Im/possible desires: media temporalities and (post)human technology relationships

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The general question of how our human desires can be supported by media technologies has produced a fairly constant endeavour in human history — and still does, for example in the shape of transhumanist hopes and aspirations. Over time, these desires have often driven development towards an, in the end, materialized technology. Many times, however, the desires have also not resulted in a physical product, but rather remained as ideas, conceptual sketches, or lo-fi prototypes. This essay will examine how such *imaginary media technologies* can be defined and categorized, why they are important to study, and how the underlying desires seem to be revitalized across centuries and decades. Such questions are of interest to transhumanism as they illustrate how desires, temporal relations, and human-technology relationships have been (and are) imagined both in the past, the present, and towards the future [1]. So, while this essay is not a media archaeological excavation of transhumanist imaginary media only (which would be an interesting project in itself), it is a media genealogy of historically recurring desires to extend, substitute and enhance the human body and mind.

This essay will make use of two typologies to explore desires and temporal relations in relation to media technologies. Firstly,

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[1] Gardner and Wray, 2013.

Verbeek's expanded version of Ihde's famous typology of human-technology relations[2]. Secondly, Kluitenberg's variantology of imaginary media[3]. As mentioned, these two typologies will be used to explore a range of im/possible desires in relation to human-technology relationships. Embedded in such desires are, as we shall see, also a range of temporal interrelationships making this essay bridge academic areas such as media archaeology and transhumanist futures.

A typology of (post)human-technology relationships

Verbeek presents an extension of Ihde's classical model of human-technology relationships, which emphasises it as a:

> "posthumanist" account of human intentionality because it shows the manifold ways in which intentionality is not "authentic" and "direct" but has a mediated character.[4]

Ihde's original model[5] distinguishes between four different types of human-technology relations: embodied, hermeneutic, alterity, and background relations. By embodied relations Ihde refers to technologies that are used to perceive or act upon the (more or less) immediate environment. These technologies practically become phenomenological extended parts of the user's body, such as a pair of glasses, a bicycle, or a kitchen knife. Hermeneutic human-technology relations consist of such interactions where we, as users, can make an interpretation of the world through a mediated representation of it. Old media technologies, such as the radio or the TV could provide good examples – although they continuously aim for more immediacy[6], they are always only substitutes for the first-hand experience. Other classical examples are the thermometer or the compass. Alterity relations refer to relations where technologies can

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[2] Verbeek, 2011.
[3] Kluitenberg, 2011.
[4] Verbeek, 2011, p. 142.
[5] Ihde, 1990.
[6] Bolter and Grusin, 2000.

masquerade or act as an "other". For example, the way people assign intentions; emotions; or cognition to various machines reveal a basic desire to project human characteristics to things that act in a similar (enough) fashion (as empirically proven by the media equation[7]). The underlying reason for this is most likely the combination of interactivity and (growing) autonomy of technologies (what Kitchin and Dodge refer to as secondary agency[8]) making it easier to assign agency and intentionality to machines. Background relations are more abstract and form a kind of backdrop to other experiences. Such technological relations are not immediately experienced or acted upon. As Verbeek puts it: "They are present and absent at the same time: without us noticing them, they give form to our experience by shaping a context for it"[9]. As such, these technologies provide a circumstantial setting by shaping (and sometimes controlling) for example room temperatures, air conditioning, or background noise.

Based in his orientation towards a "posthumanist, or even transhumanist, account of intentionality"[10], Verbeek adds two additional types to these four basic human-technology relations: cyborg relations and composite relations. Arguably, these can also be seen as expansions of Ihde's embodiment and hermeneutic relations. The cyborg relation is (as expected) grounded in the notion of a completely merged entity, and described as a radical variant of the embodiment relation. Verbeek argues that there is a significant difference between, for example, wearing eyeglasses and having a vision-improving chip implanted in your body. The relation moves from being distinguishable (the glasses) to being indistinguishable (the chip). In terms of the phenomenological experience, a (merged, amalgamated, indistinguishable) cyborg relation is incorporated and intimately mediated rather than an externalized relation of something being "used" as a tool.

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[7] Reeves and Nass, 1996.
[8] Kitchin and Dodge, 2011.
[9] Verbeek, 2001, p. 132.
[10] Verbeek, 2011, p. 143.

Composite relations, then, can be regarded as an expansion of Ihde's hermeneutic relations. This type of relation is characterized not merely by a representation of an external reality, but by an active co-construction of it. This could, for example, include aspects of reality which are not originally discernible to the human sensorium (such as an ultrasound machine or a radio telescope), but also technologies which superimpose information "on top" of the human senses (such as VR or AR systems) effectively constructing (new aspects of) reality. According to Verbeek, composite relations appear when technological intentionality is added to human intentionality. That is, the experience (or phenomenology) of the machine and the human experience come together to form a joint view of the world. Naturally, this joint view is the result of an interesting *negotiation between intentionalities*, which can become a fruitful focal point for analysis.

This paper will go on to argue that imagined human-technology relations (and thereby imaginary media technologies) are, and have been, of utmost importance to the transhumanist imagination. The overarching ambition and desire to surpass our cognitive and biological limitations has of course resulted in many fictitious accounts of (more or less) transhumanist imaginary media. Before demonstrating a range of such examples however, a definition and typology of imaginary media needs to be explicated.

A definition of imaginary media

In his development of a variantology of imaginary media, Kluitenberg draws on Zielinski's fundamental definition, which states that they can be seen as expressions of im/possible human desires as un/realized over time[11]. Elaborating on that definition he initially distinguishes three major types of imaginary media.

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[11] Zielinski, 2006a.

Firstly, conceptual media. These are media technologies that never made it past the drawing board. Media that have, so far at least, remained as ideas or conceptual blueprints for technologies that have not yet been realized. As Zielinski himself puts it "artefacts that were only ever sketched as models or drafted as concrete ideas on paper, but never actually built." [12] An interesting consequence of this definition is that we could say that many *patents* are in fact, conceptual media – concrete ideas on paper that have not yet been built, but which also functions as attempts to territorialize the potential future as one's own.

Secondly, *untimely* media, which is basically media that is out of sync with its time. Perhaps they were designed and built, but they never became popular, or were hidden away, or were effectively out-dated by the moment they were released on the market, marginalizing them as "dead-at-birth media". Again, as Zielinski puts it: "media devised and designed either much too late or much too early, realised in media practice either centuries before or centuries after being invented"[13].

Third and finally then, Zielinski also mentions *impossible* media. These are machines or technologies that are, more or less, pure fantasies – that appear as so fantastic or so spectacular that, under current scientific regimes, they are practically unachievable. Today, things like proper time machines, magic wands, or (possibly) around-the-world teleporters could be seen as impossible media. These are as Zielinski says: "imaginary media in the true sense… where the initial design or sketch makes clear that they cannot actually be built, but which implied meanings nonetheless have an impact on the factual world of media."

Parikka expresses his definition of imaginary media slightly differently, but it still provides a very striking phrasing. He identifies imaginary media as "something you do not always find in basic media studies textbooks: media that are the stuff of

[12] Zielinski, 2006a, p. 31.
[13] Zielinski, 2006a, p. 31.

dreams and nightmares, at times existing only in the minds of inventors or science-fiction writers"[14].

As such, imaginary media has an interesting position between the realized and the complete fantasy, and between the past and the future. In all of Zielinski's three types of imaginary media – and in Parikka's definition – there is a temporal relation between that which only exists as ideas and that which has been produced in material form. That is to say that even impossible media *could* stand a chance of being realized at some time in the future, maybe a thousand years from now – just like media technologies that were seen as completely impossible a thousand years ago are realized today. For example, if we were to describe a simple telephone call to a person living a thousand years ago, it would probably have been seen as crazy, perhaps even as dangerous, and you would maybe even find yourself being sentenced to death for being a heretic.

Nevertheless, the interesting thing is how these forms of media – the imagined and the realized – are continuously co-informing each other. This is to say that both the discursive *and* the material are important aspects of the analysis. How we *represent* imagined media technologies is important to the actual desires, expectations, fears, and hopes that we assign to the material technologies that we face in our lives right now (or soon-to-be now). In the same way, the material technologies that we are familiar with and use probably have a strong impact on the types and forms of media that we tend to imagine. Taken together, this results in a permeable border between the imagined and the realized, and between the past and the future, making them continuously influence one another.

This permeable border is also one of the main reasons why imaginary media become important to study. Imagined media technologies are more than just plot devices, their function is not just to drive a particular narrative or a particular story — they do that too — but they also have many other functions in our

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[14] Parikka, 2012, p. 44.

society – as expressions of desires, fears, myths, hopes and so on — and as conceptual blueprints for our imagination when designing or using actual technologies in our everyday lives.

Also, media technologies *in themselves* have historically developed as ways to challenge the border between what is real and what is simulated, between what is a true experience and what is just an illusion. So, many media theorists would argue that the way media develops is by aiming to transfer experiences in more real ways than before (most prominently Bolter and Grusin). Each new technology has the ambition to convey a more real experience than the previous ones (and thus more effectively entice certain desires).

This is something we still see today, in commercials and advertisements where a more real experience is something that is emphasized as the most important aspect of a new technology – be it a curved high-definition TV, a virtual reality headset, or a breaking story in an online newspaper. They all want to come closer to the "real" story, or the real you, or the real experience. As Bolter and Grusin noted, the way they do this is by adding *more* media – and subsequently marketing this to consumers. So, there are several interesting areas where the imagined and the real overlap and create new and exciting tensions, that are good places to look for the cultural expectations, myths, desires, fears and hopes that we have around new media technologies.

A variantology of imaginary media

From Zielinski's basic definition, Kluitenberg develops a more detailed typology, or a *variantology* as he calls it, of different kinds of imaginary media. He proposes eight different types. The very purpose of calling it a variantology is, to emphasise that this is not a *complete* list of all possible types of imaginary media. Rather, there would seem to be room for many more interesting ones that could easily be added to the variantology. As such, this essay will propose two new additions to this variantology of imaginary media: invasive media and media for transcendence.

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Next, this essay will go through these imaginary media categories and present examples, both as historical cases but also as instances of how the underlying desires live on in more contemporary culture, showing that they are, many times, *persistent* and *recurring* ideas in terms of how we imagine future media and our (post)human-technology relations to them.

Imaginary media for communicating with the divine

These imaginary media technologies are simply media technologies that were devised as a communication channel to a divine being – a higher metaphysical plane – often driven by a religious motif to make it easier (in some way) to get in direct contact with God.

As an historical example Kluitenberg presents Heinrich Suso's Wisdom's Watch. Heinrich Suso was a catholic mystic who lived in the fourteenth century. At the time when Suso imagined this machine, mechanical clocks had just begun to make their way in to western societies. Starting in monasteries as a way to keep regular track of times for prayer, the mechanical clock in civil society became more of a way to structure and order life in general. As such, it doesn't seem that far-fetched to believe that Suso was very inspired by the impact of the real mechanical clock when he devised this media technology for communicating with the divine. In fact, the mechanical clock probably impacted a great deal on how the world was thought of in general. The passing of day into night and the movements of the stars were to Suso *visible* signs that life and metaphysics were organized around a kind of invisible clockwork, which was in turn ruled by some sort of divine intervention.

Thus, what Suso suggested was a clock that co-ordinated this divine clockwork with the mechanical clock so that humans could bring their lives into unison with this divine order. In Suso's imagined clock the hands were controlled by a divine being and suggested that if you made sure you were praying at

the right time, you could establish a channel of communication to this divine being. As mentioned, in the construction of his imaginary medium Suso portrays the world as a clockwork and as one giant communication medium set in motion and guided by the invisible hand of eternal wisdom, which thus "communicates" divine order to the human subject. In Suso's mystical vision, which became very popular throughout Europe in 14th century, the clock is a connection machine, a medium to co-ordinate not only the affairs between humans, but also between the human and the divine. This is, admittedly, a very old example (and may seem a bit remote to us) but the fact is that this idea of using media to communicate with the divine is still present in various ways in contemporary society.

In many examples of televised televangelism, viewers are instructed to "touch the screen" and thereby create a chain of communication via the TV and the televangelist to a divine being and receive a blessing of some kind (see for example "Powerful Prayer with T.B. Joshua"[15]). From a media theoretical perspective this is interesting since it calls to viewers not only to confront issues of faith, but at the same time also confront their beliefs in how a specific technological infrastructure works and what role that infrastructure can play in conveying (divine) messages and communicating with the public at large. If you make a comparison to Suso's divine clock, televangelism can be seen as a way to make use of contemporary media technologies to find a way to fulfil the same desire — to communicate with God.

Another more recent example, which caused a bit of controversy relates to the phenomenon of "speaking in tongues". This is basically when a person is in a state of religious inspiration and is thereby also capable of receiving divine messages and speaking a divine language. This language is often incomprehensible to the person who is speaking and to most listeners as well. News stories tell us of a televangelist who was not speaking in tongues, but *typing* in tongues in a Facebook status update[16]. A person

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[15] Joshua, 2010.
[16] Menzie, 2011.

was receiving a divine message, which she then typed on her keyboard in a Facebook update. Several more such posts with strange spellings continued to appear and visitors to this particular Facebook page began to question this idea. While there were people agreeing that this was true divine communication, others were more sceptical and claimed that it was not even possible to be typing in tongues. Regardless of whether you think it is possible or not, it is interesting to see how the medium of communication plays a role here. The question of whether this is possible is not *only* a question of belief, but also a question of what you think a medium is capable of recording or communicating.

This tension (if you will) is also apparent in many other modern genres of communication. For example, another event tells us of a Virgin Mary apparition that was found in a piece of virtual wood in Second Life[17] (the person who found it later went on to try to sell it, perhaps also telling in some way). Yet another example can be found on the Catholic website Savior.org. The website broadcasts a live webcam image of an altar bread (one of the Blessed Sacraments). The purpose being that, in many Catholic churches, believers can come and sit in the presence of the Blessed Sacrament at any time of day, not just during the actual Mass service. Via Savior.org you can also do that online, via webcam. The "curious" thing is that the webcam image never actually changes, because the bread is, after all, probably not going to move. But there is still this idea that it needs to be represented through an updated webcam feed, to deliver an experience of "liveness". Arguably, this acts as a substitute for physical co-presence, even though the viewer could probably not tell the difference if it was just a static image, which also says something about what we think that media does and how it works.

These latter examples may not present imaginary media in the sense that they are conceptual, untimely, or impossible as such. However, what I want to show is how the particular desire to

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[17] Krotoski, 2006.

communicate with the divine may also be expressed through existing media (in imagining what they are capable of), creating yet another interesting temporal relation between desires and media technologies.

Imaginary media for communicating with the dead

Another recurring desire when it comes to imaginary media has been to improve our abilities to communicate with the dead. For example bringing back spirits (or listening to them), or to create some sort of audiovisual proof that spirits do, in fact, exist (beyond ordinary human perception). Thus, it seems important to recognize that how the dead or the spiritual world is invoked in a specific culture and time, depends partly on which media technologies that are available. So, historically, there have been many ways to establish communication with the dead ranging from campfire legends to the Internet. And each of these technologies have their own affordances, their own functionalities and uses, that make certain types of communication easier than others – from the re-telling of stories across generations, to grave stones and monuments, to photographic and phonographic memories and reconstructions, to using the internet for grieving, mourning and establishing family bonds that have been lost or deteriorated over time.

Kluitenberg begins his exposé of imaginary media for communicating with the dead by referring to Edison who imagined machines with the specific intention of establishing a channel of communication to the dead. His ideas of a Ghost Machine or a Spirit Telephone were imaginary media intended to record or make contact with ghosts or spirits of deceased people. As Edison put it: "I am inclined to believe that our personality hereafter will be able to affect matter. If we can evolve an instrument so delicate as to be affected by our personality as it survives in the next life, such an instrument, ought to record something" [18] . These machines clearly actualize composite

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[18] Noory and Guiley, 2011, p. 91.

relations, where our sensorium is extended through technology, helping us perceive new layers of (imagined) reality.

There is (to the author's knowledge), however, no proof that Edison actually constructed one of these machines, but his idea of what is now commonly referred to as Electronic Voice Phenomenon, or EVP, became popular in the 1970s again. Electronic Voice Phenomena are simply sounds that are found on electronic recordings, which can then be interpreted as the voices of spirits. Those who are enthusiastic about EVP claim that hearing words in EVP is a special ability that you have to develop and train in order to become sensitive to it. Sceptics, on the other hand, suggest that EVP is mostly misinterpretations of natural phenomena, or attempts to steer (or even manipulate) the representations in desired directions. Perhaps unsurprisingly there is not very much scientific research on EVP, meaning that most research in this field is carried out by "amateur" researchers who independently develop media technologies to support this practice[19]. One example of this would be the Mel-meter, which is a device designed by an electrical engineer who tragically lost his daughter in a car-crash[20]. He has invented a range of electro-magnetic sensors, which has found a niche market and the devices, which are priced between $79 and $350, have become quite marketable (see for example www.ghostoutlet.com or www.ukghoststore.com).

These desires (to make sure that dead loved ones are OK or to reassure us of a spiritual afterlife) are also visible in the growing broadcast and popularity of "spiritual" TV shows, such as Ghost Adventures[21] or Ghost Hunters[22], as well as in more fictional shows such as Serial Experiments Lain[23] and Caprica[24] (where digital human clones can survive by being "carried on" networks

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[19] Noory and Guiley, 2011.
[20] Fallon, 2010.
[21] Belanger, 2008.
[22] Monahan, 2004.
[23] Konaka, 1998.
[24] Aubuchon, 2009.

or even on robotic bodies). Taken together, these examples indicate a cultural resurrection or reproduction of a popular genre of communication (and its imaginary media technologies).

Imaginary media for communicating with the other

The next category is referred to as imaginary media for communicating with the other. Under this heading, Kluitenberg explores two themes of 'the other'. The first has to do with (the dream of) global and equal communication. And Kluitenberg does not go very far back in his example of this, but refers to how the Internet was championed as a truly democratizing technology that would overcome social and national differences and allow for everyone to take part in society on equal terms. One concrete example of such utopianism was the "Declaration of Independence of Cyberspace" written in 1996 by John Perry Barlow:

> We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth. We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity[25]

While this excerpt is to a certain extent true, it is also clear that the Internet suffers from lots of difficulties in making this vision of equality come true in full. Instead we seem to have lots of commercially controlled islands of communication such as Facebook (very popular in the US and western Europe), VKontakte (a popular social network among Russian speaking users), and Renren (a popular social network among Chinese speaking users), which are aimed at different groups and nationalities of users. Apart from the Internet, similar utopian hopes can be found in many other technological developments in history (including for example trains, planes and automobiles; steam power, or electricity).

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[25] Perry Barlow, 1996.

An example of an imaginary media technology of this type (i.e. to bridge various barriers and create social cohesion and understanding) would be the Babelfish, which is an animal, but that works as a medium once you put it in your ear. That is, the Babelfish from the book The hitchhiker's guide to the galaxy[26] functions as a brainwave decoder, making it possible for all the various races occupying the Hitchhiker universe to understand each other even though they use different verbal languages. While being a plot device to overcome questions of communication barriers, it is also an expression of a longing for a more fundamental form of communication, which also functions immediately (in the sense of Bolter and Grusin). It can be seen as a transhuman technology precisely because it functions to overcome communication obstructions. However, it does not do this by enhancing our capabilities, rather it taps into unused cognitive resources (brainwaves) and mediates these through a brain-animal interface.

The second version of imaginary media for communicating with the other is, as Kluitenberg says, a more "shady" side, having more to do with sexual desires, sexual differences and man-machine relations. Here, he calls upon the concept of 'bachelor machines', which has been used in different ways by for example Marcel Duchamp [27], Michel Carrogue [28] and Deleuze & Guattari [29], but which for Kluitenberg refers to imaginary technologies that express a, often heteronormative and patriarchal, desire to mediate a certain kind of sexual longing. As an example, when electricity was discovered and various scientists were beginning to understand how it could be controlled, a range of devices *exposing* people to actual electric shocks became popular. The so-called electrical kissing machine, or Venus Electrificata, from the early 18th century, was a machine where a person (a woman most likely) would stand on an

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[26] Adams, 1979.
[27] Duchamp, 1969 (1932).
[28] le Bot, Brock, Carrogues, de Certau, Clair, Gorsen, Lascault, Lyotard, Metken, Montesse, Radrizzani, Schwarz, Serres and Szeemann, 1975.
[29] Deleuze and Guattari, 2000.

electrically isolated platform and get charged up with static electricity[30]. Another person — most of the times presumably a man — would then kiss her and receive a strong electrical shock in the process. It would seem that this novelty machine was something of a salon past-time by the time. Interestingly, there is also a modern incarnation of this machine developed by the Kajimoto Laboratory at the University of Electro-Communications in Tokyo[31]. This represents a kind of imaginary media (a potential machine), since it is doubtful it has become, or will become, very popular. Still, it emphasises an imaginary media desire, which also comes with a potentially shady aspect to it: to make machines that support sexual desires, but which also expresses certain views on gender and sexuality.

To continue this argument, when discussing modern bachelor machines as imaginary media, it becomes hard not to mention Samantha from the movie Her[32]. In this movie protagonist Theodore Twombly falls in love with an artificial intelligence. The movie goes on to explore borders between real and virtual in many different ways, and what social and cultural rules that are applicable to an 'othered' being. Even though the movie is a science fiction rom-com, where *anything* could be imagined, the movie is at the same time rather conforming to current heteronormative standards, and Samantha clearly qualifies as a modern imaginary bachelor machine.

The same goes for Ava in Ex Machina[33], who is an imaginary media machine, that even though it could look like anything, conforms to many of the tropes of women in film. Ava is a femme fatale; a seductress posing as a damsel in distress, who uses her seductive skills to get one man to save her from another man (whose mission is to build 'the perfect woman'). This tendency to give a female artificial intelligence the most basic and stereotypical feminine characteristics is a recurring patriarchal

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[30] Heilbron, 1982.
[31] Lee, 2011.
[32] Jonze, 2013.
[33] Garland, 2015.

desire. This is a certainly movie that wants to build narrative tension, but by only showing that Ava understands heternormativity and uses it to manipulate men, she is also left as a very clichéd female character. Ava is almost like an even darker and more sinister version of Samantha in *Her*. Ava is at the same time a beautiful seductress and a cold machine that can be turned off if she doesn't live up to the expectations of the men around her. Again, an imaginary bachelor machine of our age.

Apart from human to other communication, there is also the case of others' communicating with each other, without the involvement of humans. This is the case in the movie Colossus – The Forbin Project[34], which is about an artifical intelligence (Colossus) used as a war computer. Being an American movie from the 1970s, Colossus is designed to learn about Russian military activities and strategies. The fear that is expressed in this movie, is that the Russians have developed a similar artificial intelligence and that these two AI:s start to communicate with each other and decide that they should rule the world without the involvement of humans. This is a subtype of othered communication where the others, in this case the machines we are creating, become our masters and decide to leave us behind in some way. This idea can, of course, be seen in many other science fiction movies and books.

Imaginary media for transcending space and absence

The next category that Kluitenberg refers to is simply imaginary media for transcending space and absence. By this he points to media that are used for keeping in touch with loved ones, for receiving news from around the world and for doing a bit of armchair travelling (i.e. experience the sights and sounds of the world without having to leave your home). However, the perhaps most mythical of all imaginary media for transcending space (except for possibly the time machine) is of course the teleporter, which has been, and still is, a desire, in concurrent popular

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[34] Bridges, 1970.

culture. To be able to transport not only representations of your voice, and your visual appearance, but your entire body is just too intriguing to let go. However, throughout history there are, of course, also less spectacular technologies imagined as well.

For example the early 20ᵗʰ century French image series *En L'An 2000* (trans. In the year 2000) portrays a range of imagined future media technologies [35]. One such image depicts a videophone, where a multimedial innovation brings both sound and vision to a long-distance call. In hindsight, however, the image also represents a Western colonial fantasy as the person being called (represented as being in a distant place) has an Asian-looking manservant bring him tea. In a way, this imaginary media shows a future technology to transfer high definition video and sound, but at the same time the representation also fail to imagine an invention that could make a person tea by his (or her) desk.

Historically, the handshake has been seen as having a particular status as a communicative gesture[36]. That is, the handshake could convey much information about, for example, a person's status (both social and medical) or ambitions.
As such, a French imagined remote presence machine from 1905 had the ambition to mediate every expression on the face of the person you are talking with, to hear his or her voice and to feel the pressure of the handshake, even when separated by hundreds of miles. Particularly, it was imagined as a way for physicians to conduct remote diagnosing – if you could see the patient's face, hear their voice and feel their handshake you could more safely diagnose the symptoms and prescribe the correct cure for a patient in another city. The Popular Mechanics article describing this imaginary media also states that "And yet it is only a generation or so ago that the telephone, the wireless telegraph, airships, submarine boats, and even the telegraph (sic), seemed every bit as impossible and unreal"[37]. A modern version of this

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[35] Côté, 2016.
[36] Schiffrin, 1974.
[37] Unknown, 1905, p. 724.

machine is the Frebble (www.myfrebble.com). As their website states: "Frebble is an accessory designed to allow you to hold hands with someone at a distance: when you squeeze it, the other person feels your squeeze. The shape holds you; you hold the shape". While nothing extraordinary in itself, the (imagined) technology shows how this particular desire for 'touching from a distance' is a recurring cultural phenomenon.

Imaginary media for transcending time

Technologies for transcending time are certainly one of the most prolific types of imaginary media. The desire to travel in time, to undo or redo things in the past, or to see what is going to happen to oneself or to society at large in the future, seems to be very strong. This is also reflected in the wide range of imaginary media that has been devised to accomplish this. The time-turner from the Harry Potter universe, the TARDIS from Doctor Who and the Delorean car from Back to the Future are all examples of such imaginary media technologies. Older technologies such as crystal balls or astrological/-nomical charts were also imagined as media that could take us beyond the limitations of time.

In relation to imaginary media for transcending time, Kluitenberg also talks about the Long Now Clock, which is a mechanical clock that is intended to run for 10,000 years. The ambition with this clock was, amongst others, that the clock should tick once a year, the century hand of the clock should advance once every 100 years, and the "cuckoo" should come out every millennium. While the clock is not fully realized yet, it is being built right now in Texas, USA. In a film on their website, the project provides an update on how the work is progressing[38]. In this film the word "imagined" is mentioned many times and with many different meanings – particularly in relation to the tension between optimistic and pessimistic views of the future.

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[38] The Long Now Foundation, 2016.

Potential media

Potential media refers to media that was planned for production, but that was, for some reason, abandoned (perhaps due to costs, or due to a lack in popularity – something that disrupted this potential development of this particular media technology). This is media that died, before it gained any popularity or reached consumers in any large scale. Media history is, of course, filled with such failures and media archaeology often emphasise how these mistakes, sidetracks and alternatives are still interesting examples of how the future of media was imagined, at a specific point in time. That is, by just looking at stories of how certain media technologies have become successful and popular, we may miss out on these strange turns and odd circumstances that media development could have included. Just to mention a number of such potential media, we may refer to the auto-magic picture gun, which was a kid's toy, or a media technology for children[39]. This was a hand-held, miniature photo-projector in the shape of a small pistol. It was used to project still pictures onto a screen, and could then be operated by the trigger of the gun (to advance to the next frame). This potential media never became a huge success. The Selectavision vinyl video system, is another example[40]. This technology took some 17 years of development, making it very non-market friendly when it arrived in 1981 as many other competing formats were making their ways into consumers' homes by then. The Video Home System (VHS), which offered a longer run time in a smaller package, was already well on its way to becoming the standard video technology in most homes. Also, movies stored on vinyl records had to be manually taken out and turned over halfway through the film, which was seen as a bit of a nuisance. So, the Selectavision was already outdated, in a way, by the time it arrived on the market. Nevertheless, it is an interesting example of intermediality – and perhaps, if it had been faster in development, it could have been popular?

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[39] The Strong: National museum of Play, 2016.
[40] Howe, 2016.

Yet another example of potential media is the Clavilux, which was a musical instrument and at the same time a kind of psychedelic visual pattern projector[41]. Invented by Thomas Willfred, it was intended as a multimedial experience, where music and visual effects would complement each other. During a performance the musician would sit on stage with a huge screen that received the projections from the Clavilux itself. However, it was not only an instrument for large concerts, there was also a version for the home, where you could play it in your own living room, projecting the visuals onto a wall. One parallel that could be drawn to the present is how the visual effects in Itunes work and appear. The underlying idea is basically the same, to have more or less psychedelic visual effects that accompany the music. Interestingly, not only is the idea as such similar, the manifestation of these effects is also very comparable.

Imaginary media as media of abundance

This category is about how certain media can be seen as the solution for almost anything and everything. Further, they can provide endless resources for us to make use of in an ever-growing and prosperous future. Or, in a more dystopian sense, also be the certain death of us all. Imaginary media as 'media of abundance' is thus about ways that media can harness various untapped resources in society, in culture and in the material world. This, in turn, can be for good or bad, and provide either a fantastic future or impeding doom. It would seem that digital media technologies and networked media have been especially good at spurring such imaginations.

One example of this is the most recent Swedish governmental reports on the benefits of digitization. In this report it is stated that:

> Digitization and use of new technology creates radically altered conditions for the future. It is a transforming, and in many ways

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[41] Kagan, 1978.

disruptive, change in virtually all areas of society. It means we can do things in new ways, and more importantly, that we can do totally new things. Digitization changes fundamental structures for companies and the public sector, but also the foundations for trust and social cohesion in society changes. Thus, digital change transforms the most important parts of our society – growth and sustainability, welfare and democracy. Technological development has always been tied to social development. Technical progress alters societal economy, that is, how we produce the goods and services that we need and want. As such, it also changes the social institutions and structures of society.[42]

This quote effectively illustrates on the first hand a very vague idea, almost imaginary, about what digitization actually is. It is never defined, but intentionally kept as a broad and illusive concept. On the other hand it is at the same time presented as the solution for everything – it will generate more democracy, more sustainability, more growth, and more progress. Naturally, this discourse of more, and better for almost everyone, is a recurring theme in many imaginary media, especially those that certain people want us to buy in to – either ideologically or monetary.

Imaginary media for deliverance (emancipatory media)

The final category in Kluitenbergs variantology, is imaginary media for deliverance. This category includes ideas of how media can be seen as potential saviours of a certain social group, rescuing them from current oppression and as a way to produce hope for the future. Or as a way to speculate about what it would be like if the world was different. Thus, this is a more politically charged type of imaginary media, where for example Afrofuturism is a pertinent cultural stream of imaginary media[43]. Afrofuturism deals with the general relationship that African Americans have historically had with the fields of science and

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[42] Digitaliseringskommissionen, 2015.
[43] Yaszek, 2006.

technology. Where in the shady past of these fields, the African-American body was treated rather violently, with black female bodies positioned as especially alien and othered. Therefore, in Afrofuturism, adopting an alien, cyborg, or robot alter ego is one way to reclaim this previously negative relationship with science and technology. This adoption can also act as an armour to protect against the limiting cultural expectations of how African-Americans "should be".

As a completely contrasting, version of emancipatory imaginary media, we may return to the French image series L'an 2000. This series consists of a number of images where various house chores are automatized. This vision of emancipation links nicely to discussions that are being held today, about the future of work and about if or when robots may start taking over more and more of our labour tasks. This has spurred questions around whether such a development will generate more freedom for us to engage in creative and artistic practices, or if we still will have to work harder and longer for society to grow and prosper. An imaginary design manifesting such questions around robot labour has been produced by Simone Giertz through her "everyday robots" [44]. For example her "Breakfast machine", which effectively questions the norms that surround robots and automation of labour. Which labour is worthy of automation? And why? What should we do with the extra time that we may get? As such, her robots become critical imaginary media that questions the norms and underpinning reasons of emancipation through automation.

Invasive media

As an addition to Kluitenberg's variantology this paper suggests imaginary media as imprisoning or, perhaps more appropriately put, invasive media. This can be seen as a counter-category to imaginary media of deliverance (or emancipation). The history of imaginary media is in fact filled with examples of how people

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[44] Giertz, 2016.

would like to watch over others, to spy on them, to eavesdrop on them, or to collect information about them. Primarily as a narcissistic way to get to know what other are saying about ourselves, but also as a more general technology to keep an entire society in check.

An example brought up by Zielinski in his book Deep time of the media[45] is the Panacousticon, which was a surveillance system of public space imagined by the German scientist and Jesuit Athanius Kircher, in the 17th century. The idea was that you should be able to overhear and eavesdrop on courtyards in castles, because this was the place where the truth was being told. The design consisted of a large spiral-shaped tube (probably inspired by the spiral shaped part of the human ear, called the Cochlea) with a capacity for amplifying sounds. This large tube was built into walls of castles and then hidden from view. It would pick up the sounds from the courtyard, amplify them and transmit them up to a form of "talking head", where the master of the castle would then get the latest gossip delivered. The intention was basically to make the castle into a sphere of surveillance, where little privacy was maintained.

This desire to spy and eavesdrop has a flipside, of course, which we may call paranoid media. As an example we may look at a recent blog post[46] that tried to imagine potential technologies that governments — or private companies — could use to monitor citizens with. They suggest many different ways that we, in the future, will be watched and spied upon. Many of these are perhaps not that extreme —the technologies already exist— it's just a matter of putting them to these uses. They range from Internet of Things applications (i.e. everyday objects with Internet connectivity), to streetlights that record conversations, to surveillance drones used on a large scale. An interesting question becomes, what is paranoia when it comes to imaginary media of surveillance, and what is just healthy scepticism? One way to start building an answer to this question is by looking at these

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[45] Zielinski, 2006b.
[46] Snyder, 2012.

imaginary media, how people discuss them, and what their potential impact on society could be.

Imaginary media for transcending human limitations

Finally, it seems a little strange that Kluitenberg does not include imaginary media for transcending human limitations in his variantology. This category focuses on human capacities and how cognitive, and biological limits can be transcended (through for example an extended lifespan or a transferrable consciousness). This category overlaps with some of the other categories, but still contains such an important desire, that it deserves a category of its own, particularly as the "most transhuman" of all the categories of the variantology.

In this category, as in many of the others, there are positive, optimistic versions of the human future – often referred to as transhumanist, as well as pessimistic versions that foresee social inequality, ethical dilemmas and various disasters for the human race. As such, we seem to have many examples where transhuman desires are questioned and even rejected. For example in movies such as Self/less, where human minds can be transferred between bodies or Transcendence, where uploading the human mind to another machinic vessel is the main technology. Both these imaginary media depictions are driving the narrative into a more depressing conclusion. Whether this is just a cultural sign of the times or simply an inability to form liaisons between transhumanism and major movie producers is difficult to speculate on. It would however seem that transhumanism as an ideology and Hollywood as a producer of cultural desires have not yet developed a relation where transhumanist imaginaries are represented through, what Kirby refers to as, normalcy, familiarity and necessity[47]. That is, imaginary media for transhumanist desires have, so far, rarely been represented as scientific miracles that 1) have a potential to *save* humanity; or 2) are *necessary* for the human endeavour at

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[47] Kirby, 2010.

large; or 3) can be seen as *familiar, safe*, and something to *long* for.

Conclusion

In conclusion, this essay has examined how *imaginary media technologies* can be defined and categorized, why they are important to study, and how the underlying desires seem to be revitalized across centuries and decades. These desires, as expressed in the range of imaginary media and their anticipated social contexts, not only have the potential to reinvigorate cultural debates around the use, necessity and purpose of certain technologies, but can also provide food for though in terms of future media design. Moreover, imaginary media may help the analysts and designers to consider (and 'reveal') non-human and technical aspects of media technologies (e.g. electro-magnetics, supersonics, ultra- and infraradiation, quantum computing), which can otherwise remain overly ephemeral (even magical) to users[48].

This paper has given a range of examples of imaginary media that are in different ways extensions, substitutions or enhancements of the human body, thus explicating different (post)human-technology relations. Understanding such imaginary (post)human-technology relations is important since it provides food for thought in terms of hopes and fears for the future (not only of media technologies, but to human existence). Imagined media technologies articulate what Huhtamo and Parikka calls topoi [49] : recurring myths, interaction patterns and media capacities. They are also cultural expression of how we, as a species, negotiate the tensions between the artificial and the real[50] calling for a more laborious discussion of intentionalities and moralities of (actual and imagined) machinery; the emergence of new (post)human-technology relationships; and the normativity

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[48] Parikka, 2012.
[49] Huhtamo and Parikka, 2011.
[50] Margolin, 1995.

perpetuated by designs that potentially stimulate, but also limit, how we think of our conceivable future[51]. As such, this essay has tried to connect historical examples to concurrent ones, in an effort to go beyond a mere "antiquarian interest"[52]. Indeed, an increased awareness of im/possible desires and how they reoccur over time could help us respond with more caution (or delight) when enticed by "new" imaginary media.

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[51] Skågeby, 2016.
[52] Huhtamo, 2011.

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