched"* (Interview: Maj Wismann, 2016). We saw skin thirst as a focus on the

materiality of the senses, it was the quintessence of multi-sensory experience that combined to create a need, or hunger for contact.

As Wismann described it skin thirst was a sense of longing caused by a lack of touch or other physical contact. This lack could cause sadness or uneasiness. Inversely, for somebody subjected to the amount of physical contact that their body craved it could cause happiness and a sense of ease (Aagaard, 2016).

But I also think that there is something about skin thirst, it is also about getting a hug and you will miss that as well and you cannot get that right. You cannot really replace a hug from your partner, like you can with smells and stuff like that. It has something to do with leaving a perfume at home and having a t-shirt you sleep in for three nights before you leave (Interview: Maj Wismann, 2016).

This sense of longing or hunger for contact was something we had not expected. We approached this project with an assumption that teledildonics would enable couples in long distance relationships to have greater intimacy. But our interviews with We-vibe users and the sexologist Maj Wismann revealed the element of skin thirst. This was an element we saw as a distinct hindrance for teledildonics to become the link between couples in long distance relationships. We assumed that teledildonics would work as a surrogate between partners allowing them a tactile experience, thus increasing the sense of intimacy that the couple had. Although teledildonics could allow couples to impart their rhythm to their partners it would not in its current form fulfil the needs to appease skin thirst.

This notion or terminology of skin thirst was as mentioned above, something that sexologist Maj Wismann connected with the sense of touch. Based on her experience through the people she has worked with at her practice and personal experience, she felt that the cravings that skin thirst incited played a powerful role for couples, whether these couples had been together for a long time or not. Wismann explained how singles that feel skin thirst had a greater chance of having sex on the first date:

And there is also something that happens when you are single that is very interesting. When I advise singles on this subject, there is in fact a bigger chance for them to have sex on the first date if they are hungry for a touch (Interview: Maj Wismann, 2016).

She elaborated on how in her personal experience getting a massage while her husband was away helped her. While Maj Wismann does not have any scientific studies to determine whether or not skin thirst actually had any effect on how people acted during their first date, she felt that based on her own

experiences and intuition that it was so. While skin thirst as a manufactured term explained some of our participants' actions, we had to question its validity and determine whether it corresponds to the reactions that we saw from our interviewees.

Wismann used the term skin thirst as an explanation for why singles often have sex on the first date. She presented sex on the first date as being somehow wrong and that it was something that could be cured by dealing with skin thirst through sensual massages. She expressed that thirst could be quenched through skin to skin contact:

You should go down and get an oil massage from a really good masseuse that knows how to give a nice massage. It is all about the massage being nice and pleasurable whether it is a tantra or an oil massage (Interview: Maj Wismann, 2016).

We had to balance our response in how we used skin thirst and remember that the way skin thirst was presented was affected by her own assumptions and imaginings regarding intimacy, relationships and sex toys.

Maj Wismann's supposition on skin thirst was supported by some of the responses we received from our interviewees. They expressed that the tactile sensations were a requirement of maintaining intimacy, something that they suggested teledildonics was unable to provide.

Hmm somehow I think that the We-vibe is much more fun because it is not trying to simulate the real thing. And I don't think this stuff will become close enough to the real thing, so I'm thinking: Don't try to be something you're not (Interview: Matthew & Claire, 2016).

For Matthew and Claire, being able to feel each other was a major requirement and they felt that while teledildonics were used to supplement and change the dynamics of their interactions, it was unable to replace a physical touch *"But of course it's more intense when you are together. it's just better when you are together. Nothing can replace that"* (Interview: Matthew & Claire, 2016).

From the reactions of our participants we could tell that while they intellectually liked the idea of using teledildonics as a way of staying connected while apart, they did not actually choose to employ teledildonics. The reason for this brought us back to the notion of skin thirst.

Our users agreed that teledildonics like We-vibe were a valid tool to supplement the interactions when the couples were apart, but lacked the substantiality required to impinge upon skin thirst. Our

interviewees agreed that while cybersex in its different aspects was a great precursor, it fell short if there were no true physical interactions in which the senses could be actualized.

SMS, MMS and phone conversations, they are all really good at getting stuff going and setting the mood, but there is kinda something missing (Interview: Bob & Pat, 2016).

For most of our participants that are currently engaged in long distance relationships they felt that they would be unable to maintain their relationship without periodical physical meetings in which they could build and maintain a sense of intimacy.

One couple in a long distance relationship has based their relationship on a foundation achieved through talking via Skype and other similar instant message applications. In actuality they expressed their intimacy differently from the other couples. While the other couples felt that a physical touch was essential for them to maintain their intimacy, the couple we called Chris and Rachel did not feel this way. They met and fell in love while playing "World of Warcraft" and communicated with each other via chat and other forms of online communication. Then Chris clarified that while they enjoyed meeting in real life, they were content to meet virtually.

I miss her of course, but I do not miss being in contact with her physically. It always makes me happy to see her whether it is on webcam or in real life (Interview: Chris & Rachel, 2016).

Unlike the other couples they did not experience the same need for physical contact. They were able to maintain a for them healthy relationship where they shared their everyday lives over Skype, either just chatting or watching a movie on Netflix together.

It is of course always best in reality right. But if I just see her on Skype then that is always nice. Then we just lie in each of our beds and talk over webcams and just enjoy. It is nice that she is the last I see before going to bed (Interview: Chris & Rachel, 2016).

Chris and Rachel showed that while skin thirst might be a strong indicator of why the interviewees were not utilizing teledildonics as envisioned, it could not be attributed as a determining factor. Without a better understanding of the dynamics that defined this couple and thus gaining insight as to why they did not behave as the rest of our interviewees, we could only speculate. According to the sexologist Maj Wismann, skin thirst was something that was felt by everyone who lacked physical contact with another human being. Yet we saw that Chris and Rachel did not feel skin thirst, or at least did not express thoughts during our interview that could be interpreted as skin thirst. How did this couple's imaginary

differ from the other couples? There was the obvious, that they were younger and that their relationship was dominantly virtual. By expressing their contentment with sharing an everyday virtual life they showed how they differed from the other couples. As mentioned in the theory section, imaginaries show how the future is imagined based on how the past is perceived. As our needs in the present change we develop new sensory experiences. These experiences influence what we dream and hope for. How we perceive that the past is always changing and thus how we imagine the future shifts. Chris and Rachel had from the start interacted online, which meant that it was not until further into their relationship that the sense of touch was introduced. Because most of their experiences did not revolve around touching each other, when they interpreted the past to imagine the future, other senses became dominant. For the other couples, their imaginary was full of experiences that were based on tactile sensoria. Thus touch became a more dominant factor in their relationships. In the end, while skin thirst was a terminology that very handily explained why our couples did not feel satisfied with the idea of using teledildonics, we could not determine whether it was something felt by all the couples. Was it psychological? Or something chemical or hormonal transferred by contact?

Chris described the senses involved in his relationship, or at least the memories that these senses pertained to, as being heavily focused on visual or verbal cues. They had trouble conceiving of intimate situations in which other senses played a prominent role in their everyday interactions. The couple explained that it was only when they met physically that all the senses came into play. When they were together, their senses created a fusion, which taken in together created the experience.

Then she had put on a new perfume. She bought a really nice perfume for when she is with me. That felt really good. Because it was a nice smell and it was something she had done for me. That brings forth some good memories and feelings and it is everything that does it, taste, touch and hearing (Interview: Chris & Rachel, 2016).

Several other participants shared similar views on how the senses combined to create a whole; something that defined their relationship and differentiated it from how they connected with a friend. This showed how our interviewees, partly unconsciously, defined intimacy as being expressed through a collaboration of senses.

In this chapter we have looked at the use of sensory experiences in relationships. Our definition of intimacy was seen as a way of being close to a significant other, not only sexually, but also through hugs

and kisses. The term skin thirst was discovered during an expert interview with Maj Wismann and was described as a longing for touch when being apart. We learned that sensory experiences were essential in maintaining a relationship, but for many couples the senses were used unknowingly through smell, touch and taste. Skin thirst can be on different levels, dependent on the imaginary of how to be in a relationship.

At last we concluded that it was very difficult to recreate senses such as a touch because a touch was much more than vibrations. It was also the feeling of skin and the texture of someone you love being close to you. This shows that teledildonic devices cannot replace intimacy because the senses are much more than just a touch. Teledildonics can in some regard supplement sexual aids and create a dimension of sexual stimulation but we do not see it as a replacement for neither intimacy nor a quench of skin thirst. In the next chapter we will take a look at the future of teledildonics and find out how the technology can be used in the future.

The future of teledildonics

We briefly touched upon the fact that the sociotechnical imaginaries of teledildonics draw upon elements that relate to our use of smartphones. An acceptance and integration of elements from imaginaries concerning smartphones are crucial to how teledildonics will develop. Online security in relation to our personal information is something that we are all concerned with. Concerns about our digital footprint and the impact it can have on our personal lives have grown in tangent with our online presence. In recent years there have been several instances of leaks of pictures and videos of a private matter of celebrities, or politicians getting in trouble after posting intimate photos on twitter or the like. Another example is revenge porn, where people post pictures of ex-partners to name and shame them. As a security measure to help combat leaks of private information from its users, the We-vibe application is designed to not log any data from a session. We have seen the hype that surrounds a leaked nude photo of a celebrity, imagine what would happen if their private vibrator session got leaked?

In our interview with the sexologist Maj Wismann she noted that a teledildonic device would be more interesting if it was able to log the use of the connected device. When talking about making a “take-

care-of-yourself"-kit to her deployed husband, she says: "But it would have been super naughty if it had been connected to an app where I could see when he used it" (Interview: Maj Wismann, 2016). According to the We-vibe representative, this is a security matter and is not possible to do with the We-connect application. With regards to this security issue, it is stated on the We-vibe webpage: "*All in-app partner communications (instant messages and photos) are cleared after a partner session and are not stored. We-Connect also has a discretion lock that, when enabled, only allows a person with the correct PIN access to the app.*" (We-vibe, 2016). This emphasis on data security also functions as a rehearsal that connects the we-connect application and integrates it into former technological debates in which data security has already been decided. These other technological imaginaries that have already been stabilized, then act as resources for people to draw inspiration and stability from with regards to We-vibe (Felt, 2015, p. 119). The online security is a matter of concern for people who, as mentioned in the beginning of the chapter, are aware of data leaks of confidential material. This has been present not only with sexually related material but also political and economic leaks have changed society in many ways. Recently we have seen the leak of the Panama papers, which have deposed leaders. These cases of online leaks are reproducing and rehearsing imaginaries of online security that are sharpening our focus on just how ambiguous our position online really is.

Other than the uncertainties surrounding the security of using teledildonics, we also asked our participants to imagine future scenarios of the teledildonic technology. The sexologist Maj Wismann sees the evolution of sex toys in general like this:

What I find really interesting is how fast it is all happening. It is going ridiculously fast. Especially in the last four years I believe that the development within sex toys and technology has really moved. It is as if there is starting to be sex toys on the market that are really technical and that can do some crazy things (Interview: Maj Wismann, 2016).

The technological progress of sex toys is developing extremely fast. Wismann describes that she has seen a fast development of the toys since she started as sexologist ten years ago. The representative for We-vibe described that one of the reasons for this could be the fast development of smartphones. As expressed in the Greenberg & Neustaedter (2011) article on long distance relationships, the technological development of video chat has revolutionized the way of being together from a distance. We have also discovered that this is the case for some of our users:

Mostly we just talk together or there is video where we also look at each other. Every once in a while when Skype is not available or we just need to talk for a bit then we use facetime (...) That makes it really easy so we can always get a hold of each other (Interview: Chris & Rachel, 2016).

The couple from this citation is furthermore in the We-vibe target group for users of the application of 18-25 years old.

So where is the technology heading? How will teledildonics evolve and what will they become in the future? According to the users we have interviewed there are several possible future scenarios. We presented our users with how a teledildonic technology could work and asked them to imagine how they could see the technology developing in the future. For many of our users this was a difficult task. One couple narrowed it down in quick order by answering *“Everything is possible”* (Interview: Bob & Pat, 2016), another couple were more sceptical towards what they imagined the future to hold: *“It doesn’t sound like it’s a spontaneous easy thing. So it sounds especially hugely expensive”* (Interview: Matthew & Claire, 2016). Especially, technological issues are of concern for several of our participants’ view of the future. *“And you wouldn’t like to have too many things attached to start it up and then you would think “To do this I need to spend 15 minutes of preparation before you can actually go and do something”* (Interview: Matthew & Claire, 2016). The technological issue discourse is also present for several of the users in our literature reviews. Their experience mirror the understanding of our own participants.

In the VICE documentary a use of the teledildonic device of the Kiiroo brand was tested with mixed results. As the tester expressed it: *“It does not feel like sex and it does not feel like wanking either. It is like totally different. It is less effort than wanking”* (VICE Media, Inc., 2014, 29:20).

Both the male and female tester experienced a sudden loss of connection during the “intercourse” which they described as “Killing the mood”. Meanwhile, journalist Daniel Cooper referred to digital sex as “not sexy” after his experience with the Kiiroo product (Cooper, 2015). This begs the question, what do the users actually want from a teledildonic product? One part as we have found stated above is that a future teledildonic product has to have a reliable connection to ensure the interactive part. Another example is an easy to use product which is both uncomplicated to understand and manageable to use for the average sex toy user.

As long as it does not become cumbersome to start and use. Because when you are at a conference and are done and up in your room before you have to go down and drink a beer with the others, then there is a half hour available (Interview: Bob & Pat, 2016).

This couple sees the opportunity to use a teledildonic device even though they live together. And as the male describes:

(...) That means that the touch is my touch and the rhythm becomes my rhythm. That is something we can do when we are together when we can feel the rhythm. But if we are apart how does the other person feel about this rhythm? (Interview: Bob & Pat, 2016).

Bob identifies the feeling of intimacy between his partner and himself through the interaction they have with the product. When using We-vibe he is turned on by his ability to control his partner and see how she responds to his movement. A practical aspect to this is also the design of the toy in relation to using it together with a smartphone. One couple noticed the convenience of having both hands available to text with their partner during use: *“That also gives you two hands so that you can actually still text or something. I mean if you don’t have to hold something”* (Interview: Matthew & Claire, 2016).

In this section we have been looking at the future perspective of teledildonics. We have discovered that a future device has to be secure, due to the imaginary of data security which is rehearsed through different cases such as revenge porn and harmful data leaks. Another aspect is that the design of a teledildonic device has to be easy to use and quick to set up, because errors or a lacking connection could be a buzzkill when using an intimate device. Next, we will take a look further into the future of teledildonics by looking at how virtual reality and teledildonics interact.

Virtual reality - The new teledildonical platform?

A male in a white bodysuit and virtual reality goggles is cupping two breast in silicone material and a masturbator is thrusting at his manhood while he watches hentai (Japanese animated porn). The image is taken from a viral video which has been spread all over the world the last month with the headline *“Goodbye real world!”* (Rice digital, 2016). It currently has over two million views. Is this the future of teledildonics?

During our study we have discovered that teledildonics are often put in relation with virtual reality technology (often referred to as VR). We find it relevant to look a little closer at the connection between these two technological phenomena.

Virtual reality (VR) is not a new phenomenon. In the 1930's the idea of creating goggles for the wearer to see a fictional world was envisaged by the author Stanley G. Weinbaum. The technology was developed in the mid 1950's where "The Sensorama" was made: A device to give a full-sensory experience for the viewer. Through the decades the technology advanced and in the 1990's VR was made for several video games. The idea of a VR world escalated back in 1999 where "The Matrix" created a scenario of a future world based entirely on VR (Virtual Reality Society, 2016). In 2016 a new chapter was written in the VR history when the new and powerful technology from mobile devices such as the Oculus Rift was launched. This was just one of many small and technologically revolutionizing devices made for VR. The new VR technology has opened a new world of VR porn where websites such as VirtualRealPorn offers porn and live camshows in VR. As a new dimension the VR porn site also supports use of the teledildonic device "Lovense": A device that is able to give life to the VR porn stars in cooperation with the VR goggles through a vibrator or masturbation device (Hytto Ltd., 2016).

In relation to sex, all that new stuff from Japan, virtual reality sex. It is completely crazy (...) I mean how big it actually is and how quickly it is happening. That it might become superfluous to have sex with each other because we can just put on these glasses and then it feels as if we are there (Interview: Maj Wismann, 2016).

In this quote from sexologist Maj Wismann, she notes that in the future real life sex would be superfluous because of virtual reality sex. She also refers to this as a crazy development in Japan. But is this "crazy" development actually closer than she thinks? In a documentary from VICE, teledildonic devices linked to VR are an emerging technology. Their development is not only happening in Japan, they are being developed all over the world: In the United States, United Kingdom and the Netherlands to name a few (VICE Media, Inc., 2014) . The sex toy business is also experiencing a constant and fast development on its technological front. The mixture of teledildonics and porn is apparent in the new way of making 3D porn, where you are able to "participate" through a teledildonic device. As a porn model in the VICE documentary notes: *When you tell people that this kind of technology exist, the first thing they think is "Oh wow, can we fuck with it?"* (VICE Media, Inc., 2014, 01:16). This view on new technology is an essential part of the porn industry. As new technology is developed, the porn industry

will seek out ways to use the technology in relation to porn. In that regard the imaginary of teledildonics will be rehearsed through the porn and virtual reality. We see this as a possible future way for teledildonic devices, because of the close connection with porn and sex toy imaginaries. Some people state that the porn industry is the mainstay of the development of VR (Terdiman, 2016), so in the future will it also be a mainstay for teledildonics?

In this section we have looked at how VR and teledildonic devices interact and can be used together. 2016 has been appointed "Year of VR". Many people connect the development of VR with development of porn. This view is reproduced into a new way of using teledildonics: As a supplement for VR porn. Could this be the future for teledildonics?

In this paragraph we have made several conclusion when trying to answer our research question: *How does the interconnected sensescape influence the imaginary of teledildonics in long distance relationships?*

First, we have been looking at our case, the We-vibe vibrator and the We-connect application, which technologically is a teledildonic device. However, in our study we have not been able to discover the use of the We-vibe as a teledildonic device. There were two different reasons for this: 1) The We-vibe vibrator was made for use during sexual intercourse, so many of the users in our study still imagined the vibrator as something they used together, and 2) the We-vibe has been branded as a heteronormative product for use in a committed relationship, which is still far away from the sociotechnical imaginary of teledildonics which we see as assembled through imaginaries from sex toys and the porn industry.

Secondly, we have been looking at the term intimacy. For several of the couples we interviewed, intimacy was not only a tactile experience, it was a lot more. This was supported by our use of sensory ethnography, which stated that we could not isolate sensory experiences and state that some senses were more important than other. In that regard we concluded that a sensory experience was much more than a touch or a vibration which the We-vibe vibrator was able to do.

Thirdly, we have been looking at the future of teledildonics. Through our fieldwork and interviews we have seen the imaginaries of teledildonic assembled through especially a porn imaginary. This

conclusion is supported by the extent to which the use of teledildonic devices go together with virtual reality porn, and we see this as a more possible way of using teledildonic devices in the future.

We have also experienced that to use teledildonics in the future it has to be secure in relation to data security, easy to use and set up, and contain as few errors as possible. Even when these requirements are met a device will still not be replacing the intimacy and touch of a partner. Whereas we in the beginning of our research imagined teledildonics more as a replacement of an existing sex life, we have now determined that it is more of a supplement of the existing love life and can be used as a sex toy. A new imaginary of sex toys has to be assembled to create a new imaginary of teledildonic devices. This is created through many different actors such as We-vibe and online sex shops such as winkwink.dk. But is this enough? We do not think that the devices as they are created today can replace the sensory experience of intimacy people can get when they are together with their significant other. Therefore, although in the future teledildonics can be used in relation with virtual reality porn and as a supplement for relationships, it will not replace physical relationships and sexual intercourse.

In the next section we will re-assemble the imaginary of teledildonics through a discussion of our findings. We will collaborate our own findings with findings from already existing studies on teledildonics. We will position our thesis to discuss what we have contributed with in the field of teledildonics and discuss the future perspectives of teledildonics and virtual reality.

Re-assembling a teledildonic imaginary

As mentioned in our literature review in the introductory chapter, other studies have researched similar themes on the use of teledildonics and other technologies for couples in long distance relationships. By conducting a more thorough investigation of these other studies we can discuss and validate some of our own results. We will discuss how our findings challenge, contradict or support the findings from our literature review. In this chapter we take a look at teledildonics as a term of the future and to discuss where the technology might be heading. We will also discuss some other terms, such as intimacy and reality with regards to other studies. We find this useful for positioning our study and for showing what we have contributed with in the field of the future of teledildonic devices.

Something that we have come to realise regarding the use of teledildonics such as We-Vibe is how much the perception of said teledildonics affects the use. If we look beyond concepts such as skin thirst and focus on how our participants have used We-vibe, we see that even the couples who downloaded and installed the We-connect application did not use it as a teledildonic, simply because they did not see a need. While our couples enjoyed utilizing sex toys, these were seen as something that was used in tandem and not as a tool to bridge the gap when couples were apart. While discussing teledildonics in general with some of our couples they imagined the possibilities of having a sex toy with which to stimulate their partner even while they were in separate places. But the focus was still on how it could be used as a sort of foreplay, a precursor to actual physical sex. Because of how We-vibe was being imagined by our couples it was difficult for them to incorporate it into their practices as a teledildonic.

We believe that part of the reason why our couples did not use We-vibe as a teledildonic was because of the sociotechnical imaginary they were perpetuating. Our couples still viewed We-vibe as just a sex toy and for many it was not until our prompting that they saw some of the potentials inherent in teledildonics and vocalized these imaginings during our interviews. This was an indicator of how the teledildonics imaginary was still in its infancy and had yet to properly assemble. As we saw it while the imaginary was still in a state of constant alteration and being assembled there were several key points that needed to be determined to help solidify the future of teledildonics. One issue was how teledildonics would affect the senses and be a part of creating and maintaining intimacy. Another issue was how closely teledildonics would end up being tied to a porn imaginary. We imagined teledildonics

as a possible tool to stimulate the sense of touch during cybersex with a partner. Something that we thought would foster a sense of togetherness that would increase the intimacy for a couple. What we learned was that our couples all viewed intimacy differently and while many shared the same elements, there were just as many differences. While one of the main aspects of intimacy our couples pinpointed was a sense of physical contact relayed through touch. This was not something that our couples imagined could be overcome through the use of teledildonics. Our couples could imagine how you through the use of a teledildonic could be able to convey part of themselves through the rhythm of the vibrator, but that a touch was so much more than just a touch. The sense of touch was not just two-dimensional, it became three-dimensional with the roughness of the skin, the amount of pressure applied and the duration of the touch. So while our couples could imagine teledildonics as a tool to supplement their sex lives they could not imagine it as being realistic enough to fool their senses and be a tool that fosters intimacy.

Constructing intimacy

In our research we have uncovered many different ways of expressing intimacy in relationships. We have seen that intimacy was not only recognized as having sex with a significant other, but also as an amalgamation of sensory experiences, memories and being close to each other. For several of our interviewees, being close often equalled intimacy, but this was not the case for all. The couple we called Chris and Rachel perceived intimacy not only as being close physically, but also intellectually. For them the feeling of closeness was not necessarily the same as intimacy. This revelation led us to realise that the term intimacy was an imaginary that was constructed from rehearsals of how a relationship was perceived. The term intimacy was also a part of understanding the use of video chat in long distance relationships in the study "*Shared Living, Experiences, and Intimacy over Video Chat in Long Distance Relationships*" made of Greenberg and Neustaedter (2011). They defined intimacy as a shared presence, which their case-couples experienced through using video chat such as Skype, while doing everyday tasks together (Greenberg & Neustaedter, 2011, p. 16). In the study, the informants saw sex as an extension of intimacy. In our user interviews we asked specifically about the different couples' perceptions of intimacy and several of our users stated that intimacy was a lot more than sex. For them intimacy was defined as being close to each other and sharing things they could not share in the same way with friends.

With regard to teledildonics, Greenberg and Neustaedter's study showed that video chat systems were not designed with cybersex in mind (Greenberg & Neustaedter, 2011, p. 16). But teledildonics were designed with the intention of being used for cybersex. While teledildonics might have been designed for cybersex they have yet to be integrated into practice by our participants. Where video chat was not created for cybersex, it has been incorporated into a practice by actors in long distance relationships. We are interested in seeing whether or not teledildonics will be accepted as well and become incorporated into a cybersex imaginary.

Our study looked at new technology such as the We-connect application, which in the end of 2015 was re-designed with a video chat function (Fieldnotes: We-vibe representative, 2016). But did this new design of an application create an acceptance of the use of teledildonics? No, in our study we argued that the adoption of teledildonic devices could only become a reality if it was looked upon as a supplement for sex toys and not a replacement of sexual relations.

We looked at our research as an extended view into how cybersex was used in relationships where people were far apart. We found that our interviewees did not use the teledildonic part of the We-vibe and did not see the prospects of the We-vibe as a teledildonic device. In the Greenberg and Neustaedter study, robotic sex toys such as teledildonics were seen as extremes and something of the future (Greenberg & Neustaedter, 2011, p. 4), but in our study we have seen that the technology is already existing and is in constant development. The development in the sex toy industry is rapid, which can be one of the reasons. Just five years can mean a great deal for development of new technology. If we look at the development of smartphones, we can also see an extensive development from 2011 to today, which is why we have to look at the study from Greenberg and Neustaedter in the light of the study being conducted in 2011. In our study we do not see the teledildonic devices used in long distance relationships, but in a more general way as something supplementing sex toys and porn, also by being a part of the virtual reality technology. In the Greenberg and Neustaedter study it was concluded that the use of video chat for long distance relationships had exploded rapidly after video chat became easier to use and set up for free with for example Skype and other video based instant message systems, and as described *"most computer-literate people can install and use it as a reasonably reliable free service"* (Greenberg & Neustaedter, 2011, p. 5). In the study it was shown that many couples in long distance relationships shared their living through doing everyday tasks through video chat (Greenberg &

Neustaedter, 2011, p. 7) and that this could add a dimension of empathy, because the video chat made it easier to express emotions, not only through speech but also by facial expressions. This made us think that teledildonics could add a new dimension to the video chat, such as the sense of touch. Our study later showed that a sense of intimacy was more than just looking at each other, sensing each other's touch and so on. This made us doubt some of the findings of Greenberg and Neustaedter which showed that video chat was a new way of being close together from a distance. Because we found that intimacy was constructed so differently from the imaginary of the couples in focus, we did not see the study as wrong, but we would like to add that the sociotechnical imaginary had to be in a certain way for new technology such as video chat and teledildonics to be adopted as a part of intimacy in a relationship. In our study the link between virtual reality and teledildonics was discussed. In the next section we will take a step further and look at the reality of virtual reality and the reality of a "fake" touch.

The reality of Virtual Reality

In the article *"The future of spatially separated sexual intercourse"*, Wagner and Broll (2014) researched the emergence of tele-operated sex through robots. They imagined a future sex scenario where couples could interact with each other over distance through robots that mimicked not just tactile experiences but also olfactory and auditory cues. Wagner and Broll aimed to uncover the attitudes and concerns people could have when they imagined having sex with a partner through a robot. This study had a similar premise as our own study where we worked to uncover the attitudes regarding teledildonics as a means of building intimacy between couples in long distance relationships. Wagner and Broll concluded that they believed there was a need for a discussion on how tele-operated sex would alter our society. In their focus group discussions the researchers were initially presented with how their male participants viewed teledildonics negatively. The male participants speculated that *"All things around, one actually looking forward to, are missing"* (Wagner & Broll, 2014, p. 5). The participants of this focus group also perceived the potential users of teledildonics as belonging to the fetish milieu and that teledildonics would need to change their reputation before they could be viewed as something to be used in a wider setting. *"Nevertheless, before we can speak about a ubiquitous usage of teledildonics products as Rheingold predicted, a significant change regarding the social acceptance –at least according to the participants– has to take place"* (Wagner & Broll, 2014, p. 6). This is something that correlates with our understanding of imaginaries based on interviews with the users in our study. While

our participants could probably be categorized as belonging to the fetish milieu based on their use of sex toys, they did not view themselves in this fashion.

Wagner and Broll focus on how their participants reactions align with the theory of the uncanny valley. A concept described like this: *“the more human-like robots become in appearance and motion, the more positive the humans' emotional reactions towards them become. This trend continues until a certain point is reached beyond which the emotional responses quickly become negative”* (Bartneck et. al., 2007, p. 368). While the reactions described through the uncanny valley theory by Wagner and Broll mainly focused on the distinction between a sex puppet and a human, their premise still applied to our scenario. In both their case and ours there was a focus on how the sociotechnical perception of a teledildonic product affected how users responded to teledildonics in general. *“if a person imagines a robot who behaves and appears as a human in all its particulars, he can only accept it as a human”* (Wagner & Broll, 2014, p. 7). Whether looking at a potential sex puppet scenario or teledildonics incorporated into virtual reality, the socio-technical imaginary will be affected by the concerns raised now.

“What scares me most, is the knowledge that you're not sleeping with a real human, you just interact with a human who isn't present” (Wagner & Broll, 2014, p. 7). There will be a focus on creating something that can mimic our senses and fool our bodies and minds into believing we are somewhere experiencing something other than what we are in reality. But when is the line crossed? When does something become so real as to create an adverse reaction? In our study we saw that the design of the We-vibe as a teledildonic did not end up being close to “the real thing” and could not create sensory stimulus that satisfied our couples' needs. This may be because it is initially a sex toy. Some sex toys are made to look and feel like human skin to simulate something real. An example is the Kiiroo product. What impact will it have on society if long distance relationships become attainable and easily accessible through teledildonics?

While our focus has been on teledildonics and their obvious use in sexual encounters, in the sex puppet scenario, Wagner and Broll also imagine the puppets as being used for hugging or cuddling. Actions that are not in themselves sexual but allow people being in long distance relationships an even greater range through which they can sense each other and construct intimacy. Ultimately the findings in Wagner and

Broll's study correlate with our own in the sense that while their participants can imagine potential benefits from teledildonics they cannot place themselves as users of teledildonics. *"I can't imagine that even one of these would make a long distance relationship better"* (Wagner & Broll, 2014, p. 7).

In both the Wagner and Broll study and our study we see how the sociotechnical imaginary influences how teledildonics are imagined. In the Case of Wagner and Broll their participants see teledildonics as something that is used by people in a fetish milieu and the participants imagine a reason for teledildonics to be beneficiary for a long distance relationship. Meanwhile our participants expressed a similar lack of understanding how teledildonics could contribute to something worthwhile in their relationships that went beyond being a precursor to a physical interaction. The sociotechnical imaginary affects the way people view the technology and thus how they interact with it and how they in turn imagine the technology. The imaginaries and the perceptions that are revealed by Wagner and Broll fit within the sociotechnical imaginary that we have seen is being assembled in our own project. The participants in our study hold many of the same concerns and views regarding teledildonics. Through their research we see that the teledildonic imaginary is global and many of the elements being transferred and integrated from earlier imaginaries are the same across national borders. The fact that teledildonics are viewed as something that only people in a fetish milieu can use shows that elements from porn and the resulting stigma in the public opinion regarding sex is still attached to teledildonics.

From a virtual reality perspective, we have chosen to take a look at the VICE documentary "Digital love industry" (VICE Media, Inc., 2014). The documentary deals with a lot of the same topics as our study, trying to understand what the future of virtual reality (VR) and teledildonics will bring. The main focus is on how VR is used for porn, but also together with teledildonic devices such as the Kiiroo, which is put to the test in the movie. We found this documentary interesting because it did exactly what we did in the beginning of our study: Treated teledildonics as a "new and scary technology" which would replace intimacy and make it superfluous to be together with your romantic partner. In the documentary a "The Matrix" scenario is looked upon, where people interact with each other in a virtual world. One developer of a teledildonic device expresses it like this: *"I can imagine a future where, especially in online dating, you will expect to fuck teledildonically, before you fuck in person"* (VICE Media, Inc., 2014, 21:07). This made us wonder about the future of teledildonics. Is it really made for couples in long distance relationships, or is it actually a way of meeting new sexual partners and fulfilling the sexual

needs you cannot fulfil in real life? Is it a golden technological opportunity for the porn industry? Or is it a dystopian scenario as Rheingold described it back in 1991? We have concluded in our study that this perspective is not relevant for the couples we have interviewed. They have all kept a distance from the technology and are certain that teledildonics cannot replace real touch and intimacy. This is a similar conclusion to the one made in the VICE documentary by the therapist from the sexual recovery institute Robert Weiss, he describes it like this:

People that are needful or in certain life stages, can get caught up in the virtual thinking that it is more real than it is. And that is because they want it to be that way. A healthy person is going to know what a healthy relationship is.(...) They still realise “that is not the same as holding, touching and being next to that person”. And I think that until virtual reality becomes so immersive that we cannot tell the difference, which I’m not sure I’m going to see in my lifetime. People will still know the difference between fantasy and reality and they going to long for the real thing (VICE Media, Inc., 2014, 7.59)

This is also an outcome of our study which shows that many factors play a part in being intimate. Some couples define intimacy differently and we can imagine that some couples will find it easier to adapt to virtual reality and teledildonics as devices for replacing intimacy. This could open possibilities for couples such as Chris and Rachel who have a relationship which is based in the virtual world and who feel the thirst for skin less urgently.

Wagner and Broll likewise discussed how the emerging imaginary surrounding teledildonics sparked a need for a re-evaluation of how we perceive intercourse and the ethical dilemmas that arise when virtual reality becomes indistinguishable from reality. What then are the needs for a virtual technology to become real or at least real enough to facilitate a spatially separate relationship? This search for an understanding of when teledildonics are real enough has echoed through our project and has been a fundamental issue raised throughout our research.

Conclusion

By researching the aggregates involved in the sociotechnical imaginary of teledildonics we have seen how our couples have yet to assimilate the use of teledildonics into their practices, thus negating the potential gains we believed that it could incur in long distance relationships. In this report we have seen a lack of commitment from our couples to imagine how teledildonics can be used beyond their scope as regular sex toys. There are concerns regarding how teledildonics will affect our couples' relationships, with fears mentioned about what effects a teledildonics that incites true sensescapes will have on human-to-human interactions. There is a need to acknowledge that the teledildonic imaginary will become tied to other imaginaries that also deal with virtual reality, robotics and what their status in society will become. Nations will have to define definitive policies that outline the rights of those involved in virtual relationships. While teledildonics may seem to be a niche area, many of the elements involved in the reassembling of its sociotechnical imaginary will be transferred and enacted in other imaginaries that will become more and more vital to understand. As technologies that are connected with virtual realities, robots and artificial intelligence's become a bigger part of our lives we will need a foundation from which we can become inspired and seek references for our imagination.

Teledildonics such as We-Vibe consists of a We-vibe vibrator and a We-connect application, which technologically is a teledildonic device. However, through our research we have not been able to uncover the use of the We-vibe as a teledildonic device. This is based on two different reasons: The We-vibe vibrator was made for use during sexual intercourse, so many of the users in our study still imagined the vibrator as something they could only use together. Secondly the We-vibe has been branded as a heteronormative product for use in a committed relationship, which is still far away from the sociotechnical imaginary of teledildonics which we see as assembled through imaginaries from sex toys and the porn industry. This implies that while technically a We-vibe is a teledildonics, its users have yet to reassemble an imaginary where they have the ability to use their sex toys over long distances. Furthermore the users' acquaintanceship regarding the technology of teledildonics should not be taken for granted with silent assumptions that 'everyone' knows how to use the technology. While it may feel natural for many to communicate over phones or video chat sharing details of their everyday lives, this ease may not transfer to other settings such as cybersex where couples share intimate details.

Intimacy is a difficult term to define as it is subjective and different in each couple's relationship. For several of the couples we interviewed, intimacy was not only a tactile experience that was solely expressed through sensations of physical contact, it turned out to be a lot more. While our couples initially identified intimacy as having to do with sex, upon digging we found that intimacy is constructed through a sensescape and is an amalgamation of senses. This means that in its current form teledildonics are unable to create a stimulus that is realistic enough to foster intimacy. In the future teledildonics may become a tool that links partners independently of space, but for now it will just supplement regular sex.

Future perspectives

While conducting this thesis study we made some methodological and theoretical decisions which have influenced the way our study was formed. In this section we will take a look at some of the other perspectives we could have had in this thesis. These are some of the different paths we could take if we were to conduct further research into teledildonics.

One area we have not discussed and which could be interesting to look at in a future study, is the possibility of various users of teledildonics within different actor constellations. Our study has shown that the users we have interviewed did not have a need for using teledildonic devices. Could teledildonic devices be an opportunity for other user groups, such as people with disabilities, people deployed in the military or other user groups for whom teledildonics could be helpful for fulfilling sexual needs.

Another perspective which could be interesting for a future study of teledildonics would be to look at the use of teledildonics within the LGBT society and to have a gendered perspective of the use and production of sex toys in general, and which values are implied in the design of sex toys in the future.

Still another approach within this field would be to look deeper into the concerns regarding data security. There have been expressed some doubts with regards to the security surrounding the use of teledildonics and whether or not a sex toy may be “hijacked” by a stranger or your intimate video communication intercepted and shared on the internet. This concern is linked to the question of how to keep data, for which we do not know the consequences in the future, and with teledildonics as being such a delicate matter for many people, this concern for the future could be an interesting perspective for a future study.

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