Dissecting online cosmopolitanism. An analysis of contemporary art as examinations and examples of the circulation of online imagery.

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MA Arts and Culture | ca. 17.000 words

Leiden University | MA Arts and Culture | 2014-2015| MA THESIS | 5794VMATH

Date	7-8-2015
Specialisation	Art of the Contemporary World and World Art Studies
EC	20
Tutor	Prof. dr. C.J.M. Zijlmans

Summary: *This thesis offers an analysis of four contemporary artworks that address the role of imagery on the Internet, which increasingly constitutes our worldview. These works are three online works:* Image Atlas *(2012-ongoing) by Taryn Simon and Aaron Swartz, Amalia Ulman's* Excellences and Perfections *(2014) and* DISimages *(2013-ongoing) and the fourth is not web based:* How not to be Seen. A fucking didactic educational .MOV file *(2013), by Hito Steyerl. Although the key role of the Internet in processes of interculturalization is often put forward, recent changes in the functioning of our browsers, search engines and our use of social media do not allow for worldviews to be expanded or enriched by the Internet. Rather, mechanisms such as 'personalization', the use of social media as multimedia browsers, and commercially governing hubs of images are likely to result in a reaffirmation of worldviews. Online imagery plays a key role within these mechanisms. With different strategies and media, these works or projects elucidate important aspects of the way information and visual imagery on the Internet is mediated or disseminated.*

Keywords: internet art, net art, personalization, new media art, digital culture, deep remixability, online interventions, stock photos.

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Acknowledgments

Since this thesis marks the end of my master's study, I hereby take the opportunity of writing a brief acknowledgement. I would like to thank my parents for their infinite support. I also want to thank my friends (including brother and sister) for reassuring me while enjoying good coffee and for displaying an amazing and pursuable work ethic. Also my thanks go to Kitty Zijlmans, who has been a great supervisor and an inspiration throughout my master's study.

Introduction

> One man's imagined community is another man's political prison.
>
> Arjun Appadurai, *Modernity at Large*[1]

Globalization is generally conceptualized as a process of intensifying cultural and economic exchange. Cultural permeation, or *interculturalization,* is a continuous process at play, due to people's movements on the planet's surface since the dawn of humankind, but its scope and velocity has greatly increased under the influence of technological innovations. New ways of transport invented in the previous century enabled growing groups of people to travel longer distances. In recent years, air travel seems to have gotten more affordable, including long distance flights. Whereas it would have been a rare opportunity to be on the other side of the globe some fifty years ago, this is now possible for a growing part of the human population. Leisure and business travel are just two examples of mobility of a privileged minority of the world's population, but technological innovations also facilitate various forms of political, economic or labour migration. In short: an expanding group of people is becoming increasingly mobile. On an economic level, markets are so interlinked that our economy is often called a world economy, something the frequent use of the term '*global* economic crisis' made us well aware of during the past decade.[2] These developments are facilitated, accelerated and in that sense co-shaped by the innovations in communication technology.[3] The birth of the World Wide Web, and its increasing implementation in our daily life could arguably be the biggest catalyst of cultural exchange. Individuals exchange texts, images, music and different kinds of (representations of) cultural utterances without vis-à-vis contact. Through cable networks and wireless connections they travel the world as data, get stored on servers and appear on screens of laptops, mobile phones, tablets or other devices, potentially all over the world, where they can get duplicated, altered, mixed, converted and otherwise transformed before travelling again.

Although the process of interculturalization has intensified under the aforementioned

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[1] Appadurai 1996, p. 32.

[2] I've put 'global economic crisis' in between quotation marks as it is so often bluntly used as the defining point of reference for the current global condition. 'Global' is subsequently in italics to nuance the claim of its applicability to all markets and people worldwide.

[3] A so-called *flash crash* is a good example in which technology's speed exceeds human interaction (and understanding). In a flash crash, stock markets drop dramatically because of automated traders that act upon calculations made by other sophisticated computational models. Due to computational generated manipulation, in 2010 the market dropped almost 1000 points in 5 minutes. Only five years after the crash of the Dow Jones index on May 6, 2010, someone was arrested for his involvement. '2010 Flash Crash' on *Wikipedia* [http://en.wikipedia.org/wiki/2010_Flash_Crash] accessed 17-05-2015.

developments, it would be false to conceptualize the world as a place where money, people and cultural forms can move freely. Too easily, terms like 'global village' (McLuhan) are used to describe the world today, without nuance or reflection on these terms that only make sense for an economically privileged part of the human population. For many it is impossible to travel based on his/her passport or the lack of one, apart from whether they have the financial means. Economic exchange is also selective on several levels, from local to global, due to protectionism or boycotts. In the same way, many think of the internet as a platform for free global exchange.[4] However, also on the internet there are obscure mechanisms at play that don't allow for this potential. Just like the traffic of money, goods and people, data traffic on the internet is obstructed, steered and subject to various mechanisms that are furthermore highly obscure for the vast majority of its users.

Through faster mobile Internet, and the interface of handheld devices becoming more user-friendly, the Internet has become a source of information not only at our desktops at home but accessible everywhere one takes these devices. Someone reaching for his/her cellphone mid-conversation saying 'Let me google that', for verification of, or extra information about what is said, may be a recognizable situation for many. Hence, the constant accessibility of the internet has a great influence, as these technological tools get implemented in daily activities and become the main gateway for information, with Google as a portable oracle answering all questions in a few seconds.

We are now more than ever able to be informed about the part of the world we do not directly deal with, which enables the potential to internalize a feeling of connectedness to the rest of the world. Obviously, our knowledge of the world which forms our worldview is always based on mediated information, whether it is written in books and newspapers or broadcasted on television. Verification of information is and has always been problematic, but the distinctive aspect of the Internet is that it is able to show information from a myriad of (sometimes unknown) sources, that disseminate incredibly fast. A news item 'goes viral' and then turns out to be a 'hoax'.[5]

The choice of source to consult on the Internet can obviously still rely on the authority one ascribes to more traditional media known to be trustworthy. For example, I would turn to the website of a newspaper I take to be reliable, if I want to gain information about current events. Similarly, the exchange of texts, pictures or videos via personal messages through e-mail services or other online websites/applications, are from one individual directed to specific others and in that

[4] This idea resonates in the names of the first Dutch Internet providers like XS4ALL (Access for all) and Planet Internet.

[5] Quite frequently reports of untimely deaths of celebrities 'go viral' by means of fans/admirers disseminating the information, 'sharing' links on social media. In some cases these 'death hoaxes' are further accelerated by publication on established news channels' online outlets, without correct verification. Among numerous other examples, the death report of Brazilian football legend Pelé was reported on a CNN Twitter account (28-3-2014), another example is Dutch football professional Johan Cruyff on the Twitter account of newspaper De Volkskrant (16-8-2014), which accidentally got published when testing a new application.

sense their origin is clear. However, people often use search engines to find something on the internet, and they often exchange information on social media without it being directed to specific individuals.[6] In these cases, the information one will get to see is based on his/her past Internet behavior, sorted by mechanisms that are highly obscure for the vast majority of users, if they already know about this. It should be taken into consideration that one only deals with a small part of the world directly - in a physical sense - and for the rest heavily depend on information mediated by an unintelligible black box. This black box offers the various pieces one constructs his/her worldview with, colored by ideologies and invested with underlying value systems. In the formation of worldviews, I believe images to play a vital role.

Our alleged cosmopolitanism is therefore increasingly constituted by information obtained via the Internet. I define 'worldview' in a broad sense, open for two interlinked, if not inseparable definitions. I mean one's conception of the world: a conglomerate image of what the world entails, compiled from all the snips and scraps of images and information about (parts of) the world that one came across and took as valuable. However, I also mean an ideologically-invested 'worldview', since one's *conception of the world* on the one hand and his/her ideological *worldview* on the other are constantly in dialogue. Images with which one may compile his/her conception of the world may communicate certain ideological values. Vice versa, one's ideological disposition may change depending on one's conception of the world. These two definitions allude to what anthropologist and globalization theorist Arjun Appadurai conceptualized as *mediascapes* and *ideoscapes*. These are two of the five 'scapes' which he discerns in his model of global cultural flows, which is central in his influential book *Modernity at Large: Cultural Dimensions of Globalization* (1996).[7] Mediascapes '[…] tend to be image-centered, narrative-based accounts of strips of reality,' so he explains. People who engage with these strips of reality construct the 'scripts of imagined lives' – of themselves as well as others. As a result, they 'can and do get disaggregated into complex sets of metaphors by which people live as they help to constitute narratives of the Other and protonarratives possible lives […].'[8] Appadurai argues that ideoscapes, like mediascapes, are 'also concatenations of images, but they are often directly political'.[9] He particularly relates this to state ideologies, but arguably the 'political' is not confined to a system of state and citizens. Rather generally, images influence people, transferring values directly or subtly, in particular in the light of mass image dispersal online as explained in

[6] Search engines as Google, Yahoo, Bing et al., which can either be accessed via their websites or via a search field implemented in a browser, e.g. Internet Explorer (Windows), Safari (Apple), Google Chrome or Mozilla Firefox. Social media is definitely important to take into account, since it is almost becoming to function as a browser itself. I will expand on this in chapter one.
[7] The other three are *ethnoscapes*, *technoscapes* and *financescapes*, conceptualized as multi-perspectivic landscapes of flows of (resp.), people, technology and global capital.
[8] Appadurai 1996, p. 35-36.
[9] Ibid., p. 36.

chapter one. In the same book, Appadurai considers the production of locality. He summarizes this as 'a structure of feeling, a property of social life, and an ideology of situated community'. He argues that the 'spatial neighborhood' and the 'virtual neighborhood' have increasingly become separated under recent developments in communication technology.[10] Following Appadurai, cosmopolitanism can be seen as the conceptual counterpart of locality. Just like locality it is also constructed, or rather, always in process of construction. If we take locality as the spatial neighborhood and cosmopolitanism as the virtual, or the *imagined*[11], how is this neighborhood then formed? What kind of cosmopolitanism do mechanisms on the Internet account for?

From this, my research question follows, aiming to understand **how artworks address the importance of information and images on the Internet, which increasingly constitute our worldview.** This is a significant topic many theorists and contemporary artists engage with: the developments in digital communication technology challenge established categories, both theoretical as well as visual. In this thesis I take three artworks as starting points of each chapter. I understand contemporary art as potential agents of awareness or change, and the contemporary art world, or at least some parts that have less to do with the art market – as a valuable realm where societal issues can be and are indeed addressed in various ways. The cultural influence of computation and Internet receives increasing attention in contemporary art institutions in the form of exhibitions and accompanying lectures and symposiums dedicated to the topic.[12] It takes too far to take up the task of making just a sketch of an inventory of artworks, artists or exhibitions here because of problematic and exclusionary demarcation principles. Likewise, I refrain from labelling these artistic practices as 'Post-Internet Art', 'Post-Digital', 'The New Aesthetic' or other terms that are currently *en vogue* for these artistic practices that have been, and still are, described as 'Internet-engaged' or 'Internet-aware' art. These labels originated in different cultural scenes, are often used in formalistic respects and in contradictory ways and are sometimes declared dead before becoming widespread.[13]

I give an analysis of several artworks that address the cultural impact of the Internet. However, in not confining myself to works that are themselves confined to the space between gallery

[10] He argues that this is one of the most important factors that trouble the production of locality. Appadurai 1996, p. 189.

[11] Referring to Benedict Anderson's notion of an 'imagined community', which he discusses in relation to nation states, but is applicable to cosmopolitanism as well. Cosmopolitanism is similarly based on imagination. Anderson 1983.

[12] During the writing of this thesis, only in the Netherlands I came across the following exhibitions explicitly revolving around the cultural role/impact of the Internet, of which almost all were accompanied by symposiums: Radical Software (W139, 2014), Born Digital (MOTI, 2014-15), Amalia Ulman: International House of Cozy (Showroom MAMA, 2015), Art in the Age of… Planetary Computation (Witte de With, 2015), Melanie Gilligan: The Common Sense (Casco, de Hallen, De Appel Arts Centre, 2014-15), Algorithmic Rubbish: Daring to Defy Misfortune (Stedelijk Museum Bureau Amsterdam, 2015).

[13] For a survey of the use and critique of the labels 'Post-Internet' and 'New Aesthetic', see Domenico Quaranta (2015) 'Situating Post Internet'.

walls, I would also like to include web based artistic practices. Sometimes they are presented as online exhibitions[14], but I would prefer to show the critical potential of different forms of visual culture, specifically best described as 'critical digital culture'.[15]

Positioning and frame of reference

Although my vocabulary on which I depend in the analysis of visual culture is largely based on my training as art historian, during my master's study there was more emphasis on art theory and intertextual interpretational strategies. Furthermore, the interdisciplinary approach allowed a more sociological and anthropological perspective on the arts and frequently, the contemporary arts that were up for analysis opened up geopolitical and societal issues.[16] I take my cue from Arjun Appadurai, who importantly pointed out that processes like globalization never unfold in a linear way, but are rather full of counter movements and 'fundamental disjunctures'.[17] This alerted me to the counter movements within the alleged 'widening' World Wide Web.

Also important is my own chronological situatedness.[18] Being born the Netherlands in 1991, I witnessed the fast rise of the computer industry creating consumer-oriented desktops and software connected to the World Wide Web from when I was little. I vaguely remember using the Internet for the first time when I was around six. I guess I played a game and I remember well that I was asked to keep it short, since the cable company charged per minute. When the Internet was being used, the phone would have no connection. Now, in 2015, mobile providers offer unlimited data (use) for a fixed price, we *generate* money for companies collecting data about our Internet behavior, and ironically phones are the devices that increasingly enable this.[19]

For understanding about some of the mechanisms on the internet, I draw on Eli Pariser's *The Filter Bubble: What the Internet is Hiding from You* (2011), which primarily deals with personalization of search engines and argues, although at times speculatively, what societal effects this has.

Valuable for the analysis of the artworks in this thesis, as well as the online circulation and manipulation of images is *Remediation: Understanding New Media* (2000). In their book David Bolter and Richard Grusin alert to the historical precedents of computer generated media, arguing that new media in fact remediate old media. This is important as modernist tendencies are still vivid in our

[14] See Oliver Laric (2013) 'An incomplete Timeline of Online Exhibitions and Biennials' [http://archive.rhizome.org/artbase/56398/timeline.html] accessed 14-12-2014.
[15] Term borrowed from lecture of Alessandro Ludovico - artist, media critic, writer and founder of *Neural*, an influential magazine on digital culture. Symposium Being Political in Art and Design, Groningen, 27-3-2015.
[16] My growing interest in this potential of art is also indebted to being involved at BAK, basis voor actuele kunst, Utrecht.
[17] Appadurai 1996, p. 32.
[18] This chronological situatedness is extra important since technological innovations, changing features, possibilities and interfaces impact the way one makes use of the Internet.
[19] Metadata such as GPS-location, device specifications, browser history.

culture, so they claim, leading to an overemphasis on the newness of new media.[20] Lev Manovich' *Software Takes Command* (2012) offers a more contemporary account of new possibilities of mixing different kind of media. He understands media as greatly determined by the software they are made with. Manovich: 'For the users of popular media software, a medium changes with each software release.'[21] Hence, he focuses on the software behind the visual outcome, which I think is indeed important. A lot of the formal aspects of the artworks I discuss are self-referential in this sense: there are often references to, or appropriation of formal elements of the used software's interface. This thesis will therefore draw on knowledge from art history and theory, new media studies and software studies, supplemented with my experience and knowledge as someone who intensively uses the Internet for both social and professional purposes.

Structure of thesis

Chapter one considers the constituting role of the internet on worldviews. It sketches the landscape in which the works discussed in the subsequent chapters operate or what they reflect on. Central questions that will be answered are: What are the actions that make the Internet such a defining source of knowledge? What are the steering mechanisms of the Internet that determine what is visible online? Chapter two takes the online work *The Image Atlas* (2012-ongoing) by Taryn Simon and Aaron Swartz as a case study of a work that reflects on the governing role of the Internet and opaque mechanisms within this determine image dispersal, together with a critical analysis of the way an online artwork itself operates within a larger economy of websites. The third chapter takes Hito Steyerl's *How Not to be Seen: a Fucking Didactic educational .MOV File* as a starting point, indeed proving to be a didactic instance of the notion of *deep remixability* and an inducement to reconsider photographic representation. Chapter four examines stock photo websites and the visual language of stock photos that physically appear worldwide, followed by an analysis of *DIS.Images* in reaction to the phenomena and its aesthetic regime.

The overall aim of this thesis is to embed the works in recent developments and problematics of the Internet's increasing cultural importance. I hope to explain how artworks can elucidate, unveil or unsettle our ideas about this, by offering a visual analysis, but also critically examining how they function within this problematic, as they are themselves part of the larger economy of online images as well.

[20] Bolter and Grusin 2000, p. 270.
[21] Manovich 2012, p. 335.

H1: Black box dependence

Before I analyze the artworks that react on the cultural role of the Internet shaping our worldview, it is necessary to have an understanding of the behavioral and technological mechanisms that steer which information and images we get to see on our screens. In this chapter I explain in what ways we interact with technologies that offer us access to the World Wide Web and how these technologies came about. I argue that recent changes in the used information technologies, like 'personalization', and the way we use these technologies can have problematic implications for our worldviews.

1.1: Human interaction with devices

> 'It's like all we do is wake up, sign in and [bzzbzzbzz] we are *plugged* into the matrix *all day* - Gmail, Grindr, Facebook, Face*time*, Instagrindr, Tumblr, Twitter, [inaudible] *Jesus Christ*, and then we have to *rip* the plug out to go to sleep, rub one out, rinse and repeat. We have these auto-responses, programmed-' [mobile phone rings – Ilana picks up immediately, mid-sentence] 'Hello!'[22]

In the comedy series *Broad City*, Ilana exclaims the previous words, full of indignation. The situation: after a night of non-stop online surfing whilst lying next to each other on the couch with their laptops, Ilana and friend Abbi start a skype conversation together, only to realize that they are already physically next to each other by seeing the same room in the background of their screens. In shock, they cry out in a synchronized scream and abruptly close their laptops, upon which Ilana suggests to leave their phones at home that day. 'We would be totally off the grid. It would be like breathing air for the first time!' Abbi responds positively and Ilana then indignantly sums up the absorbent online applications and websites that took her time. While starting about conditioned behavior, she unwillingly shows the pavlovian response she was just about to comment on by instantly picking up the phone.

The scene exemplifies some of the main activities that are facilitated by web-based technologies, which greatly influence what it means to be living in 2015, which is to say, for an economically privileged part of the world. The majority of my peers and other owners of laptops and smartphones like myself use phones for various ends described in the scene by their specific app/online service: messaging individuals ['Gmail'], video calling ['Facetime'], connecting with potential love interests ['Grindr'], sharing and watching photos ['Instagram'], photoblogging ['Tumblr'], 'microblogging' or short-messaging ['Twitter'] and sometimes all of the above on websites

[22] Quoted from the comedy series *Broad City*, season 2, episode 6 'The Matrix', 04:26-04:45.

that can integrate these different activities ['Facebook'].[23] For many, the Internet is primarily a source of entertainment and recreation comparable with television. Not only are television shows disseminated online, also social media in a way functions as such: friends, acquaintances, celebrities and strangers curate their online identities, who all become characters in fragmented, extendable and voyeuristic reality shows, whose narratives – scripts based on imagined lives[24] – unfold on Instagram, Twitter and Facebook.[25]

Needless to say, the scene is highly exaggerated for comic effect. It is unlikely one would spend a full night online without noticing any time passing. However, complete unawareness of time due to the absorbency of apps and programs or media online, may be recognizable on a smaller scale. Web pages are often full of hyperlinks that direct users to other pages, the characteristic that makes the Internet indeed a 'web' or network (and a useful tool). Next to this convenience, website are often specifically designed to keep us staying on websites or clicking on other links for other purposes that users not necessarily benefit from.[26] Therefore, it is not strange one's time-focused rational loses from one's short-term curiosity.

1.2:…and vice versa

Next to the absorbance of the different media exemplified in the scene, 'digital interruption' marks our times: at any moment, everyone with an internet-connected device can be intruded by audible, visual or otherwise sensible notifications of push-messages, incoming instant messages and phone calls.[27] In short, digital technologies intersect and change our daily activities on moments we are not deliberately choosing this. Moreover, this is also the case when we are purposefully working on our computers and are under the impression that we decide what becomes visible on our monitors. Already in 1997, editors of influential technology magazine *Wired,* Kevin Kelly and Gary Wolf, argued that the boundary between users steering media, in so called 'pull media' and media steering users, 'push media', was dissolving more and more. In their article 'Kiss your browser goodbye: The radical future of media beyond the Web', they predicted that whilst using the Internet, we would move seamlessly between these two modes of pulling information by interacting, and being subjected to information that would be pushed towards us. They predicted that the web would predominantly be

[23] The mentioned apps, software and online services do all have equivalents, like Hotmail, Skype, Pinterest, and Google+, just to name a few. It is not always so clear why some are preferred above others, but it is often related to geographical location, sometimes following nation-state borders in the case of strict legislations.
[24] Appadurai 1996, p. 35.
[25] Sometimes, the most interesting aspect is rather *how* online identities are curated.
[26] I will elaborate on this later in this chapter.
[27] A 'push message' is an audible, sensible or visual notification one can set for a variety of programs on your device: incoming e-mails, software updates, special news items, battery alerts, agenda reminders, etc.

characterized by pushing information to viewers.[28]

Jay David Bolter and Richard Grusin, key theorists in New Media Studies, want to remind us that push media is definitely not new, but argue that this development is rather a development of convergence of different media: the converged form of the web with push technology in fact largely remediates television, so they argue.[29] Written in 2000, the latter proves to be a rightful observation, especially given the existence of digital television, which allows viewers to pause television programs, watch previously broadcasted shows *on demand* at any time and choose films from a menu. With other words: television is becoming like new media because of its interactivity. Different than traditional television, immediacy in a temporal sense is introduced, challenging categories like 'viewers' and 'users'. Even when realizing that both television and the Internet mutually remediate each other's characteristics, there are however (still) several clear differences between them, which are fundamental to take in consideration for understanding how it constitutes our worldview.

Lev Manovich argues that the biggest difference between television and computers may be that personal computers have the capacity to and are used to show a wide range of mediums, files, or formats and most notably enables users to transform these. The development of the Graphical User Interface (GUI), its key characteristics developed at XEROX Palo Alto Research Center (PARC), was of great importance for the capacity to change media. Before, computers that could edit media were often medium-specific, and only existed in specialized research centers, film studios and other realms outside of reach for general users. GUI-based software enabled the development of computers that did not need as much specialized training: one did not need to know about programming or remembering commands to operate it, hence it marked the rise of personal (consumer) computers and the capacity to remediate older media. But, according to Manovich, computers can do more. Taking photography as an example, he argues that digital photographs are 'radically different', because they have many qualities that its traditional equivalent does not have.[30] Users are able to alter them, merge them with other pictures, turn them into films and 'share' them, in fact duplicating and transporting. All these actions can be done with different kinds of media. This is why Manovich puts forward that computers can better be understood as a *metamedium*, in the words of Alan Kay, who lead PARC during the 1970s, and Kay's co-writer Adele Goldberg.[31] Their research, leading to the development of a computer into a platform for various media was, according to Manovich, of radical importance for not only our thinking about computers, but also about what in fact is a medium, arguing that we should not only describe mediums in opposition of each other. He

[28] Kelly and Wolf 1997.
[29] Bolter and Grusin 2000, p. 223.
[30] Manovich 2013, p. 57-62.
[31] Kay and Goldberg, *Personal Dynamic Media*, p. 394, as referred to in ibid. p. 62.

therefore positions himself explicitly in relation to Bolter and Grusin, explaining he is more interested in *how* the remediation has become possible and how it functions, instead of 'looking at the media surfaces' to which Bolter and Grusin, however 'accurately', limit themselves.[32]

These positions are not oppositional: Manovich does not deny remediation-mechanisms of traditional media in the digital realm.[33] However, because Manovich focuses on the technical properties of media, he brings forward that the term 'media' in fact has become inadequate for phenomena that we face on the screen of our computers. Each medium has specific cultural histories and address specifically one or a couple of the human senses, but - in the light of new technologies and mixability of media - 'medium' is also commonly used to refer to a platform of presentation or interaction.[34] An example is Twitter, which can be used web-based or via an application. Manovich thus argues that through what he calls 'deep remixability' of media, various media overlap to such an extent that the word does not suffice anymore. The title of his book – *Software takes command* – already hints at his conclusion: instead of media, we should rather speak about *media software*.[35] 'In software culture, we no longer have "documents", "works", "messages" or "recordings" in twentieth-century terms. […] we are engaging not with pre-defined static documents but with the dynamic outputs of a real-time computation happening on our device and/or the server.'[36] For example a relatively simple program such as Microsoft Word already exemplifies this: a Word document may 'remediate' a sheet of paper or a type writer, but its lay-out can change with an optional 'reading mode'; while typing, it is performing by making autocompletion and autocorrections; it stores data like spent working time and keeps track by whom this is done; it externalizes by the inclusion of hyperlinks and its result is navigational by means of a search function. In short, Manovich means we should perceive documents, works, messages and recordings as performances, constantly in a state of flux.

1.3: Personalization

The rise of the computer as a **metamedium,** whether characterized by the ability for 'deep remixability' and hybridization of media (Manovich) or a machine of remediation (Bolter & Grusin), has made possible that the amount of information on the World Wide Web has grown to the proportions of todays. By posting pictures, videos and text, people contribute to the pile of data stored in large server parks across the globe: in 2013 this pile increased daily with no less than an average of 210 billion e-mails, 60 million Facebook statuses and 50 million tweets.[37] The biggest

[32] Manovich 2013, p. 59.
[33] Manovich: '[…] previously available physical and electronic media were simulated in software'. Ibid., p. 44.
[34] Ibid., p. 226-231.
[35] Manovich also inverts the words, using 'software media'. Ibid., p. 336.
[36] Ibid., 2013, p. 33-34.
[37] Pariser 2011, p. 11.

implication of this vast amount of data online is that the gateways that filter out the irrelevant information become increasingly important.

The most powerful computer companies, Microsoft and Apple, were early in developing their own applications for the task of filtering information. According to Eli Pariser these projects quickly sank into oblivion after they were met with scepsis because of their limited effectivity.[38] With technology developed at (again) PARC, it was online book shop Amazon.com that was one of the first to successfully personalize its website, in 1995. Amazon was able to recommend books that potential buyers would also be interested in, by using technology PARC called 'collaborative filtering', which was developed to filter large currents of e-mails (especially computer engineers quickly adopted this way of communicating amongst each other).[39] This may mark the dawn of the personalized web as we know it today. In a similar way like product placement in shows on TV, advertising started seeping through along the edges of websites, as custom-made suggestions to our putative taste.
The drive for economic profit has accelerated the development towards Push web (Kelly and Wolf), or a *softwarization* of the Internet (Manovich). How does this work?

To make relevant selections for users, search engines need information about them. A geographical location which is linked to one's IP-address, can for example be convenient for when you search for a weather forecast. Google started out basing the website ranks on the number of clicks on certain links, which they called 'click signals'. In 2004, the company started to provide services that needed users to log in, like an e-mail service, which allowed them to track internet behavior of its users for longer times than just one browsing session.[40] What people search online, what they click on, what they read and when and where and for how long: all this information can be saved, to be further processed to predict one's needs, resulting into a personalized, softwarized push-web. Offering Gmail was just a start: now a Google-account can be linked to your google browser (Google Chrome), video website (YouTube), digital social network (Google+), online agenda (Google Calendar), saving data from which they profit by enhancing effectivity of advertisement. Furthermore, behind behavioral data a whole, rather hidden, market has evolved where data are being auctioned.[41]

Recently in 2015, Google launched 'Google Now', a service that is really close to what Kelly and Wolf predicted: 'The browser becomes invisible by becoming ubiquitous. It submerges inside

[38] Pariser 2011, p. 24.
[39] Ibid., p. 28-29.
[40] Ibid., p. 34.
[41] This happens in split seconds. It takes too far to explain here in detail, but in short: there is a large market in which key players (data processing companies and commercial databases) store and auction behavioral data to the highest bidder. 'What all of this means is that your behavior is now a commodity […].' Ibid., p. 45.

other programs, removing itself from our consciousness.'[42] Devices would warn us for rain based on our location, before we would be aware of the possibility, before we type a query for this specific information, Kelly and Wolf speculated. *Google Now* promises to remind you about your groceries when you are near a shop: 'Set reminders for a specific time or *location*, like outside the grocery, so you always remember the bread and burgers and don't go home empty handed.'[43]

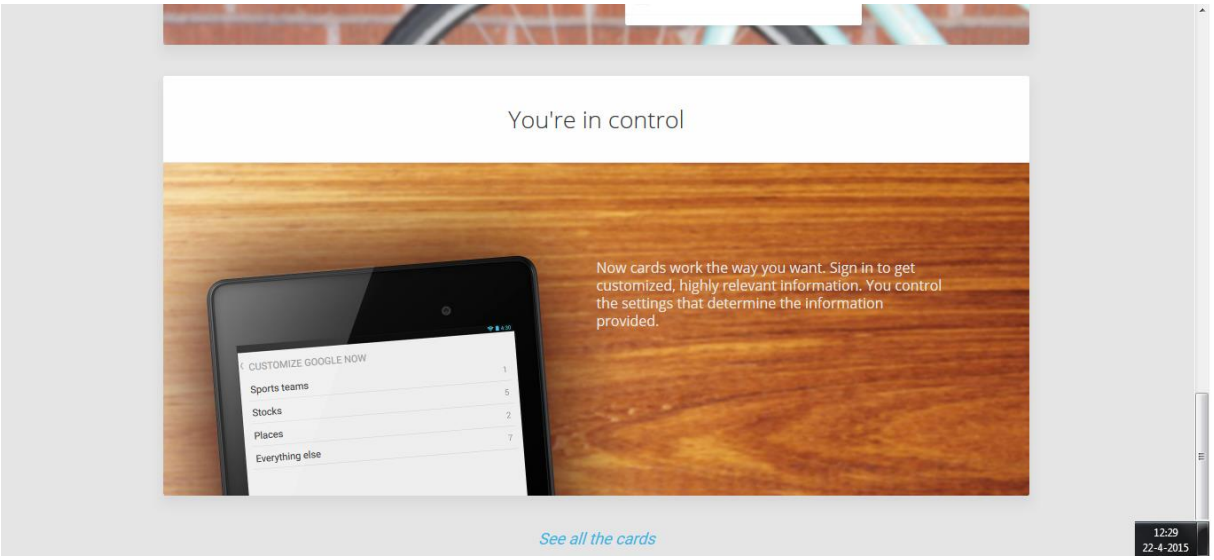

Fig. 1. *Google Now* introduction website [https://www.google.com/landing/now/] accessed 7-5-2015. Screenshot.

The service is advertised as one that gives its users control (fig. 1). The headline reads: 'You're in control', but the clusters of information a user can personalize, depicted on the device's screen, seem to be 'Sports teams', 'Stocks', 'Places' and 'Everything Else'. If this represents the possibilities of shown information, it covers quite a narrow field of possible interests.[44]

The gathering and saving of data – essential for enabling personalization – is bound by legislations that must secure privacy of users. Within this debate, metadata, including subject-titles of e-mails, GPS-location, search queries, are often presented as impersonal or innocent, and subsequently the debate is faced with guilelessness by Internet-users, the tenor characterized by 'I'm not doing anything illegal and therefore have nothing to hide,' and similar arguments. Indeed, users willingly and actively *provide* lots of information about not only their online but also offline behavior, through applications that in return promise users insight in their own behavior. For instance, there are sleep cycle apps on mobile phones that measure user's REM or 'deep' sleep, based on movement

[42] Kelly and Wolf 1997.
[43] *Google Now* introduction page (my emphasis). [https://www.google.com/intl/en/landing/now/] accessed 7-5-2015.
[44] Plausibly this is (just) a default setting which could be adjusted by users. By only depicting these categories in the advertisement, it consequently also makes the product seem less interesting for certain, probably less consumerist, individuals: they do not form Google's target group to which the advertisement is addressed.

detected by a built-in gyroscope. For this, users have to put their phones under their pillow. The app can be set to wake users when they are in their light sleep phase within a certain time span, and it can show users graphs of their sleep cycle when they wake up. However, it can also measure other activities whenever the app is activated.[45] While only caring about short term benefit like insight or using them for fun, many are not aware of the obscure agenda of these apps. These 'free apps' are not free; users pay with their data. Critics like Bruce Sterling, also a writer of science fiction, warn us for the consequences of providing these data, for example with software-incorporated home appliances that is called 'the Internet of things' in advertisement. Sterling:

> Digital commerce and governance is moving, as fast and hard as it possibly can, into a full spectrum dominance over whatever used to be analogue. In practice, the Internet of Things means an epic transformation: all-purpose electronic automation through digital surveillance by wireless broadband.[46]

Privacy legislations prevent third parties to read e-mails' and private messages' content without user's consent, but apps and websites save our metadata often without users being aware. The article 'Hoe je onschuldige smartphone bijna je hele leven doorgeeft aan de geheime dienst' by Dimitri Tokmetzis, published on *De Correspondent* (itself an interesting platform for journalism initiated in response to sensationalist online journalism), elucidates how all presupposed 'impersonal' metadata of just one week combined can already expose quite a detailed and therefore personal profile of one's interests, whereabouts and routines.[47] For this article, someone volunteered to sign in on a special app that gathered all sent-out metadata. Together with data processors, the author and a graphic designer presented the volunteer's activities taken place within the week of the experiment, accompanied with informative infographics. The more data gathered and combined, the more personal a profile can be sketched and details of one's life revealed. To combine metadata is not difficult for companies such as Google, that host the aforementioned online services for which a user has to log in with the same account.

[45] Next to the aforementioned app, other remarkable apps involving physical/physiological activity: menstruation cycle apps, sport apps to measure run distance and burnt calories, diet apps that let users enter food-intake to calculate calories and apps that combine the latter two to tell users if their calorie balance of the day 'allows' users to eat, for example, a post-workout banana. Then there also apps to operate equipment in homes: heating, lighting, television, music installations.
[46] Sterling 2014.
[47] Translation: 'How your innocent mobile phone passes on almost your whole life to the secret services'. Tokmetzis 2013.

1.4: Socialization

In discussing the personalization of the web, I cannot exclude the ominous effect of social media on the 'born digital' generation. Facebook, as an example, is not merely a 'social' platform allowing persons to exchange messages and media. It also functions as a browser in the sense that it is a navigational space, a gateway to digital culture and a platform for dissemination of information and outreach to possible publics.[48] Users can find information about venues, restaurants, exhibitions, opening hours, book launches et cetera, without 'leaving' Facebook.[49] This is increasingly the case: as of May 2015, Facebook has launched its Instant Articles: a service allowing external websites to publish articles directly on Facebook, readable without (visible) hyperlinks to external websites or accessing these in new browser windows.[50] Also, a 'Buy' button will be implemented in Facebook.[51] Vice versa, other websites can be provided with 'Like' or 'Share' buttons, enabling an incorporation of the website within Facebook's infrastructure.

Fig. 2. The top notification is a suggestion based on user data such as GPS-location. Anonymized screenshot of Facebook newsfeed (mobile version) by friend of the author, 12-6-2015.

The key element of Facebook's homepage is its so-called 'Newsfeed': an overview of messages, images, videos and/or links posted by 'Facebook friends', 'Facebook Pages' and notifications *about* their activities. What will appear to users in this Newsfeed depends on a multitude of things, of which interactions with other users in the form of messages, likes or hidden interactions such as viewing each other's profile are important. The items also depend on commonalities between users, based on what pages users both 'like', the events they say to (have) attend(ed), the places they visit(ed), mutual friends, articles or websites they clicked on via

[48] Or markets, considering the reportedly growing role of Instagram as a sales tool for (at least a part of the younger) artists, collectors and gallery owners. Siegal 2015.
[49] These examples are mostly consumption-driven. However, non-profit organizations, cultural and scientific institutions reach out to their public on Facebook as well - the latter two increasingly making use of 'Facebook Events' in advance of events and posting documentation of events/lectures/exhibitions/openings on Facebook afterwards.
[50] Michael Reckhow (12-5-2015) 'Introducing Instant Articles' on website *Facebook Media* http://media.fb.com/2015/05/12/instantarticles/ accessed 13-05-2015.
[51] 'Today we're beginning to test a new feature to help businesses drive sales through Facebook in News Feed and on Pages.' in: Facebook for Business (17-07-2014) 'Testing a New Way for People to Discover and Buy Products' on website *Facebook for business* https://www.facebook.com/business/news/Discover-and-Buy-Products-on-Facebook-Test accessed 17-05-2015.

Facebook and whatever metadata Facebook has gathered. When many Facebook friends, or some of the friends a user most interacts with, 'like' a certain post, it is more likely to pop up at his/her newsfeed. The combination of all information is calculated to form the customized 'news', or suggestions about topics one did not actively search for. Next to newsfeed, there is a 'Notifications' feature under an icon of a globe, which turns red to draw your attention to reminder of certain events or messages (see figure 2).

These suggestions which have the capacity to intensify social links between users, based on similar interests, reciprocal likes and other commonalities, is an explanation on how news items can 'go viral', a popular term for fast online dissemination. Facebook's Newsfeed thus forms an important source of news, novelties, digital culture or rather 'knowledge': the possible building blocks with which we shape our worldviews. According to Eli Pariser, in 2011 36 percent of Americans under thirty years hears of news first via social media[52] and this is likely to have increased over the years.

As for Facebook Pages, a 'Like' serves as a subscription on a Facebook page of a cultural institution, a shop, a newspaper, band, artists et cetera. Some pages are created around certain topics, from art history to funny cat pictures. By liking a page, the messages that are posted on this page can appear on a user's newsfeed. Which posts actually appear, again depend on putative relevance, algorithmically calculated and based on interaction (time and clicks spent), but also on other data not necessarily derived from a user's actions within the realm of Facebook. Or rather, within the realm of Facebook, but not within what users *think* is the realm of Facebook: Facebook owns other popular companies delivering frequently used applications on mobile phones, such as WhatsApp and Instagram, and it can legitimately derive data and content from these applications and combine it with Facebook data. Therefore, Facebook (the company) knows a lot about frequent users of their apps: when they sleep, what kind of mobile phone they have, with whom and at what time they have digital contact.[53] Evident privacy and surveillance concerns aside, this shapes one's newsfeed – and hence advertisements. Using similar rhetoric and visual imagery as Google Now ('You're in Control. Now cards work the way you want.') Facebook wants to reassure users they are in control of Facebook as well. 'You're in Charge. We're here to help you get the experience you want. Learn about ways to protect your privacy on Facebook,' the advertisement (fig. 3) reads. It is followed by a simplistic explanation of their policies, in which 'privacy' primarily refers to visibility of content to just other Facebook users.

[52] Not specified. Pariser 2011, p. 8.
[53] Helmond 3-12-2014.

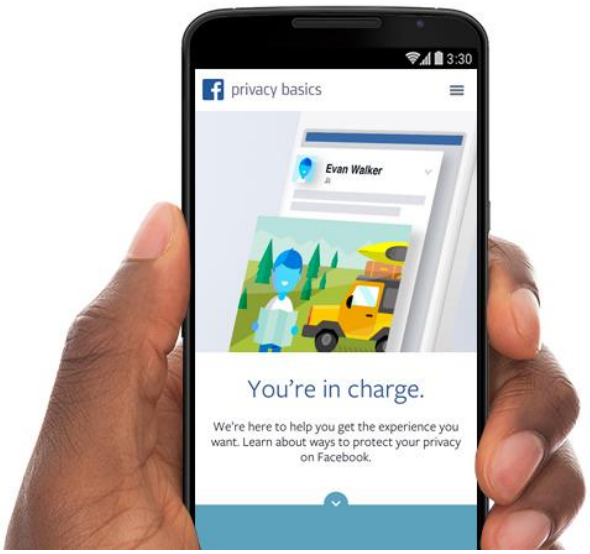

Fig. 3. Facebook online announcement 'Updating Our Terms and Policies: Helping You Understand How Facebook Works and How to Control Your Information' on Facebook's website https://www.facebook.com/about/terms-updates accessed 27-11-2015. Screenshot.

1.5: Implications for our world view

Like all technological innovations, the societal implications of our reliance on digital technologies slowly unfold and demand critical investigation. Every day newspapers report some of these societal changes and challenges: from children's alleged shortening of concentration span challenging education models, to 24/7 cyberbullying, to discussed piracy issues. Many critics are not attentive to the emancipatory potential of these technologies, according to assistant professor on new media and digital culture and director of Utrecht Data School, Tobias Mirko Schäfer. This emancipatory potential includes raising awareness, creating free access to data and the possibility of political discourse entering online public spheres. The plural *spheres* are important here. In his later work, Jürgen Habermas describes the public sphere as a network for communicating information and opinions and according to Schäfer, 'new media encourage heterogeneous and dispersed public spheres'.[54] Thus, it implies that personalization and socialization of the web create multiple online networks. This could be understood as networks being increasingly clustered around distinct information and opinions *and*, possibly, distinct *carriers* of information and opinions. Videos, pictures or embedded links to YouTube videos are important examples of these carriers and by 'liking' or sharing primarily short videos, YouTube links or images oneself, one will likely see more of these in one's newsfeed. Following this observation, *(critical) digital culture* could play an important role in constructing our

[54] Schäfer 12-2014, p. 12-13.

worldview and it is already contributing in debates about the role of digital culture itself. Take the music video of Holly Herndon's song *HOME*, written in response to the revelations about the American National Security Agency (NSA) activities of mass surveillance (see fig. 4).

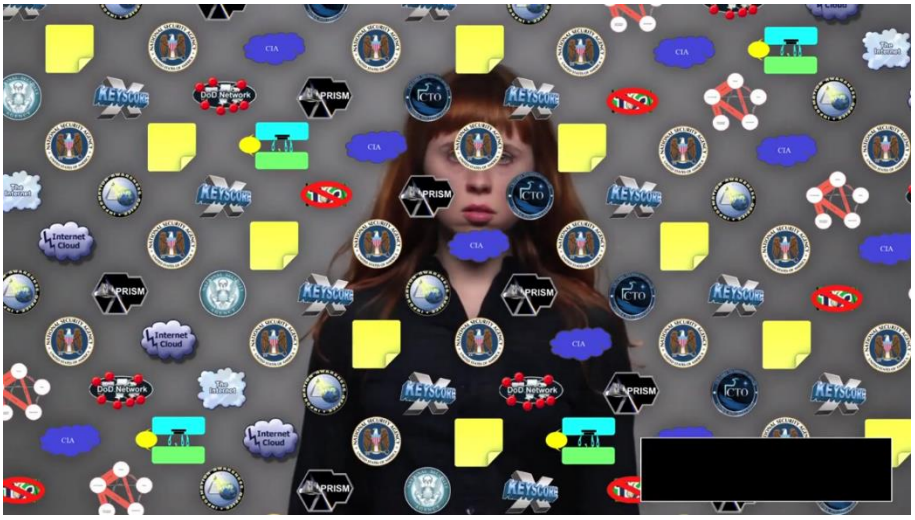

Fig. 4. Holly Herndon, *Home*, 2015. Video directed and designed by Metahaven and Mat Dryhurst. Screen shot 00:01:45. Icons referring to NSA, Prism and affiliated surveillance programs poor down the screen in front of Herndon while she looks into the camera, singing: 'I don't know which me to be / I know you know me better than I know me.'

Critical digital culture has a potential to address societal problematics. Between funny cat pictures, selfies and advertisement, forms of societal critique swerve the internet. This implies a different understanding of for example 'music videos' that used to be broadcast on television but are merely seen on television anymore. Nowadays, they are made to be viewed and shared online and they operate differently; they serve a range of other functions. Not to say they were never, or could never be explicitly political before, but now everybody can share underlying societal critiques as a statement.[55] 'Music videos' are agents in a multitude of spheres.

In the introduction I asked the question: what kind of virtual neighborhoods does the Internet account for? The observation of a multitude of public spheres intersects with this question and concerns regarding world views, since opinions and values disseminated in the public sphere (sometimes conveyed in a 'music video') affect our worldview as an ideologically loaded imagination. The concerns about controlling power of media are not at all new, but have changed as the media changed. In 1964 Habermas, key theoretician on the notion of the public sphere, noted that the circulation of images no longer happened via face-to-face interactions but was replaced by mass media. 'The centralized and corporate control of the media threatens a free, open, and fully diverse exchange of ideas and information', he argued.[56] The control of the media is still largely corporate, but its body of information is disseminated in a fragmented way. The ideas and information that are most likely to get exchanged by the masses, are 'the sensational, the appalling and the shocking',

[55] See also Ben Valentine's interview with Herndon and Metahaven (2014) 'The Radical Power of Classified Pop Music'.
[56] Habermas 1964, p. 1568.

according to Schäfer.[57] The way traditional journalism as well as online journalism platforms post news messages on Facebook may be exemplary for this development. Articles are often headed by suggestive titles such as 'Ten things you need to know about [phenomena]', 'Breaking: [phenomena] took place and nobody expected THIS to happen' – strategic misrepresentations, sensationalist promises evoking clicks.

The personalization also leads to a confirmation of own beliefs: a user is likely to be catered with information that already corresponds with his/her existing world view. Pariser describes this as 'autopropaganda', which could not only amplify our desire for the familiar, but also disables the possibility to come in contact with experiences that unsettle or enrich our world view.[58] A striking example of people only engaging with likeminded individuals is a data visualization of tweets on the Ferguson shooting in 2014. The heated debate, sparking riots and protests revolved around the jury sentence for the (white) policeman who shot a (black) young man under suspect circumstances. The jury sentence was followed by protests and on Twitter, opinions in favor or against the sentence were expressed. The visualization shows the users of both camps did not interact with each other on Twitter, the graph resulting in two large clouds of dots (representing the two groups) that merely overlap.[59] This needs some further nuance. Users of social media can still be confronted with opinions other than their own online, although exclusive communication with likeminded individuals is both a cause and a potential consequence of these mechanisms. Opinions other than one's own could get filtered out, but equally (if not more) important, personalization is filtering out *which topics* in fact are worthy of discussion: reports on human rights violation, or party pictures of friends. Hence, one's world gets smaller online, only representing the topics that through an underlying value system seem relevant.

Users of social media are (mostly) not robots[60], and technologies are used in ways they are not intended for. With other words, human beings are not technologically determined and therefore I need to give this chapter some nuancing as not to be set aside as a simplistic critique. Although Facebook is implicitly propagating consumerism informed by hidden agendas, it has proven to play an important role in mobilizing masses around shared democratic struggles. Social media are also often subversively used, for example by including nonsense-content only discernible as such by informed readers. Although primarily seen as fun, it can be a strategy against personalization to 'like'

[57] Schäfer 12-2014, p. 16.
[58] Pariser 2011, p. 15.
[59] Emma Pierson (25-11-2014) 'See how red tweeters and blue tweeters ignore each other on Ferguson'.
[60] Mostly, since there are in fact Facebook profiles run by bots, governed by companies that allow you to buy 'Likes' on your Facebook page as to feign significance.

random pages and pretending to attend Facebook Events that will never take place.[61] This is also the case for mobile applications: if I should believe the WhatsApp statuses of my contacts, a remarkable number permanently lives at the gym or infinitely sleep.

In online representation, images play an important role as they accompany information or are the first visible representation of events. Even within the made-to-measure information selection on screen, there are mechanisms that could potentially manipulate what kind of images one gets to see. They could be filtered, or even altered to fit an aesthetic regime with a normative composition, color saturation, contrast ratio and definition. At least this already happens in the *production* of an image on a digital camera or mobile phone. In one of her essays, Hito Steyerl describes how this works: '[…] the lenses are tiny and basically crap, which means that about half of the data being captured by the camera sensor is actually noise. The trick, then, is to write the algorithm to clean the noise, or rather to discern the picture from inside the noise.' This 'computational photography' algorithmically generates pictures with the required contrast or color correction, its calculation based on an analysis of the pictures stored on the device or the online data storage ('cloud') it is linked to. [62] This is *softwarization* of media in a nut shell. Communication between individuals is furthermore frequently adorned with emoticons and at times pictures replace textual information. The sensationalist nature of platforms for dissemination imply a shortening of messages, which also occurs in digital conversations between individuals, through instant-messaging apps like WhatsApp. Text is often replaced by videos and pictures, such as 'selfies', and emoji.[63]

Obviously, the role of images is addressed in the works of contemporary (visual) artists, whose practice primarily concerns analyzing, thinking about, or playing with images and exploring ways to visualize the invisible. Manovich notes that the visual artists have been pioneering in the cultural discussions of software, and the first to explore it as a medium.[64] This could also count for discussions of the softwarized web of today.

[61] Given the existence of Facebook Events such as 'Studio shoot with horses and matrushkas while eating a fried snack - at Horseland', 'Some hipster eating thing with fancy beers somewhere on an Amsterdam rooftop, and salade bars' and other digital ridicules on phenomena of (online) popular culture.
[62] Steyerl 2014.
[63] 'Selfie' is a popular word for self-portraits, which are often used instead of text, for example replacing a message with (a detailed description of) one's location. 'Emoji' is the standardized collection of emoticons or smileys in programs such as WhatsApp and Facebook App on mobile phones, resembling facial expressions (and a range of objects) born out of the emoticon of which '☺' is an early example, used to express emotions.
[64] Manovich 2013, p. 13.

H2. Windows frame the world

Many visual artists are preoccupied with the role of (photographic) representation and misrepresentations. The ambition to visualize the invisible, in this case the invisible mechanisms and infrastructures of the Internet and its impact, is in the heart of the work of contemporary artists such as Trevor Paglen, Armin Linke, Femke Herregraven and James Bridle. They respectively have photographed the NSA Data Centre and other sites of digital surveillance, portrayed large server parks that store our data, investigated arctic submarine cables and intervened in the public space by painting silhouettes of drones on streets.[65]

Taryn Simon has a similar approach in her work, for example in her research project *An American Index of the Hidden and Unfamiliar* (2007) reminiscent of Trevor Paglan's work as it largely deals with secret (American) state governance activities. The series is a photographic inventory of nearly seventy 'hidden and unfamiliar' places in the United States of America, which are inaccessible to citizens or are otherwise sites and situations hidden from public view. Simon's work urges that photographic representation is anything but innocent. 'I investigate photography's ability to blur truth and fiction and its influence on memory, which can lead to severe, even lethal consequences,' Simon explains.[66] The 'lethal consequences' in this citation explicitly refers to her series *The Innocents* (2003), revolving around wrongfully convicted, victims of mistaken identification based on photographic evidence. Within this context, the consequences of photographic (mis)representation are direct and alarming. This idea of photography having the ability of blurring truth and fiction is an important premise for thinking about the role of images on the Internet. Here, the consequences are indirect, not easily discernible as is investigated in the context of a court case, but worrisome nonetheless.

2.1: *Image Atlas*

In 2012 Taryn Simon developed *Image Atlas*, an online image search engine which she created together with programmer and internet activist (sometimes called 'hacktivist') Aaron Swartz. *Image Atlas* is accessible via www.imageatlas.org and it shows a range of images based on the search query that is typed in. The images are sorted alphabetically or by Gross Domestic Product, along with which

[65] Mentioned examples: Trevor Paglen, *They Watch the Moon*, 2010. C-print 91 × 122 cm; Armin Linke and Territorial Agency, *Anthropocene Observatory*, 2015. Video diptych; Femke Herregraven, *Staring into the ice*, 2013. Lecture; James Bridle, *Drone Shadow 1-7* (2012-2014) and *Drone shadow handbook* (2013). Their work is shown together in multiple exhibitions such as 'Dread' (De Hallen, 2013) [Bridle and Paglen], 'Fire and Forget' (KW Insitute, 2015) [Bridle and Linke] or 'Art in the Age of Planetary Computation' (Witte de With Center for Contemporary Art, 2015) [Paglen and Herregraven].
[66] Simon 2009, 00:12:00 – 00:12:30.

option is preferenced in the top right corner. The images are preceded by a list of countries and translations of the search query in the corresponding languages, seventeen by default. The list of countries can be extended to 57, which form the list with tick boxes shown behind 'Atlas Selection' to control what countries to include in your search results.[67] According to the explanation on the website (accessible via one of the hyperlinks), *Internet Atlas* shows the images that appear in image search engines in various countries a user can select. Upon navigating to the website, a visitor will first be faced with a rather empty opening screen, in contrast to most websites not filled by a white background and colorful images or accents (fig. 5).

Fig. 5 . Taryn Simon and Aaron Swartz, *Image Atlas*, 2012. Entrance screen. Website www.imageatlas.org. Screenshot 14-6-2015.

One is faced with only 7 features on a black background. Immediately, visitors will notice that this is not an ordinary website, its visual elements are so small in number and the website in total seems stripped down, appearing both monumental as well as archaic. A small search field, a search button and a link 'Atlas Selections' to further preferences are displayed in the top left corner. Two

[67] Countries included in this list: Afghanistan, Argentina, Armenia, Australia, Austria, Bahrain, Bangladesh, Brazil, Bulgaria, Burundi, Canada, China, Colombia, Cuba, Denmark, Egypt, France, Germany, Greece, Haiti, Hong Kong, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Kenya, Lebanon, Libya, Mexico, Morocco, Netherlands , New Zealand, North Korea, Pakistan, Philippines, Russia, Saudi Arabia, Serbia, Somalia, South Korea, Spain, Switzerland, Syria, Tanzania, Thailand, Turkey, UAE, United States, UK, Ukraine and Zimbabwe.

preference options [‘Sort results alphabetically’ or ‘Sort results by GDP’] are in the top right corner. In the bottom right, there are two hyperlinks in grey, one directing to information about *Image Atlas* and one about Swartz, which reads ‘Remembering Aaron Swartz’.[68] The font (Times New Roman), search button and tick boxes all have the default aesthetics and functioning of early Internet web pages (see fig. 6), contributing to the archaic feel.

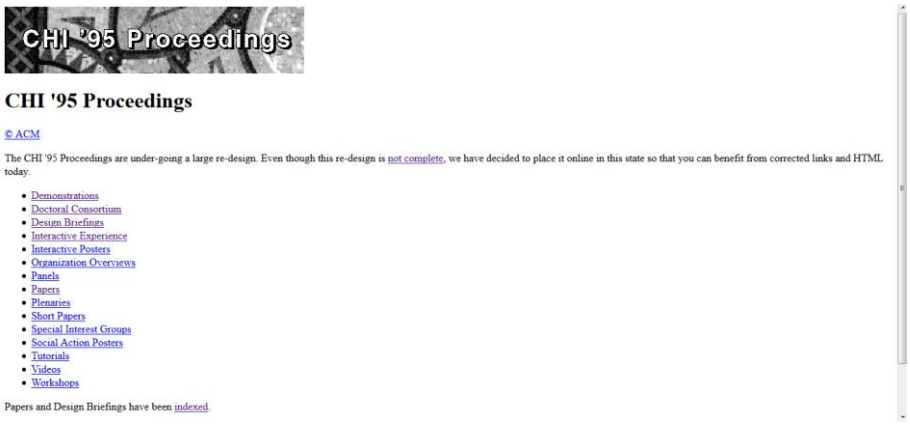

Fig. 6. Website of 1995 Conference on Human factors in Computing Systems (CHI ’95), which remarkably still exists and functions in its original design. http://www.sigchi.org/chi95/proceedings/top.html, screenshot 3-5-2015.

2.2: Opaque archive

Fig. 7. Taryn Simon and Aaron Swartz, *Image Atlas*, 2012. Search query: ‘Female’. Website www.imageatlas.org. Screenshot 16-10-2014.

Figure 7 shows the search results of the word ‘Female’. The pictures greatly differ: the images behind Brazil are almost all pictograms depicting the female gender, whereas the pictures behind China are almost all rather ‘NSFW’[69], sexually explicit, containing nudity and for example zoomed in on the

[68] He committed suicide in 2013.
[69] This abbreviation of ‘Not Safe For Work’ is frequently used online as a warning, heading explicit content.

genital area. In contrast to these pictures, behind France there are the only examples of non-human 'females' in the overview: electronic cable parts and a fish.

The *Image Atlas* is in stark contrast with Google Images, not just literally or formally with their respective black and white background. Whereas the made-to-measure selection procedure is hidden in Google Images, the *Image Atlas* also makes apparent that images online are subject to categorization, translation and language-specificity of the web. Hence, it does not only investigate the image provision of the web, but also its connectivity with, or dependence on language and translation. This interplay of text on a general level is one of Simon's main concerns throughout her oeuvre. As she explains about her work *A Living Man declared Dead and Other Chapters I – XVIII*: 'What I'm most interested in, is the space between image and the accompanying text and how the texts change the picture and the picture changes the text.'[70] In this installation at the Neue Nationalgalerie in Berlin, her photographs are accompanied with texts that reveal what the people depicted in the pictures have in common or otherwise explain what the photographs share. The installation, consisting of pictures, shards of documents and descriptions of the pictures, all mounted in thick, large walls that function as big passe-partouts. The repetitive layout of the elements in the wall, as well as the uniform repetition of the walls through the space share similarities with, and hence is in reference to an archive.

Image Atlas is a remediation of an archive in another aspect: Its archaic appearance bears reference to archives. Only with a high degree of temporal continuity, an archive can operate and disclose its information properly. Hence, not only the material or documents saved in archives are 'old' or to become old in the archive, its operating mechanisms are often considered dated as well – which is to say, especially in the light of rapid technological innovations of today. The *Image Atlas*, with its rigid layout and limited responsive design – note that every line of images consists of just six, instead of automatically filling the whole screen – thus presents the internet in an archive-like format. Furthermore there are similar basic categorization and demarcation principles at play in *Image Atlas*, which ties in with Simon's fascination for the influence of texts on images and vice versa. Multiple steps of translation are operative, which makes the website so interesting to use and can also result in showing images that do not seem to correspond with the searched word. Not only do search queries get directed through a translation program[71] that literally translates from one language to the other, but also it shows visual imagery based on text: a translation of text into

[70] Simon 2011, 00:04:33-00:06:20.

[71] Probably Google Translate, given the images' hyperlinks that all include local various google domains: google.com.af for Afghanistan, google.com.br for Brazil, etc. (Depending on browser/browser settings these hyperlinks pop up when hovering over the images without clicking.)

images. Search queries that are open for a range of visualizations sometimes show a remarkable variety of visual representations.

Although the *Image Atlas* shows an alternative for a personalized selection of images, the visual qualities reminiscent of archives are not congruent with what the Internet and the media that circulate on the Internet are according to Manovich: software performances, real time computation, constantly in flux.

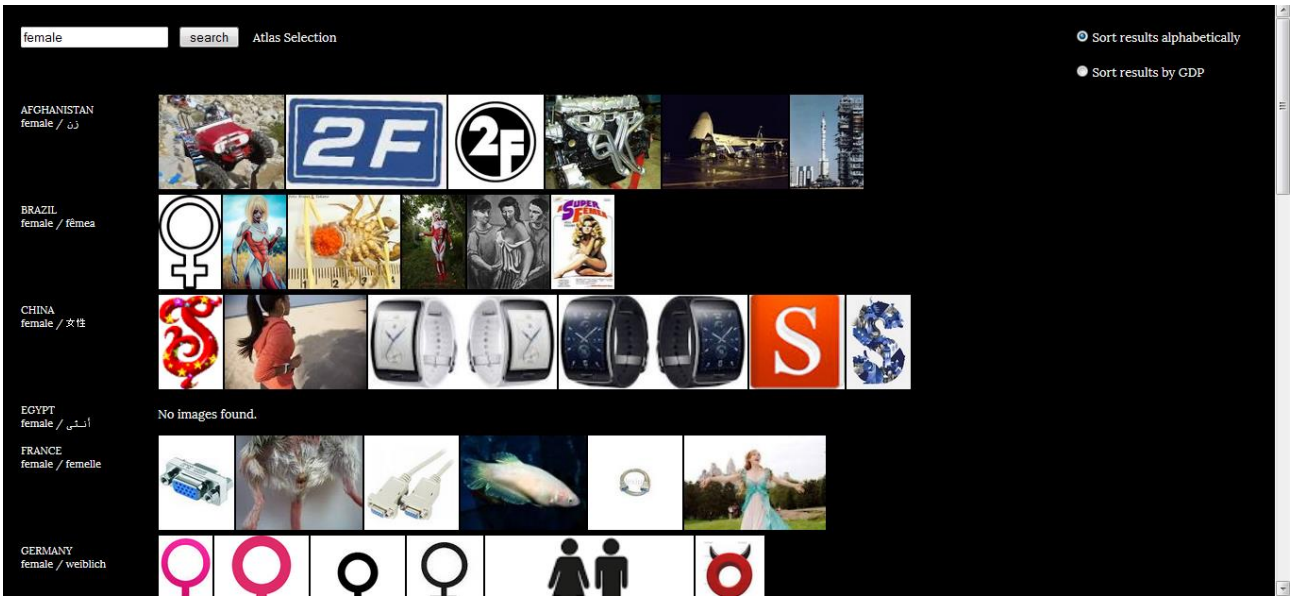

Fig. 8 Taryn Simon and Aaron Swartz, *Image Atlas*, 2012. Search query: 'Female'. Website www.imageatlas.org. Screenshot 10-6-2014

Of course through its interactivity the work manifests itself according to visitor's actions, but also, over time, the same submitted search query delivers different pictures to appear on screen: In figure 8, the same query is submitted as in figure 7 with the same settings, and in the months between these two searches a whole set of images may have appeared and disappeared again. Users are most likely to be familiar with this possibility and they will rather experience the website as an image search engine than an archive. However, only upon using the website multiple times with long intervals between them, the changeability of the results become apparent. The figures 8 and 7 show a different range of pictures, and note that behind Egypt there is a small line of text reading 'No images found.' – another reminder that we are not accessing a fixed archive but rather an extendable database, bound to various conditions that enable it to function properly. Following Lev Manovich and understanding the images as 'dynamic outputs of a real-time computation happening on our device', then, even when the range of images look the same, never will there appear the same images.[72]

[72] Manovich 2013 p. 35.

Furthermore, despite its archaic-archival feel, an important aspect of *Image Atlas* meets the hyperlinked reality of the Internet. Although it is unlikely to be frequently used as such, *Image Atlas* can function as a navigational tool since the pictures are hyperlinked to websites. They function as buttons directing to websites. Interestingly, this allows users to view the images' 'origin' – at least the websites where the images are derived from, as well as in bigger size, allowing to see details and potentially a description. Obviously the question how the images got there, on respective websites, remains unanswered, but this is something Internet users are numb to by being faced with hundreds of images a day. In any case, the possibility to navigate with the images as thumbnails (note that only now in discussing their characteristics of extendibility that I describe them as such), *Image Atlas* provides users the possibility to visit websites one would otherwise never stumble upon, because they would be filtered out when using regular search engines, for example because of language settings.

2.3: Incorporated conceptual framings

Like an atlas, the website dissects the Internet and offers a vertical, unrooted perspective: a birds-eye view unveiling the existence of multiple viewpoints that are colored by geographical, national and online-behavioral data. Opposed to only one's personalized browser that is the only frame from which to view the images that circulate online, it shows the alternative online visual realities that exist – the other visual representations that could have been one's material for imagining the world but did not get to appear on one's screen.

In her essay 'The Art Museum as Ritual', Carol Duncan considers visiting an art museum as performing a ritualistic act, in which the spatial plan – both the sequences of rooms as well as the arrangement of the objects they harvest – result in 'structured experiences'.[73] According to Duncan, they contribute to a certain experience of artworks, as a ritual performed by museum visitors. Through the sequence of physical actions, and I think it includes social (inter)actions as well, visitors will adopt an 'attentive gaze', characterized by 'intense, undistracted visual contemplation.'[74]

But how does one stumble on www.imageatlas.org itself? How do potential viewers access the website? There are a myriad of ways to stumble on *Image Atlas*: one might type in the URL if it's known from a conversation, print, or other websites – in the latter case it is likely one is directed to it via a hyperlink. This could have been shared on social media, online magazines or an accidental Google search maybe? In short: since these websites do not function in an isolated state but have to compete with other websites and programs, there is a fair chance the *experience* of the works is not

[73] Duncan 1995, p. 428.
[74] Ibid., p. 433.

effectively *structured* and an attentive gazing does not follow. However, I do not want to disqualify the works, because there are ways in which a structured experience can be realized.[75]

The page that pops up after clicking 'About Image Atlas' learns that the website is commissioned by Rhizome.org and the New Museum, New York. It is part of the latter's online exhibition series called 'First Look', for which they regularly commission artists to make an online work or project.[76] Accompanied with a hyperlink to and a visual preview of the projects, an introductory text is featured on the New Museum and Rhizome websites, as well as their social media outlets. A brief examination of the projects shows that the majority of the works share the overall theme of digitalization, but each seem to focus on specific topics. From Oliver Laric' 3D-scans of museum objects that question – or maybe push the boundaries of museum collections, to online exhibitionism and voyeurism addressed by Xavier Cha and Amalia Ulman, both staging a performance within the infrastructure of a Tumblr-website (Cha) and Instagram application (Ulman).[77]

By means of the textual description and preview image (often a print screen or still), the websites in a sense structure the experience, but its structure may be too weak to effectuate a contemplative engagement as Duncan describes. No online work on a computer screen will be fully isolated and there are often too many other websites or application demanding attention when accessed at home. There is no architectural and barely behavioral organizations to speak of rituals, except for idiosyncratic ones. An introductory page like those of the New Museum and Rhizome are therefore on the one hand productive in preparing viewers/users/visitors, but at the same time risk spoiling features that would otherwise surprise. The presentation of these works entail a balancing act. It is not only called an 'online exhibition' to make this clear to visitors of the websites, it also involves the same exhibition politics of framing the works: disclosing information while also isolating the works, just as in the physical museums Duncan wrote about.

Frequently, an explanation of the project, mentioning the institutional origins of the work and (although in fewer cases) supplying a conceptual framing is incorporated in the websites, to make sure they are legible on itself. At least this is the case within many of the websites featured in the 'First Look' online exhibitions. These explanations make clear this it is not a regular website, but some artists also choose not to position these too prominently. In these cases, it takes visitors

[75] For example by simply showing it in an exhibition space, but I think there are various creative other means in the minds of those more technologically knowledgeable.
[76] For an overview, see New Museum, 'First Look: New Art Online' [http://www.newmuseum.org/exhibitions/online] accessed 8-7-2015.
[77] Oliver Laric, *Lincoln 3D-scans* (2013), Xavier Cha, *Disembodied Selfie* (2013) and Amalia Ulman, *Excellences & Perfections* (2014).

navigational actions to discover them, with a possibility that users/visitors/viewers lose their interest, get confused, frustrated or bored – which of course can be the desired result.

There are however artists who strategically intervene within certain platforms, where their artistic motivations are deliberately kept secret. In her Instagram-based performance piece *Excellences and perfections* (2014, fig. 9), Amalia Ulman avoided to clarify that the pictures on her Instagram account were scripted before the end of the performance. As a result the project was barely discernible as such.[78] Amongst other things, the fictional narrative included a break-up, breast enhancement operation and finding a new love, which were displayed within the thread of pictures propagating a healthy, luxurious and consumerist lifestyle. The pictures, often *selfies*, and sometimes videos with sensual dance moves, were captured in pastel colored settings (sometimes due to the glare of light), subjected to Instagram filters and Photoshop manipulation.[79] She mimics gendered virtual archetypes, set to examine the notion of 'cute' and 'pretty', according to Ulman.[80] The overall performance, or intervention, emphasizes the performance-like character of meticulously curating a virtual self that is disseminated online.

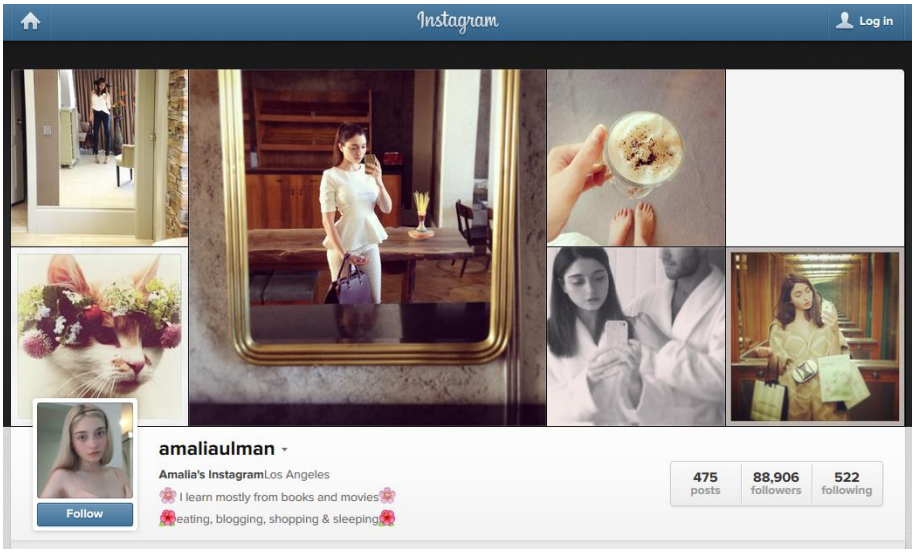

Fig. 9. Amalia Ulman, *Excellences & Perfections*, 2014. Performance on Instagram account. In the bottom right shows Ulman's selfies with new love interest and shopping bags. Rhizome's social media documentation-app [http://webenact.rhizome.org/] accessed 30-7-2015.

Apart from its relation to technology, virtuality can be understood as a psychological notion. It is an expandable reality full of promise, a 'plane' of 'imagination and transformative potentiality', in the words of Antony Bryant and Griselda Pollock who elaborated on the concept of virtuality.[81] Arguably every user of Instagram is performing, by *showing* a certain version of themselves along their values. Similarly, they *create* an imaginary version of themselves, projecting a life they aspire or

[78] The pictures were also automatically uploaded onto her Facebook account which was linked to her Instagram-account.
[79] Jones 2015.
[80] Ulman 2015. Panel conversation 'Rate/Comment/Subscribe' (23-5-2015) at TENT/Witte de With, Rotterdam as part of The Internetional Symposium, organized by Showroom MAMA, Rotterdam.
[81] Bryant and Pollock 2010, p. 15.

value. They present aspirational promises both to others as to themselves. In this sense, 'virtual' may be an adequate concept that combines reality and the imaginary. Bryant and Pollock: '[…] the virtual can be manipulated as the site for generating affects that have substantive political consequences.'[82] Thus, images dispersed on platforms such as Instagram are worthy of critical examination; the images have political power: they are carriers of values, potentially transmitting them onto others.

Both *Image Atlas* and *Excellences & Perfections* with their different strategies, elucidate important aspects of visual representation online, the latter exposing the manipulation and fictionality of online visual representation. Or am I, by deploying terms such as 'fictional', wrongfully opposing online representations to a 'real', physical world? Different than with the rigidity of Simon's search engine and the puzzling performance of Ulman, Hito Steyerl's 'fluid' videowork considers this question in the following chapter.

[82] Bryant and Pollock 2010, p. 14.

H3. Invisibility and Deep Remixability

3.1: *How Not to be Seen*

Picture an aerial photograph of a desert. In the middle there is a big grey square with white rectangular bars of various dimensions, positioned in different directions. 'This is a resolution target. It measures the resolution of the world as a picture,' a robotic voice narrates, while the square slowly becomes smaller and smaller, as well as the desert it is situated in, until the contours of a continent appear, which also shrinks until eventually the whole globe is visible. The voice: 'Resolution determines visibility. Whatever is not captured by resolution is invisible.' Thus concludes Lesson I, in Hito Steyerl's *How Not to be Seen. A Fucking Didactic Educational .MOV File* (2013).[83]

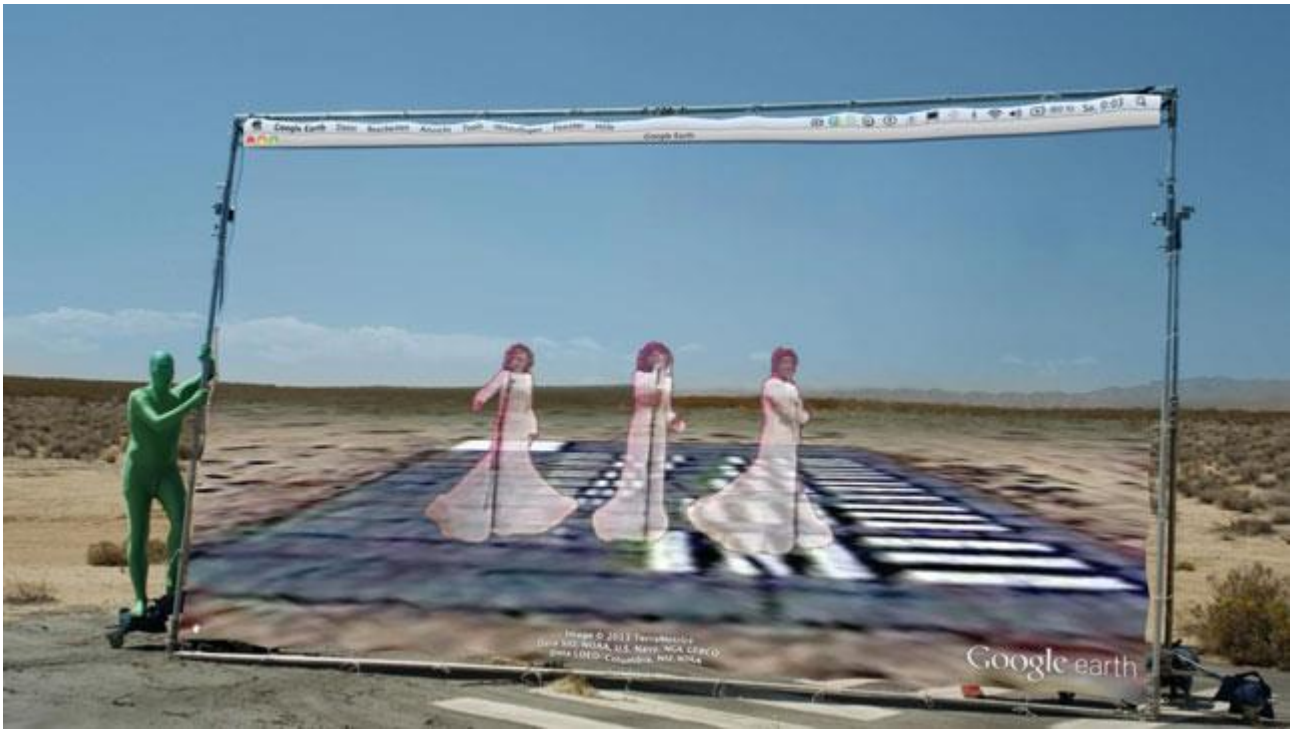

Fig. 10. Hito Steyerl, *How Not to be Seen. A Fucking didactic educational .MOV File*, 2013. Video. 16:02 min.

The figure above shows a still of *How Not to be Seen* (fig. 10). Here, the pop trio The Three Degrees is dancing, while singing their 1974 song 'When Will I See You Again'. They are translucent and radiate a pink aura as if they were copy-pasted from a stage with pink lighting. They are situated on the so called 'resolution target', the grey platform with white right-angled bars. Or rather, we see the images of the Three Degrees on a flattened out picture via Google Streetview, inside Google Earth, inside an Apple program according to the watermark in the bottom right and the Apple bar in the

[83] This videowork is not an internet based work to viewable online. However, a fragment of it is published online on the website of Dazed, accompanying an announcement of a summit organized by Steyerl at the Institute of Contemporary Arts, London. See Healey 2015 for the link.

top. This is projected on a green screen, supported by someone wearing a green 'morphsuit' covering its whole body. The horizon of the projection is aligned with that of the desert-like environment outside the screen and the same goes for the clouds, which is all again situated on another (or the same?) resolution target, discernible by its white bars partly visible on the foreground, in high resolution.

There is an accumulation of visual levels within this fragment, the total of various layers, derived from different online domains, are explicitly shown as an amalgam of elements. This is different than a montage, because the various visual elements are derived from different media (a navigational space such as Google Earth, 70's video footage and computer generated imagery). Only the outer layer, the one in high resolution, claims a sense of immediacy in the beginning of the film. This sense of immediacy is partly the result of the sharpness of the environment outside the screen, opposed to the pixelated or blurry layers projected on screen and the absence of other frames of mediation outside of it, except for the large screen in an exhibition space where one would be viewing this work. In that case, I may be imbued with what Steyerl herself calls 'the fetish value of high resolution', the conception that pictures with high resolution are more mimetic.[84] Following this reasoning, the various layers are step by step further removed from the viewer, but this idea gets challenged as the film unfolds.

How Not to be Seen is divided into five parts, and following the format of an educational movie of which there are thousands to be found on YouTube, they are called 'lessons'.[85] Throughout the film, each lesson title is recited to mark the various chapters, which are all narrated by the same robotic voice. The lessons are as follows: I) 'How to make something invisible for a camera', II) 'How to be invisible in plain sight', III) 'How to be invisible by becoming a picture', IV) 'How to be invisible by disappearing' and V) 'How to become invisible by merging into the world made of images'. The first chapters more or less follow the same order but through alterations they become more chaotic. Its narrative consists of different threads: visuals, narration and text that are closely related at times, but at other times don't exemplify the other threads and sometimes take turns.

'Lesson II: How to be invisible in plain sight' – upon this question, Steyerl herself is seen facing the camera in front of the green screen, dressed in martial arts attire and performing gestures to accompany the seven tips, of which some seem illogical, unclear or impossible. 'Pretend you are not there. Hide in plain sight. To scroll. To whipe. To erase. To shrink. To take a picture,' the narrator recites. Steyerl's look is serious while she performs the gestures that look like touch screen

[84] Steyerl 2012, 33-42.
[85] An alternative division can be made into the visuals, audible narration and visual narration threads, which make it difficult to make an adequate summary.

commands but are equally reminiscent of a martial arts instruction. During the last tip – to take a picture – her gaze is extracted from view by the mobile phone she holds up in front of her eyes. The lesson ends with a variation on the end of the previous lesson, telling us about the resolution target. This also happens in the subsequent chapter, in combination leading to a brief summary of aerial photography turning digital. The narrator: 'This is a resolution target. […] It *calibrates* the world as a picture.' Chapter three ends with: 'Around 2000 a new standard for resolution targets is introduced. This is a pixel based resolution chart. It serves to shoot pixels.' The voice teaches us that in 1996, the resolution of aerial photographs was 12 meter per pixel and today, this is 1 foot per pixel. 'To become invisible, one has to become equal or smaller than one pixel,' we hear while a scene is visible of people walking around and lying on the floor wearing black, grey and white cubes on their heads (presumably one square foot) with an aerial photo of the resolution chart in the background. There are reasons for the wish to become smaller than one pixel: the increase of the earth's (photographic) visibility enables an increase of surveillance and a decrease of privacy.[86]

The film critically-yet-humorously brings afore different instances of both unwanted and wanted invisibility. Just as in previous lessons, in the fourth lesson the narrator sums up how to be invisible, from 'being a female and over fifty', 'owning an anti-paparazzi handbag' and 'being a superhero' to 'being undocumented and poor', 'living in a gated community' to 'being a disappeared enemy of the state'. The playful and the poignant are equally valid in this list.

[86] Reportedly, with Google satellite images police officers in Oregon (US) discovered a farmer illegally growing weed on one of his fields. In Lithuania, tax authorities used Google Streetview to detect illegal houses and house extensions. Van Ammelrooy (2015), p. 12.

3.2: Deep remixability

Fig. 11. Hito Steyerl, *How Not to be Seen. A Fucking didactic educational .MOV File*, 2013. Video. 16:02 min.

Towards the end of the movie, the different layers permeate each other. In Lesson IV, we navigate through a computer generated architecture rendering which is turned into an animation and inhabited by white silhouettes that stroll around. In the bottom of the screen, descriptions of the different spaces pop up while the camera floats through the streets, the mall and de sun-lit lanes adorned with palm trees, of what appears to be an extensive design for a gated community. Architecture renderings – designed to attract investors for large scale building projects – are highly aestheticized images of what is eventually possible to be build: their colors are often brighter, the glass more sparkling and more transparent than they can ever be photographically captured if they are realized. The exaggerated renderings in recent years have even lead to the birth of the term 'render porn'.[87] These dream renderings represent promises, or lies, made for commercial ends. In *How Not to be Seen* the imaginary dimension of the rendering made for *future* buildings at a certain moment is home of images from the *past*: we arrive at one of the parks called 'huge center green', featuring a pergola under which The Three Degrees are performing. White semi-transparent silhouettes of birds, comparable with the white human inhabitants of this rendering, fly around in the park, and fly *out* of the screen. They usher an exodus of all other silhouette-figures, that leave the promised land of the rendering and move into the desert (fig. 11). *How Not to be Seen* is an interesting demonstration of Manovich' notion of *deep remixability* of media. Ever since 1993 blockbuster movie *Jurassic Park*, most viewers will be familiar with the remixability of media, through animated feature films or films that include computer generated imagery. The difference however is that in feature films, the distinction between the different media is usually tried to be made as small as possible, presenting a uniform visual language. In *How Not to be Seen,* the layers in the film can be discernible as different planes, like a landscape painting consisting of a background, middle plane and foreground of which its elements are cut loose, expanded, filled in, and brought to live, culminate in a moving diorama. All

[87] Hannema and Witman (2015), p. v12.

elements are positioned in a common software environment, regardless of their former medium-specificity, but are still discernible as such through their visual language.

> […] techniques of drawing, photography, cinematography, and typography which go into capturing or creating two-dimensional visual elements can now "play" together with all the techniques of 3D computer animation (virtual camera moves, controllable depth of field, variable lens, etc.)[88]

The different elements indeed leave their place and travel to, or rather simply step into the other dimensions: 'everything lives in a common 3D-space'.[89] The elements indeed 'live together': the figures with their 'pixel sized cubes' on their heads wander through the architecture rendering and the white silhouettes walk on the resolution target platform in the desert.

Upon seeing the camera that is situated on the platform and filming the green screen, the white silhouettes point towards it before they fade out and disappear. We still hear The Three Degrees singing: *'When will I see you again? / When will we share precious moments? / Are we in Love or are we just Friends? / Is this my beginning or is this the end?*' The camera crew which we saw handling the camera crane in an earlier shot never appeared again. We are left with a very low resolution image of the resolution target and the desert. Lines of text now indicate what happened and what should happen, as if it were editing directions for someone else to finish the movie – maybe in reference to the outsourcing of digital visualization work?[90] The captions, popping up at the place of the suggested actions, read: 'Camera crew disappears after invisible energy rays emanate from iPhone. Make 3D animation!!!' – 'camera crew gets tied up by invisible people seen from above' – 'pixels hijack camera crane.' A video recording of The Three Degrees is playing within a window that looks copy-pasted into the low-resolution image of the desert. The accompanying caption: 'Three Degrees dance on resolution scale for real.' During the last minute of the song, the film also reaches what should have been its apotheosis: 'US Airforce drops glitter from stealth helicopter' – 'happy and excited pixels filming from crane' – 'shooting this for real' – 'and fly away with drone!' – 'Happy pixels hop off into low resolution, gif loop!' The animism of the pixel and its interaction with the camera crew in the last scene adds to Manovich' *deep remixability*. It embodies the pixels' permeating abilities, because its power does not manifest itself only within the metamedium of the computer, but reaches beyond the screen. The animism of the pixel with a life of

[88] Manovich 2013, p. 292.
[89] Ibid., p. 293.
[90] Amazon Mechanical Turk is maybe the most well-known website. It is an online market place where one can outsource small 'Human Intelligence Tasks' such as typing addresses from pictures of business cards to categorizing images or tweets. Mechanical Turk Website [https://www.mturk.com/mturk/welcome] accessed 30-7-2015.

its own could also count as the titles' legitimization: Why should there be 'a fucking didactic educational .MOV file' for being invisible?

3.3: Why Not to be Seen

The title's premise is that you are visible by default and there are reasons one doesn't want to be (fig. 12). Because of *deep remixability* of media, a picture or video has an uncontrollable future, especially when uploaded online, photographs, videos or parts of them can be altered and used by everyone, ending up on unforeseen places and used to various ends.

Fig. 12. In Lesson III, Steyerl is partly becoming invisible by merging with the background, by covering her face with green paint. Hito Steyerl (2013) *How Not to be Seen. A Fucking didactic educational .MOV File*. Video. 16:02 min.

Recently I was reminded of this possible alteration as I stumbled on a picture of myself from years ago. The respective photographer re-used the portrait as a preview for some of his new works, after he changed background, clothes and blackened my face; only by the shape of my silhouette and by being familiar with the original, I was able to recognize 'myself'. Another case from my own vicinity is the following which happened to a good friend. She found a portrait of herself – made for the website of the students association of which she was chairman – on a commercial website that offered homework tutoring. Her picture was captioned with a name other than her own, including a short recommendation of the company between quotation marks, telling how much she enjoys working for the homework institute. It is a relatively innocent anecdote, but it does lay bare that feelings of ownership of photographic representation, especially portraits, are in conflict with the way they are disseminated online. They are subject to alteration and capitalization by others.

The possible wish of being invisible is not confined to photographic representation, but can also apply to online (invisible) 'portraits' which are constructed with the metadata that represent individuals online.[91] Hito Steyerl also mentions this in her essay 'The Spam of the Earth: Withdrawal from Representation' which deals on the topic. Steyerl: '[…] social media and cellphone cameras have created a zone of mutual mass surveillance, which adds to the ubiquitous urban networks of control,

[91] See chapter 1.3 'Personalization' and 1.4 'Socialization'

such as CCTV, cellphone GPS tracking and face-recognition software.'[92] She notes that an active refrain from photographic representation is becoming more and more widespread in reaction to this zone of mass surveillance. An avoidance of not only photographic but also behavioral traces online could be a reaction to the zone of personalization which exists by virtue of surveillance.[93]

3.4: Note on *How Not to be Seen*'s online visibility

This work is only to be seen in its totality in an exhibition space.[94] It is jointly acquired by the Stedelijk Museum, Amsterdam and the Van Abbemuseum, Eindhoven. Like the images on the Internet that do not stay within the digital realm as the next chapter will explore, fragments of *How Not to be Seen* do not stay within the museum. Through pictures and videos of visitors, fragments find their way online. Low resolution stills, .GIFS[95] and fragments are used by gallerists, cultural institutions and the artists herself as promotion material, upon which it is posted by others on websites, blogs and social media. People will be familiarized with the work without being given too much disclosure, not to spoil a (physical) visit to the museum or related events.[96]

[92] Steyerl 2012, p. 167.
[93] There is software to maximize your privacy such as TAILS, which can be put on a CD to allow users to browse the Internet anonymously, to leave no traces on the computer, and send encrypted files and e-mails. The use of such software is not widespread. Reportedly the visitor numbers of anonymous search engine DuckDuckGo.com is increasing, but with 10 million searches a day (June 2015) still in sharp contrast with Google.
[94] Or in the museum library for research purposes.
[95] A format, showing a sequence of pictures for a several seconds in a loop, like a looped 'stop motion'.
[96] See note 83. One of the other works in the collection of the Van Abbemuseum, *Liquidity Inc.* (2013) however is in fact viewable online: Van Abbemuseum website [http://vanabbemuseum.nl/projecten/hito-steyerl/] accessed 7-8-2015.

H4: Mediascape monopolies and ambiguous parody.

'Image spam is addressed to the vast majority of humankind, but it does not show them.'[97]

4.1: Stock photos

As explained in chapter one, contact between individuals is increasingly image saturated and there is a growing photographic representation that circulates online. This does not automatically imply a diversification of the images indeed visible, both online and offline. An interesting case of rather a convergence of representation facilitated by the Internet, is the phenomena of stock photo imagery. These pictures are stored in online accessible databases that show low-resolution previews of images, 'protected' against free use with a semitransparent watermark (fig. 13).

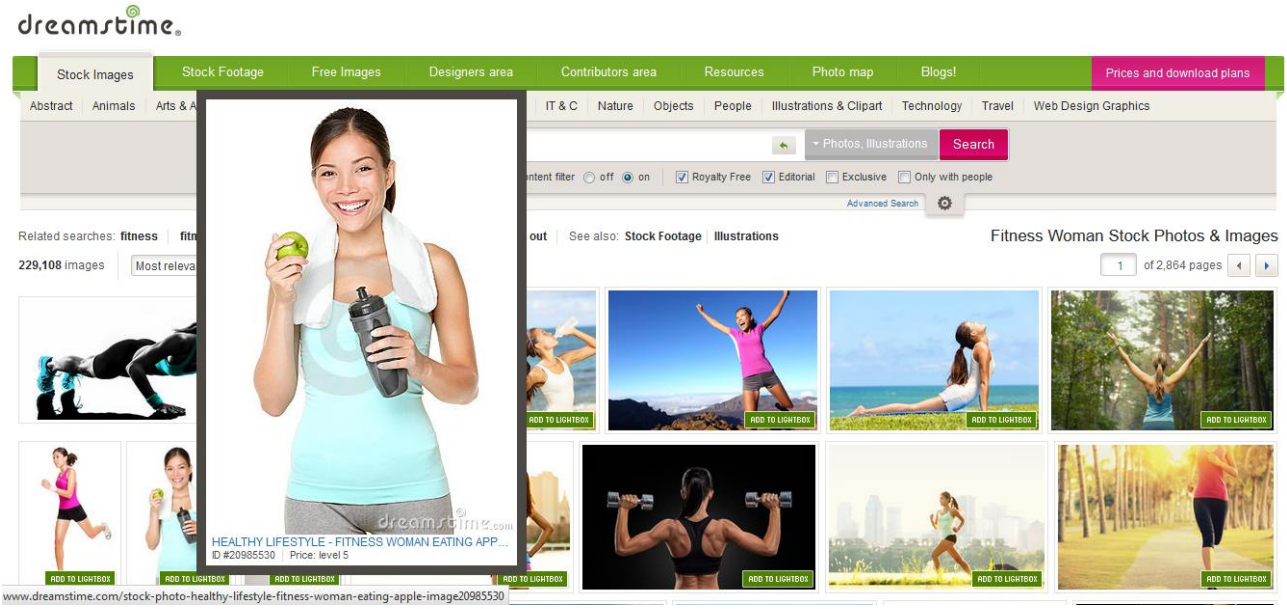

Fig. 13. Example of a stock photo website, search query: 'fitness woman'. Website dreamstime.com, screenshot (1-8-2015).

After paying for the copyrights, a high-resolution image is downloadable – its watermark removed – and to be used for any purpose.[98] While the images are accessible and downloadable online, just like the rogue pixels in *How Not to be Seen* they do not stay within the digital realm.

[97] Steyerl wrote a thought provoking essay on image spam, of which I think stock photos can be considered an example. Steyerl 2012, p. 163.

[98] Many stock photo websites work with subscriptions by offering corporate accounts.

Fig.14. Cropped pictures of images featuring the same stock model. Top to bottom: Billboard (Utrecht), shopping window (Leiden) billboard (Leiden) and ticket machine (Berlin).

They are frequently printed in magazines, newspapers[99], billboards and brochures: a myriad of companies rely on these stock photo website for their photographic imagery, because it is cheaper than the alternative of hiring a photographer, studio, model, make-up artist, et cetera.

Consequently, it happens that the same picture is used by similar, competing companies. Sometimes, the images are used in other ways than their aimed purpose – for example a picture of a woman drinking green tea from a cup, featured in an article about urine.[100] Browsing the search query 'women laughing alone with salad' gives an inkling of stock photos' uniformity: almost all pictures depict an ecstatically laughing woman uncovering her unnatural white teeth with a salad bowl in one hand and a fork in the other. As a result, those perceptive of the uniformity of stock photos find joy in collecting recurring pictures on photoblogs and the likes.[101]

In an online article[102], the omnipresence of one stock photo model whose image is visible on various places across the globe, was brought to my attention. Since then, I started to recognize her in several places myself.[103] Last year I encountered images of her in Krakow and Warsaw and within the time-span of writing this thesis I kept track of encounters with her image: four different billboard posters on train stations in the Netherlands, a print covering an empty shop in a shopping mall in an outskirt of Leiden, pictures adorning the facades of a supermarket chain, an outlet store, a newspaper advertisement for a weather report app, and when I was in Berlin for just a short visit, her face appeared on the screen of the U-Bahn's ticket machine

[99] The newspaper/magazine *Metro* (on 9-1-2015) featured a report about a meteorite flying over Bucharest which lit the city. The small piece was accompanied with a picture of a brightly shining orange bolt, piercing through dark clouds with lightning flashes. Above the dark clouds, a blue sky and shining sun was visible. It had a rather photoshopped appearance, and the actual event happened early in the morning, before sunrise, so this picture could never be one of the specific event. The caption read that its source was 'Colourbox', which turns out to be a stock imagery website. Historically specific events are thus easily represented by images found online, its link based on one's imaginations and similarly influencing other's imagination.

[100] See White and Billing 2015 [http://www.buzzfeed.com/alanwhite/11-stock-models-who-probably-regret-their-choice-of-career#.ny6JbDLqAN].

[101] For example [http://womenlaughingalonewithsalad.tumblr.com/].

[102] Roks 2013.

[103] Collaborative 'spotting' of her pictures world wide culminate in a Facebook page 'Ariane – The Overexposed Stock Photo Model' [https://www.facebook.com/arianefans?fref=ts] and picture blogs *The Overexposed model* [http://overexposedmodel.tumblr.com/] and *I am that Asian Stock Photo Girl* [http://asianstockphotogirl.tumblr.com/], which harvest pictures of places where her image appeared.

(See fig. 14).[104] Slowly, she seems to be monopolizing advertisement worldwide, yet her omnipresence goes unnoticed until it is brought to one's attention (see fig. 13 again, closely).

A brief visual analysis of stock photos learns that they predominantly feature white men and women, both clothed in business attire, but some stock photo websites prove to be more diverse than others.[105] Still, the diversity of the people in the pictures prove to be to a limited extent upon entering general search queries. The pictures particularly show people who are skinny, in their twenties or thirties, express distinct emotions, make expressive gestures, smile their unnatural white teeth, have an immaculate skin and ditto clothing. To put it boldly, they are ageist and sexist – consider for example a 'beach' category showing more women than men.[106] They furthermore confirm gender norms and cultural stereotypes: the query 'two women' results in pictures of women who are shopping, drinking coffee or otherwise share an overtly satisfying pastime activity, whereas the search query 'two men' predominantly results in pictures of men dressed in shirts, involved in a discussion.

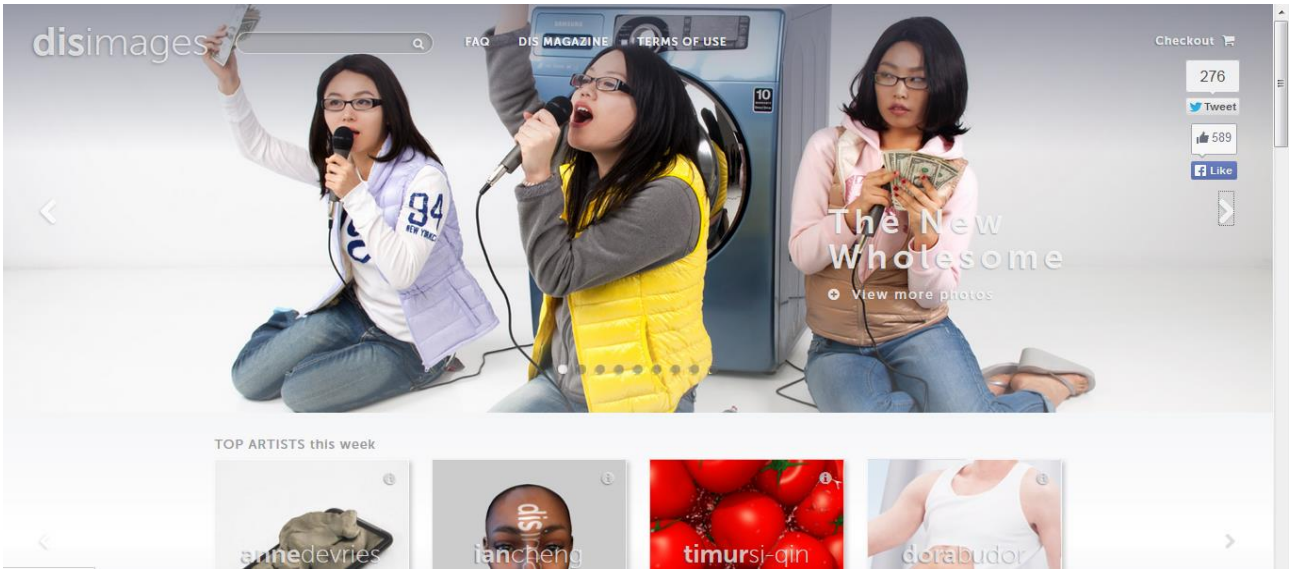

Fig. 15. DIS, *DISimages* (2013-ongoing). Opening screen with photo header from 'The New Wholesome' series. Website [www.disimages.com] accessed 6-8-2015.

4.2: *DISimages*

Artist collective DIS, consisting of Lauren Boyle, Solomon Chase, Marco Roso and David Toro, react on the phenomena of stock photos and stock imagery with their online project *DISimages* (2013-ongoing, fig. 15). The website is designed in a similar fashion as conventional stock photo websites by

[104] These pictures are most likely but not necessarily all stock photos, some of them could also be from a custom photo shoot.
[105] The one of Getty for example shows a more diverse range with people of color, kids and elderly.
[106] And arguably racist and 'beautist'

deploying the aesthetics and navigational lay out of stock photo websites. There is a search bar, filter options, and in the right top corner an icon of a shopping cart that signifies the ability to buy the display of the website's content. Its name, DISimages, refers to Getty Images, especially due to visual commonalities.[107] The logo is positioned on the same place as the one of Getty Images on its website. Although this convention is not confined to stock photo websites, the logo is furthermore designed in a similar font, both without capitals and bolding of its prefix.[108]

4.3: *The New Wholesome* and other series

The website is operative as a stock photo website and some of the images indeed look like stock photos. Stock photos often feature people isolated on a white background, so they can be easily cut out of them and implemented in other pictures. This is also the case in the picture that is functioning as a header on the website, seen in fig. 15. This is a picture from 'The New Wholesome', a collection of pictures that is viewable online as a series.

Fig. 16. DIS, *DISimages*: *The New Wholesome* (series). Preview with watermark. Website DISimages [http://disimages.com/photos/view/378] accessed 22-6-2015.

The majority of the picture series on *DISimages* are made by artists, commissioned by DIS. *The New Wholesome* however has been conceived by the members of DIS themselves. These pictures share many visual qualities that are common in stock photography: the bright lighting, the white background, clear gestures and prominent props. Household appliances, vegetables, shopping bags and the notorious apple: they are all present in the series. Whereas stock photo images are made to disperse simple message or sell certain (but not too specified) products, the message conveyed in *The New Wholesome* is anything but simple. In fig. 16, the interaction of the models with the props do not make much sense and they are not selling any of the products. In contrast, they explain how to avoid buying new slippers, since one could clean them in the dish washer. The man in the picture is not wearing underwear but this is not emphasized; his nudity serves no purpose. Other pictures within the series depict scenes with similar 'random nudity': a man and a woman whose breasts are uncovered, reclining near a vacuum cleaner. Then there is a woman carrying shopping

[107] Getty Images website [http://www.gettyimages.nl/] accessed 4-8-2015.
[108] '**dis**images' and '**getty**images'.

bags in two pictures: one in which she poses with clothes and one without, and one that depicts three women posing around a toilet bowl in various stages of undress. Then there are ones that are even more puzzling, such as the picture in which three women are sitting in front of a large washing machine, holding a pile of money in the one hand and in the other holding a microphone of which its cord leads to the washing machine. Like stock photos themselves, these pictures defy any logic.

Other DISimages series also show a close mimicry of stock photo aesthetics in combination with a societal critique, such as the series *How Much is that Intern in the Window?* by Josh Kline. This series shows various scenes of models working on their laptops, while sitting in dog and cat benches, in one case leashed, or they are offering take-away coffees to others. Like regular stock photo websites, the pictures are captioned with a celebratory description.[109]

The pictures and their descriptions comment on the putative general applicability of these images. Not all series adopt the typical stock photo aesthetics while doing this: some take a different turn.

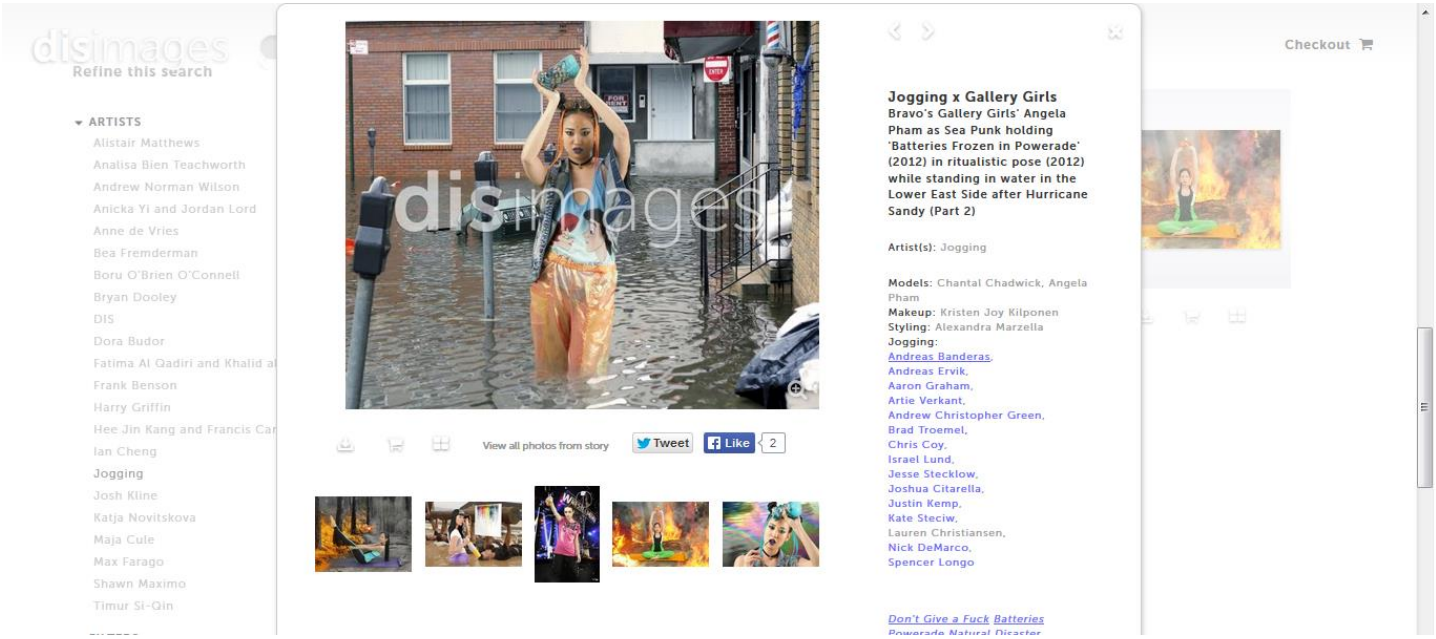

Fig. 17. DIS, *DISimages* (2013-ongoing): *Jogging × Gallery Girls* series, by artist collective Jogging according to captions. Printscreen, [http://disimages.com/photos/view/551] accessed 6-8-2015.

[109] The caption of this series reads: 'Indispensible and increasing in numbers. Interns. Today's down-sized, hyper-productive, ultra-efficient office couldn't run without them. Their unpaid labor--compensated with experience, connections, and occasionally cupcakes--allows the American creative sector to stay in the black. Bring in your own laptop and chop that administrative cane. Often hidden in plain site, interns are seen, but not remembered. Fleeting and ephemeral capital. Stock images of intern stock will help fill this cultural blindspot - providing pictures of the people working hard for a non-living in today's creative economy.'

In the series *Jogging × Gallery Girls,* the pictures are extremely specific, which is enhanced by the detailed description. The image featured in figure 17 captioned as follows: 'Bravo's Gallery Girls' Angela Pham as Sea Punk holding 'Batteries Frozen in Powerade' (2012) in ritualistic pose (2012) while standing in water in the Lower East Side after Hurricane Sandy (Part 2)'. It takes an informed viewer to make sense of it – the simplistic description of emotions, poses and props of the usual stock photos are on the other side of the spectrum.

4.4: Ambiguous discernibility

I would argue that the fact that this website is operative is incredibly important. Because there is indeed an option of 'buying' the puctures, visitors/viewers are indeed faced with a choice, which at least evokes a vague ciritical positioning in relation to the pictures, which starts with the question to what purpose these pictures could be bought. With strategies of appropriation and subversive alteration, or radically differentiating from stock photo's visual conventions, the pictures raise awareness of the illogic character of conventional stock images.

However, the website is not just forming a critique on, or implying a diversification of stock images. At the same time it is a website on which artists may gratefully want to be visible because of DIS' stature within the art world.[110] By implementing hyperlinks to the personal websites of the artist (the names in blue, in fig. 17) in the description of the stock photos, these photos and *DISimages* as a whole functions as an indirect advertisement platform for the artists' involved.

[110] DIS is appointed curator of the 2016 Berlin Biennale.

Conclusion

Information on the Internet is constituting our worldview, increased by developments in computer technology and the development of the Internet into an advanced *push web*. The online media that are pushed around within this personalized push web are in a constant state of flux, because of their changeability, or *deep remixabilty* (Manovich 2013). This remixability further enables photographic representation that circulates online to be altered to our imaginations, while it alters our imaginations as well. There are arguably a multitude of online public spheres that merely interact. That is why the Internet does not necessarily diversify or enrich one's world view. Critical digital culture - music videos, images, websites, or interventions within them – are also subject to these mechanisms of made-to-measure information dispersal. Consequently, these potential agents of awareness are likely to be viewed by those already interested in the subject they broach, and the messages they convey about the subject. Online works frequently have a conceptual framing incorporated, to those who stumble upon them without introduction.

Image Atlas 'dissects' the popular way of accessing images, by unveiling the processes of translation, categorization and personalization that are at play when we use search engines. The work makes visible that it matters from which place one accesses the Internet. It is oppositional to the idea of the Internet as one navigational realm, and it similarly allows users to navigate to these 'other realms' that would otherwise be filtered out.

DISimages is not just a reaction on the phenomena of stock photo websites as hubs for imagery (that get materialized), but also on the characteristics of these images themselves. It is not just a reaction to stock photo websites, it is also an example of one. DIS *appropriated* the visual and navigational conventions of these websites and also capitalize the images which are likely to be considered unsuitable for commercial purpose. Some series emphasize typical photo stock characteristics through *mimicry* and exaggeration, for example in *The New Wholesome* series. Other series invert a certain aspect of stock photos, such as their putative general applicability (*Jogging × Gallery Girls*). *DISimages* could also be seen to serve another function, as an important platform on which artists can gain visibility. Hyperlinks to websites of the artists involved are incorporated in the pictures' captions – this is very different from the conventional anonymous stock photos – 'Like' and 'Tweet' buttons are also incorporated.

In *Excellences and Perfections,* Amalia Ulman also demonstrates a visual exercise in mastering the conventions of photographic representation (in this case those specific of Instagram). With a meticulous staging and retouching along certain Instagram conventions, she dissects these conventions into the different visual elements (objects, poses, lighting, etc.) with which in fact

everyone curates there online personae, but only to be experienced as such when you are familiar with them.

How Not to be Seen goes at the heart of what a digital image is, by leaving the various visual layers that images are constructed with, dissected. We are used to the idea of images (moving or not) being retouched, computer enhanced or generated, but are only infrequently reminded to this: in the majority of images that surround us, there is put much effort to deny the existence of digital manipulation. Their fabricated, remixed character is rather obscured. Although *How Not to be Seen* is only visible in its totality in a museum, a collection of images and fragments importantly circulate online: online visibility serves important purposes after all.

The works discussed in this thesis have in common that they both address *how* visual imagery circulates online, but also address specificities of this imagery. With different strategies – grotesque mimicry, stark opposition, dissection of elements, or hidden intervention – when they are part of a structured experience without distraction, they challenge preconceived ideas about the Internet and its imagery.

Suggestion for further research

The avoidance of online photographic representation as an individual (*How Not to be Seen*) on the one hand and the importance of online visibility as a means to disclose your work and form professional networks as an artist, seems an interesting contradiction worth investigating. I touched upon this very briefly in discussing *DISimages* and *How Not to be Seen.* Possible research questions for such research could be: how do artists curate their online visibility – and with what kind of visual representation or interventions – and which role does this play in forming professional networks with other artists, curators, activists, theorists, gallerists and collectors. How does this affect the practice of curators, the amount of visitors of exhibitions, and their experiences? Subsequently, could mechanisms of personalization form specialized clusters of likeminded contemporary art professionals?

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