The Metainterface Spectacle

6 November 2021

Søren Bro Pold, Christian Ulrik Andersen
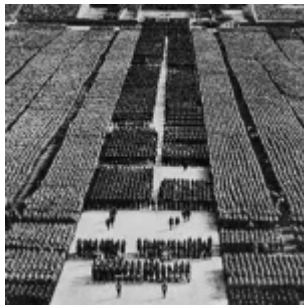
Building on their concept of metainterface, Søren Bro Pold and Christian Ulrik Andersen analyze the change in perception and experience that bring forth the always-on(line) mode of engaging with digital content. The notion of 'spectacle', in itself having a long history in critical theory, is employed here to discuss media politics and the struggle for power in terms of aesthetized computation, with their main driving forces being data analytics, surveillance and forensics. Pold and Andersen uncover how metainterface spectacle can also serve to empower political agency through reclaiming the apparatus.

Try to reflect on a typical contemporary experience of and with interfaces and compare it to interface interaction before 2000. Interfaces have become even more important, but also slightly out of reach for understanding, analysis, even to some degree out of reach for experience and perception. With the concept of metainterface we have analyzed how interfaces become at once ubiquitous and networked or dispersed, at once everywhere, in everything and nowhere in particular as in e.g. cloud computing (Andersen and Pold). This general change of interfaces' global dimensions leads to a gradually changed way of perception and experience, which will be explored in this article as a new metainterface spectacle that is configured along two axes.

First, the contemporary metainterfaces are *always-on(line)* and their use is combined with tracking. In the 1980s interfaces had to be switched on, booted and one had to learn to understand them. Even when the web was new, people went off-line and 'away-from-keyboard' and thereby also away-from-interfaces. Contemporary networked interfaces are increasingly embedded in the things and devices of the home such as e.g. voice assistants, and furthermore they are spread out in the environment taking advance of wireless and mobile networks. Today, people are often using several interfaces at once when navigating, streaming media, communicating, being tracked, listened to and seen by sensors, microphones and cameras. Often this happens without people fully noticing. It runs in a semiautomatic way – by way of cookies on websites, the tracking of Mac addresses, and the wifi pings your mobile device sends out to discover known networks (thereby also disclosing the networks it normally hooks up to). This always-on(line) character has led to what has Shoshana Zuboff has labelled 'surveillance capitalism' as an emerging business model connected to Google, Facebook and more (Zuboff "Big

Other: Surveillance Capitalism and the Prospects of an Information Civilization"; Zuboff *The Age of Surveillance Capitalism : The Fight for a Human Future at the New Frontier of Power*).

Second, the always-on(line) character, contemporary interfaces often combine a front end for individual interaction with collections of data used for statistical calculations and user profiling. Within the personalized interfaces ('for you') lies a more anonymous understanding of the user as part of a mass; i.e., a mass-oriented multi-user perspective ('for people like you'). The *profiled mass perspective* appears for instance in search engines that provide individual search results, combined with collection and statistical mapping of what 'people like you' look for, which can be used in the formation of the search algorithm and targeted advertising. Another example would be the 'feed' as it appears in social media, which is a particular and customized list of news and advertisements, 'just for you', but at the same time relying on the collection of what 'people like you' respond to emotionally. Or, mapping services that lead you to 'your destination', but at the same time track and compare your route and speed to calculate a more distanced perspective on traffic, or other conditions in a city, which 'people like you' contribute to. In such ways metainterfaces present an individual and individually profiled perspective on the urban, local and global mass; most often a mass that is divided into groups and neighborhoods through profiling and data management (Chun). This profiling plays a central role in the mis-information economy, the manipulation of people's emotions, as well as in the proliferation of new services and products; however, it also (as we intend to propose in this paper) presents a different experience of the mass, a different 'spectacle'.

The notion of 'the spectacle' is central in critical theory, and although one might argue that it also relates to modern urban developments, and e.g. George-Eugène Haussmann's transformation of Paris into boulevards with views to see and be seen, we want to specifically tie it to the development of mass media, and discuss what a contemporary 'metainterface spectacle' is in relation to the history of computing and the role of computation in the construction of the spectacle.

Finally, we also want to raise the question of politics in the metainterface spectacle. The notion of spectacle is intrinsically tied to politics and relations of power and control. In Haussmann's Paris, the boulevards did not only provide new urban experiences, it was also a city mapped out and controlled from above, and a city that was designed to control the masses (as we all know, Paris has a long history of upheaval of the masses). Historically the spectacle, as a view on and of the masses involves a particular political agency tied to media. The cinematic spectacle lends itself to political propaganda and another kind of control of the masses, as evident in Nazi Germany. The mediated spectacle also plays a key role in the control of the consuming masses in capitalist societies. Media spectacles have therefore also always been a central part of Marxist cultural criticism, ranging from Benjamin, Kracauer, Adorno, Horkheimer to Guy Debord, and beyond; and they have always been a contested zone for political struggle – for propaganda as well as for activism and situationist happenings. How does this work in the

metainterface spectacle? This question is not least relevant in light of recent political developments as displayed on Capitol Hill in January 2021, on various online platforms, as well as in global nation politics where e.g., Russia has been accused of using the profiling of users and strategies of misinformation to influence the outcome of elections.

Mass spectacles: Propaganda

In this context, we want to focus specifically on the role of the spectacle in relation to mediation. Here, it is obvious to draw lines to the German cultural and film critic Siegfried Kracauer and his concept of the mass ornament. Kracauer writes about *Triumph des Willens* as a film producing mass ornaments "symbolizing the readiness of the masses to be shaped and used at will by their leaders". He notes how the Party Convention, according to Riefenstahl, was prepared in concert with the preparations for the camera work, and he concludes: "Triumph of the Will is undoubtedly the film of the Reich's Party Convention; however, the Convention itself had also been staged to produce Triumph of the Will, for the purpose of resurrecting the ecstasy of the people through it" (p. 301). And: "This film represents an inextricable mixture of a show simulating German reality and of German reality maneuvered into a show" (Kracauer *From Caligari to Hitler : A Psychological History of the German Film* 302, 301, 303).

In short, Riefenstahl uses the mass ornament as a stage for a political purpose. As Walter Benjamin writes before a footnote that explains the cinematic perspective and technology used by Riefenstahl: "It sees its salvation in granting expression to the masses-but on no account granting them rights" (Benjamin 269). Benjamin and Kracauer offer, in our opinion, a much- needed understanding of the aesthetic complexity of mass perspectives and spectacles that may help us understand our contemporary spectacle – and not least how it is different from former media spectacles.

Mass spectacles: Realism

As we have noted elsewhere, metainterfaces and cloud computing also function as what Walter Benjamin once called 'phantasmagoria' (or shadow plays) of contemporary globalization (Andersen and Pold 138 ff). The personalized interface (be it your feed in social media or your route on a map), functions like a commodity with a special force: it can embody the deepest desires of its worshippers, but it constantly hides its origin. In this sense surveillance capitalism is no different than other forms of capitalism: it disguises and operates on the level of social and collective dreams. However, the lightweight nature of the media spectacle does not seem to serve the sole purpose of manipulation. Its aesthetics is far more complex – lingering between propaganda and media-reflection – and the relation between what we see as mass consumers, how we see, and (not least) how we see ourselves in the spectacle are crucial questions in the assessment of the spectacle.

In Kracauer's understanding, the spectacle (as a mass ornament) is also an aesthetic reflection of capitalism's production process, the assembly line, and statistical control. All of these characteristics of a modern mass society are generally abstract or invisible and

can only be recognized by the individual as an indirect experience; or, staged aesthetically as a mass ornament: "The production process runs its secret course in public. Everyone does his or her task on the conveyor belt, performing a partial function without grasping the totality. Like the pattern in the stadium, the organization stands above the masses, a monstrous figure whose creator withdraws it from the eyes of its bearers, and barely even observes it himself" (Kracauer *The Mass Ornament* 78). This withdrawal of the creator makes it, like the phantasmagoria, enchanting; the loss of your perspective embodies the desires of the worshippers: the experience of a common project that binds people together. As Kracauer writes, "The bearer of the ornaments is the *mass* and not the people" (Kracauer *The Mass Ornament* 76).

In other words, the stadium spectacles of synchronized gymnasts offer a reflection of the compulsive actions of a new mass, and a way to experience this as a mass ornament – in which the withdrawal of perspective and the hiding of an origin can even be a sublime experience. In this way, the mass ornament exists above the level of the individual, but nevertheless offers the individual a perspective on the mass. Although, it was this enchantment that fascism and Nazism misused in perverse ways and took advantage of in their propaganda, its effect is not uniform (see also Andersen and Pold 102 ff.; Pold 26-27). Its social significance cannot simply be compared to that of a roman theatre, staged by the ruling power, as Kracauer notes; as he highlights how the mass indulges in sensations comparable to a godless cult (Kracauer *The Mass Ornament* 85). And in fact, it is such sensations that help the individual reflect the rationale of industrial production; that makes the ornament 'real'; or, a reflection in how reality is produced.

The metainterface spectacle is as complex as the mass ornament. Following Kracauer's line of thinking, we may assume that the mass ornamentation of customized media 'just for you' reflect a new moment in industrial production, the moment of surveillance capitalism and platform production. Just as in the 1920s and 30s, we may also assume that mass ornamentation make way for propaganda, but also realist (media) reflection. However, the mechanisms of both propaganda and realism function substantially differently: interfaces see us differently, and we see ourselves differently in them. This has to do with both the design of interfaces, and their dependency on computation.

Inteface spectacles: Minimalism

Metainterfaces have adopted a tendency of hiding their ways of working behind minimalism. When smartphones became popular, it was often a challenge to adjust popular interfaces to the small screen; but since then minimalism has increasingly ruled on apps, devices and even PCs, for example the template interfaces of social media with very limited means of input and interaction. Ever since Google's minimalistic interfaces emerged shortly before 2000, small and minimal interfaces, have become minimalist. With this, they have changed from allowing various levels of configuration in settings and being oriented towards user-driven choices and interaction towards building on profiling, datafication and 'smartness' to preempt the user's preferences. Hence, the minimalism not only rule the visual appearance of the interface (the template that is easy to decode and avoids information overload), but also the functionality of the interface. For instance,

many interfaces turn towards automatic suggestions of what you might like to see, rather than letting the user configure this herself. Both Netflix, YouTube and Spotify automatically play what they suggest you will like, and dynamic websites generate news feed, you might like, or the search result that you might be interested in. To put it in broad terms, the interface changes from interaction and interactivity to streaming, auto-suggest and auto-complete. With this, the old values of user-friendliness have in more than one way become a screen for manipulation: everybody can operate the typical social media platform or Google's services, but practically nobody knows the full extent of what the generated data is used for. The difficulty of understanding has moved from the level of interaction to the infrastructures behind the screen.

Although the minimalist interfaces follow a tradition within HCI and interface design of user-friendliness, user-orientation and user experience design, the changes in the two axes of metainterfaces pointed out above have gradual but large effects on the *experience* of interfaces. In fact, it can be seen as a dominant way of understanding computation and virtualization through engineering rather than humanistic understandings of representation and language, as pointed out by the American media scholar Ed Finn.

Interface spectacles: Computationalism

The computer and interfaces are often seen as distanced and relieved from the messiness of the real in both public imagination and research. Deep in the understanding of algorithms there is a belief in computation's ability to model and handle the world in efficient ways, which also often leads to modeling dissimilar areas in similar ways. As argued by Finn, computation and algorithms are seen as "a universal solvent for problems in the physical sciences, theoretical mathematics, and culture alike." Finn points to a general "hermeneutics of modeling" in computation and, like the interface, the algorithm "spans the gap" and "negotiates the tensions between computation and material reality" (Finn 23, 10). This is not new but deeply steeped in the history of computing, and the birth of the modern computer with the Universal Turing Machine as an "ur-algorithm."

Computation is an "abstraction generator," but "every abstraction has a shadow, a puddled remainder of context and specificity left behind in the act of lifting some idea to a higher plane of thought" (Finn 23, 24). This "puddled remainder" is created by an engineering approach of efficiency and "'good-enough' rationalism" and this has according to Finn a "tremendous impact on policy, culture, and the practice of everyday life, because the compromises and analogies of algorithmic approximations tend to efface everything that they do not comprehend" (Finn 22). Engineering is about making things work in a pragmatic way, rather than understanding in a philosophical way and Finn characterizes this general approach as "computationalism", drawing on N. Katherine Hayles.

In general, computationalism is in line with the empirical, logical dimensions of modern science in the way that "they convert truth to provability" (Weizenbaum 373), whereas the language that is produced by programming becomes "a fetish surrounded by black magic.

And only the magicians have the rights of the initiated. Only they can say what words mean. And they play with words and they deceive us" (Weizenbaum cited by Finn 35). In this, Finn follows Wendy Chun's seminal writing on 'source code' as a kind of fetish and 'sourcery' – a "fundamental alchemy" and "mysterious fungibility" (Finn 33) – or perhaps, another 'godless cult' in the words of Kracauer. This characterization of code makes sense not only in relation to the role of code in computing, but also in the everyday use of computers – and not being able to understand the functioning of large global platforms, even from the inside or through reading the code.

The mass perspective of profiling: the Nooscope

Following both a history of minimalism and computationalism, we see that a central difference between the metainterface spectacle and former spectacles lies in particular instrumentalist hiding of the production of the mass perspective. To explain this further, Matteo Pasquinelli and Vladan Joler have pointed out how Artificial Intelligence is not intelligent, and Machine Learning is not learning. It is a 'knowledge instrument' in the tradition from Leibniz that we may not be able to see, but which can be mapped as a 'nooscope'.

> "The purpose of the Nooscope map is to secularize AI from the ideological status of 'intelligent machine' to one of knowledge instruments. Rather than evoking legends of alien cognition, it is more reasonable to consider machine learning as *an instrument of knowledge magnification* that helps to perceive features, patterns, and correlations through vast spaces of data beyond human reach. In the history of science and technology, this is no news; it has already been pursued by optical instruments throughout the histories of astronomy and medicine. In the tradition of science, machine learning is just a Nooscope, an instrument to see and navigate the space of knowledge (from the Greek skopein 'to examine, look' and noos 'knowledge')" (Pasquinelli and Joler).

Pasquinelli and Joler basically see machine learning systems as sophisticated versions of perception, a kind of "statistical cinema" that extends the spectacle into non-visual datasets. This statistical cinema does not show exact or neutral pictures, but includes a number of limits and potential errors such as bias in the data, reduction of data, loss of diversity, regression to a mean etc. (See also D'Ignazio and Klein). Furthermore, statistics is, as always, used for a purpose and "often does take the shape of *statistical hallucination"* (Pasquinelli and Joler). However, for the individual users behind their interfaces this often looks like magic (as a fetish, or a phantasmagoria), where they cannot see the workings of the machine.

Political agency in the metainteface spectacle: the SoMe carnival

In the metainterface everybody takes and sees the same snapshot of the Eiffel Tower (as a compulsive action of the mass), but unlike former mass spectacles, nobody is seeing *the mass perspective*. The spectator of the new mass ornament, the user, is limited to responding emotionally to the feed (by sharing what is on one's mind, or liking what is on

the minds of others) – there is, in other words, no one to see the figure (in Kracauer's terminology). If the mass ornament (the spectacle) is the aesthetic mirroring of the ruling economic system and its inner rationale, there is nobody to see this, there is no sensation of this. As a particular datafied perspective one might even question whether the mass itself can be the bearer of ornaments? In the next part of this article, we want to discuss the politics of the metainterface spectacle. If the metainterface (as a nooscope) does not allow for a perspective on the masses, and is not sensible to the individual in any other ways than in e.g. our 'feeds', then, what kinds of political agencies does it allow for?

In terms of political agency, much has changed since the stadium spectacles of the 1920s and the proliferation of the culture industry and advertisement of commodity culture. There is still much research to be done in fully understanding the aesthetics of our contemporary metainterface spectacle and the kinds of manipulations, reflections, and activist interventions it allows for. How do we understand the events on Capitol Hill, the Occupy Movement, or the so-called twitter revolutions of the Arab Spring, and the role of media-, metainterface-, and statistical spectacles in this? What makes them alike? What makes them different?

Clearly, media technologies are integrated into the social tissue of the contemporary spectacles. This was already pointed out by Ned Rossiter and Geert Lovink a little less than a decade ago in their description of the various upheavals taking place in the years between 2011 and 2013 at Taksim in Istanbul or Plaça del Sol in Madrid, and how these events were intrinsically related to "bursts of 'social media' activity" and characterized by "communication peaks, which fade away after the initial excitement". They became, as Rossiter and Lovink writes, "event centered movements","carnivalist ruptures of the everyday life", and "revolts without consequences" (Lovink and Rossiter 10).

Clearly, there is still a remanence of a carnival on Capitol Hill – just think of the so-called Qanon Shaman (Jake Angeli) and how the iconic image of him lends itself to mediation and 'sharing' on Instagram and elsewhere. In this sense, the metainterface spectacle allows for an image politics by way of mood-algorithms that take part in the spreading of misinformation and pray on or fascination with the zany, the cute and the interesting (to paraphrase Sianne Ngai's capture of our present aesthetic preferences, published at the same time as Lovink and Rossiter's analysis (Sianne Ngai)).

But comparing Capitol Hill to Plaça del Sol perhaps also misses an important change in the spectacle. Unlike former event centered revolts, it is now clear that behind the carnival is a much stronger organization – typically residing on 4chan, 8chan, or reddit fora, but presumably also with ties to national US-politics. It is tempting to draw lines between this organization of politics and how Kracauer describes Riefenstahl's staging of the Nürnberg party days, and how it represents "an inextricable mixture of a show simulating German reality of German reality maneuvred into a show". In this way, Qanon's media spectacle is produced by the media along the media's own agency as an "aestheticizing of political life" which Benjamin saw as "the logical outcome of fascism" (Benjamin 269).

Political agency in the metainteface spectacle: Orgnets

Rossiter and Lovink, in fact, already described such a potential political agency (which, in their analysis, the political movements of the 2010s were lacking) as an 'orgnet':

> "The orgnet concept (short for organized networks) is clear and simple: instead of further exploiting the weak ties of the dominant social networking sites, orgnets emphasize intensive collaborations within a limited group of engaged users. The internet's potential should not be limited to corporate platforms that are out to resell our private data in exchange for free use."

> "Here, we are speaking of the conjunction between software cultures and social desires. Crucial to this relation is the question of algorithmic architectures, something largely overlooked by many activist movements who adopt – in what seems a carefree manner – commercially motivated and politically compromised social media software such as Facebook, Twitter and Google+." (Lovink and Rossiter 10)

What Lovink and Rossiter here highlights is that in order to contrast the lightweight nature of political activism on social media (which basically makes the actions another contribution to the mood-driven platform economy), one needs intensive collaboration and organization. Three interesting hypotheses can be extracted from this proposition.

First of all, and in the context of this article, if the carnival upheaval has no other spectator than that of the personalized feed, it is weak. The statistical mass perspective of the nooscope and computationalism – the "question of the algorithmic architecture" – should not be left to the corporate platform economy. To reclaim political agency entails reclaiming the perspective of and on the mass.

Secondly, to reflect and reclaim a mass perspective one needs to learn from the underbelly of network and software culture – the simple use of social media will never suffice. The various tools for data analytics should no longer be restricted to corporate platforms or the NSA, but reclaimed by political organizations.

Thirdly, this engagement with the algorithmic architecture should not be carried out in a. "carefree manner" – which perhaps is a way to characterize Qanon, the events on Capitol Hill, and the political organization of the far right (including Trump's way of carrying out his presidency through Twitter).

As a final conclusion (or opening), we want to briefly delve into this third hypothesis, how the political battlefront of the 'nooscope' is played out in the contemporary metainterface spectacle.

Political agency in the metainteface spectacle: Conspiracies and forensic evidence

The metainterface spectacle has changed the field of political struggle in media. It remains a struggle of the perspective on the masses; on how the mass sees itself in the mass perspective. Fifty and a hundred years ago it was possible to misuse the spectacle in propaganda, or to point to the mediation of the spectacle as a political act (the ability to see the wider apparatus of propaganda – as exposed by both Chaplin and Debord in each their own way). However, when the media spectacle turns into an interface spectacle, it becomes infected with another type of abstraction: that of computationalism and the nooscope. With the metainterface and the increased use of artificial intelligence and 'mood algorithms' designed to read and customize media, the perspective on the interface spectacle further disappears. One merely sees one's own interface/feed. With this, the revolution becomes a carnival.

However, as Lovink and Rossiter already pointed to a decade ago, political agency must reflect and reclaim the apparatus – a reclamation of the perspective on the mass, one might say. If what counts as, and what enables, political action is the appropriation of an algorithmic perspective, a number of new political tactics that 'play' the metainterface spectacle is bound to emerge. And, we are already witnessing this. Not only has data analytics, for instance, become a key tool in political agency, but the tracing of how the datafied perspective is established in the first place, has also become a site of political interference. The tactics of using data analytics and interfering in the apparatus of the metainterface spectacle does not, however, have a predefined political direction. The use of data and the interference with the 'nooscope' hold a potential for different kinds of politics, which might be "granting expression to the masses" as can be seen in propaganda, or might be a re-engineering of the apparatus "granting them rights" they otherwise did not have as can be seen in other movements (Benjamin 269).

One example of this complexity is seen in the mixed use of data analytics and data forensics by orgnets. One example is the so-called "Pizzagate". In 2016 the email account of John Podesta (Hillary Clinton's campaign manager) was hacked. It was a so-called phishing attack, organized by a group of people and specifially targeted Podesta (aka 'spear phishing attack'). The emails were then published by WikiLeaks and analyzed for evidence of a human trafficking and child sex ring connected to the Comet Ping Pong pizzeria in Washington DC, and involving prominent Democrat politicians. The results were then spread by far-right journalists and others on social media, such as 4chan, 8chan and Twitter. Pizzagate is an example of how the masses are granted expression in the metainterface, and a demonstration of how the use of analytics can generate fictions, or rather conspiracies and misinformation – a contemporary aesthetization of politics guided by data and fictitious evidence.

In contrast, data analytics and forensics can be used in entirely different ways to grant the masses rights. Data forensics is well-known within media criticism where it, for instance, is conducted by the Forensic Architecture Lab at Goldsmiths in London under the direction of Eyal Weizman. Broadly, the institution's many cases aim at collecting evidence of violations against human rights, used to both document violations and assisting criminal courts. Many of their projects analyze the data of the many photos

taken on smart phones and proliferated on social media. This is for instance seen in one of their early cases, the Israeli soldiers' killing of Palestinian Bassem Aby Rahma in 2010, and also recently in documentation of the use of tear gas against anti-government protesters in Chile in 2019. They, for instance, analyze the sound of real bullets compared to the sound of the allegedly used rubber bullets, the spreading of tear gas clouds, and more, and use the information to generate exact 3D mappings of the events in chronological time – a nooscope that serves the victims, so to speak (*https://forensic-architecture.org*).

The political tactics of analytics and forensics are examples of how media politics is changing in the metainterface spectacle; both in ways that stay within the symbolic and mediated, and in ways that they uncover atrocities and conflicts in the real world. Data analytics and forensics performed by organized networks appropriate the perspective of the algorithmic architecture (of the nooscope), and the significant differences in the ways they do this and deal with the saturation of media in the metainterface point to the metainterface spectacle as a new political battlefront.

Works Cited

Andersen, Christian Ulrik and Søren Pold. *The Metainterface: The Art of Platforms, Cities and Clouds.* MIT Press, 2018.

Benjamin, Walter. "The Work of Art in the Age of Its Mechanical Reproducibility." *Selected Writings*, edited by Michael William Jennings et al., vol. 4, Belknap Press of Harvard University Press, 2003, pp. 251-283.

Chun, Wendy Hui Kyong. *Updating to Remain the Same : Habitual New Media.* The MIT Press, 2016.

D'Ignazio, Catherine and Lauren F. Klein. *Data Feminism.* The MIT Press, 2020. *Strong Ideas Series*.

Finn, Ed. *What Algorithms Want : Imagination in the Age of Computing.* MIT Press, 2017. Ed Finn.

Kracauer, Siegfried. *From Caligari to Hitler : A Psychological History of the German Film.* 5. paperback printing. edition, Princeton University Press, 1974.

---. *The Mass Ornament.* translated by Thomas Y. Levin, Harvard University Press, 1995. Lovink, Geert and Ned Rossiter. "Organized Networks - from Weak Ties to Strong Links." *OT -*

The Occupied Times of London, no. 23, 2013, pp. 10-11.

Nacher, Anna. "#Blackprotest from the Web to the Streets and Back: Feminist Digital Activism in Poland and Narrative Potential of the Hashtag." *European Journal of Women's Studies*, vol. 0, no. 0, p. 1350506820976900, doi:10.1177/1350506820976900.

Pasquinelli, Matteo and Vladan Joler. "The Nooscope Manifested: Ai as Instrument of Knowledge Extractivism." *AI & SOCIETY*, 2020, doi:10.1007/s00146-020-01097-6.

Pold, Søren. "An Aesthetic Criticism of the Media: The Configuration of Art, Media and Politics in Walter Benjamin's Materialistic Aesthetics." *Parallax*, no. 12, 1999, pp. 22-36.

Sianne Ngai, Ngai. *Our Aesthetic Categories. Zany, Cute, Interesting.* Cambridge, Mass.: Harvard University Press, 2012.

Weizenbaum, Joseph. "Computer Power and Human Reason: From Judgment

to Calculation - Introduction." *The New Media Reader*, edited by Noah Wardrip-Fruin and Nick Montfort, MIT, 2003 (1976).

Zuboff, Shoshana. "Big Other: Surveillance Capitalism and the Prospects of an Information Civilization." *Journal of Information Technology*, no. 30, 2015, pp. 75-89, doi:10.1057/jit.2015.5.

---. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power.* First edition. edition, PublicAffairs, 2019.

Cite this Essay: