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5.0 Thesis Closing

Planetary-scale computation, and The Stack as made possible by and as a design for it, are the "accident" of the co-determining advancement of global information systems and technology. As such, they are directly manifest of the modern/colonial world system and inherently related to the causes of industrialization as human force-what the highly contested term and epoch the anthropocene refers to. The wrapping of the planet in and by computational technology induces a new and immaterial realm on top of concurrent materialities determined by more traditional parameters such as bio-geo-and geontopolitics, such as earth, body, water, and air. The Stack does not discount or act as an alternative to these categories. Instead, it at once complicates them by additionally, and I argue, alternatively, constituting them through technological computation as data. This levels, but does not reduce or equate, the relations of the inorganic and organic, inhuman and human. It also more accurately represents the confusion of lines and layers of jurisdiction. The interconnectivity of these issues is through their historical development as global frameworks of being and sovereignty.

In this thesis, I have tried to bring to fore the weight of the immaterial turn as the contemporary moment and gap in eras. In my first chapter, I analyzed planetary-scale computation, its formation of cyberspace, and The Stack as a current architecture for it. I did so with the theories and discourses of modernity/coloniality and the anthropocene. I exposed this gap as an opening for inhuman and human temporalities, spatialities, and ontological reformations within these multiplicities and their computational interoperability. Their

interoperability is not a reduction of being or communication to data, but a displacement of the singular narrative of user subject.

My case studies exemplify the effects of planetary-scale computation in which relations between user entities as an emergence within interfaces and the Stack as computational infrastructure at large. These relations are neither an affirmation of being-entity as life or material, nor a reduction of life or being to a machinic or immaterial exchange. Bratton argues that "...the [User agent] of an important but partial agency within many larger and small apparatuses at once..." (Bratton, *The Stack SS*, 348). To push this idea, my case studies of *Pig Simulator* and *Home* reveal different scenes of *becoming*-user. They do not propose a 'better "sovereign unit" of ...[the User subject] assembly' the world-and-life-making structures within planetary-scale computation (Bratton, *The Stack SS*, 347-8). Rather, they work through the ontological effects and necessity of complicating the development of subjectivity. They complicate this development as an emergent act with other immaterial and material entities and multiplications of the self.

Conceptions of being must reorient away from subjecthood in order to conceive of a more specific and global, immaterial and material, politics required by the merging of the immaterial realm and constitution, and, as a critical infrastructural reality, and the site for the future. The relations between ontological reorientations that deal with this merging in my objects aim to help avoid the mode of conquering in the affordances of the platform of the Stack as global infrastructure. As well, they are an attempt to help in avoiding the potential for perpetuating "...[the accommodation, reproduction, and fortification of]...the placebo identity of a resolved Vitruvian *User*" (Bratton, *The Stack SS*, 347-8).

Throughout my thesis, I have been inclined to call this gap an immaterial-turn, even though it is more accurately the effect of an immaterial addition for a reconstitution of being and the organization of power. This overlaying is of the immaterial, as well as merging of immaterial within the material. I continue the use of immaterial-turn in that it must be felt as such. The immaterial must turn our conception of being: from our constitution in its most raw with other actors and ourselves as manifest by it. Herndon demonstrates this in the engaging with her multiplication of self as an ongoing emergence through her datafication as personal and interfacial constitution. In Herndon's video this has specifically political consequences, as the interfacial constitution of the Cloud platforms permits them to act in ways that offend her constitution. The former point arises in the experience of *Pig Simulator*, letting current User subjects possibly find confidence in the immaterial force to turn user entity. It does so by its nonsubject and nonnarrative path that creates a pool of self-reflexive reactions of having been displaced is crucial. I remain strong in conceiving this gap as one in which the immaterial must turn into the forming era ahead. But, I do so in the hope that it will not by the same moniker of the anthropocene as I argued in my first chapter by way of Yusoff. That is, its nomination simultaneously permitting the introduction of the inhuman to the anthropocentric world. But, in its birth it determines the inhuman as both a failure to serve human geologically as well as act as the proper rival "we" once thought it was; as well as "...refuting the basic architectures of thought that structure that space (where humanity is used as a term of erasure of material and political forms of differentiation)" (Yusoff, 7).

The conception of a post-anthropocene as an end in material territory and subsumption of the world into an information-based immaterial global infrastructure, is both the success and failure of the universalized human-subject, world-and-life-maker. We must permit ourselves to take embodiment within the architecture that realizes its emergence, to keep in motion the emergence of its multiplicities as world-and-life-constituting. This may never entail a detailed "sovereign unit," but instead the incorporation of local-global, discrete immaterial and material and overlapping realities within world-and-life-making infrastructures as a way to keep an unmasterable yet operable narratives.

Becoming-user frames dissolution of the insularity of the anthropocentric and modern subject of man, conquering and making exteriorities. This is not an inherently embodied dissolution, and reasons for why the affectspheres of both *Pig Simulator* and *Herndon* are significant to exposing and reinforcing the relationality of the immaterial and material merging. *Pig Simulator* creates an experience of leaving the expectancy of subjecthood and world-maker to being a non-subject without a mastery, *becoming* a user agent on a platform. This is not just one among many, but constituted by other entities.

Alternatively, *Home* approaches *becoming* from an institutional, life-making vantage point, in which she legitimizes the reality of her deeply intertwined immaterial and material multiplication of herself. She becomes one and multiple with her data from her intimate, life-constituting movements. The affectspheres are formed by very different agencies but both create a connection between the immaterial and material discrete yet multiple self, by and through interoperating on a platform interface with other entities.

In his critique of Judith Butler's *Notes Towards a Performative Theory of Assembly*, media theorist Mackenzie Wark argues the limits of traditional determinations of politics. Wark problematizes Butler's call for differentiated human bodies to be seen as subjects. In inscribing embodied-subjects, her call remains within the constitution of the human body as world-subject.

And, in turn, inhibits infrastructure (and the inhuman broadly) as an agent from being anything but in the service of supporting and realizing the (differentiated) human bodies.

I suggest that *Pig Simulator* and *Home* act out what Wark describes as "...the capacity to interrupt the temporality and narrative coherence of virtual geography" (Wark). It is crucial that we have objects to look to for new cultural narratives, which engage an affective embodiment as user entity without becoming a User subject. And, it is crucial that these are narratives that retain multiplicities (inhuman and human) in their manifestation, by way of interface design (not through self-reflective surfaces of pop platform GUIs) and its acute relationship with infrastructures at large. In the immaterial turn, planetary-scale computation may organize and be organized by design-as-infrastructure, without conquering for human-subject.

Organizing the information as world-making and life-making drives down to the interfaces of their translation. This is not to co-exist, or be co-operative, but as inter-constituting. This is not a discussion of the multitude as body politic, but specifically repositioning what mandates incorporation based on current realities and incongruent legalities. This is a big turn and request, but it is possible as it is already acted every day (it is specifically emphasized in *Home*). Where Bratton talks about The Black Stack as the generic holder for the design that may take shape from the current Stack (or as he also says it might be obliterated completely), the contemporary moment and future is indeed on a planetary scale. And, it is being organized in a certain way still based on universalized conception of subjectivities that have procured it as a demise and failure (i.e. the anthropocene). The orientations of self and body constitutions must be reconstituted with and by the inhuman and infrastructural.

These implications of linking a body as a user entity in emergence with other userentities, and in emergence with the not yet orchestrated by computational infrastructures, are dependent to their focus. I think of discourses such as Jane Bennett's vital materialism or ethics of technology (for example, this is a whole department at TU Delft). What orients my questions of "what next," are ongoing developments like Facebook's solar-powered high altitude drone that will reportedly "deliver internet connectivity to the remotest populated corners of the Earth" for up to 3 month-long flights (Gallagher). So much of this creation cannot just fall in discourse of philosophy or ethics or technology or inhuman agency. This must be considered within the meta-field of its reach, of the how and who are determining planetary-scale design-as-infrastructure. Facebook's "delivery" of the internet via planetary-resources and reach, creates new territories within the universalizing paradigm of modernity/coloniality. This is the current future.

Bibliography

- "The "Anthropocene"" Global Change Newsletter: The International Geosphere—Biosphere

 Programme (IGBP): A Study of Global Change of the International Council for Science

 (ICSU) 41 (May 2000): 17-18. Print.
- Appadurai, Arjun. "The Production of Locality." *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis, MN: U of Minnesota, 1996. N. pag. Print.
- Avanessian, Armen, and Suhail Malik. "The Speculative Time-Complex." *Dismagazine*.

 Dismagazine, 12 Mar. 2016. Web.
- Barad, Karen. "Queer Causation and the Ethics of Mattering." *Queering the Non/human*. By Noreen Giffney and Myra J. Hird. Aldershot, Hampshire, England: Ashgate, 2008. N. pag. Print.
- Barad, Karen. "Intra-Actions." Interview by Adam Kleinman. *Mousse Magazine* June 2012: 76-81. Print. Issue 34.
- Barad, Karen. "Queer Causation and the Ethics of Mattering." *Queering the Non/human*. By Noreen Giffney and Myra J. Hird. Aldershot, Hampshire, England: Ashgate, 2008. N. pag. Print.
- Bateson, Gregory. Steps to an Ecology of Mind; Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology. San Francisco: Chandler Pub., 1972. Print.
- Beauchemin, Molly. "Holly Herndon: "Home"" *Pitchfork*. Pitchfork Media Inc., 17 Sept. 2014. Web. 9 Oct. 2014.
- Berardi Bifo, Franco. "Cognitarian Subjectivation." *e-flux* 20 (2010): n. pag. *e-flux*. e-flux, Nov. 2010. Web. Jan. 2014.
- Berlant, Lauren. Cruel Optimism. Durham: Duke UP, 2011. Print.

- Boomkat. "Holly Herndon Chorus." Boomkat. Boomkat Ltd., Jan. 2014. Web. 9 Oct. 2014.
- boyd, danah, and Alice Marwick. *Social Privacy in Networked Publics: Teens' Attitudes, Practices, and Strategies. Danah.org.* Microsoft Research, 2011. Web.
- Boym, Svetlana. "On Diasporic Intimacy." *The Future of Nostalgia*. New York: Basic, 2001. N. pag. Print.
- Braidotti, Rosi. *The Posthuman*. N.p.: n.p., n.d. Print.
- Bratton, Benjamin, and Metahaven. "Transmediale 2014 Afterglow Keynote -- The Black Stack." Transmediale. Haus Der Kulturen Der Welt, Berlin. 31 Jan. 2014. Web. https://www.youtube.com/watch?v=3c3jXPBG-NY.
- Bratton, Benjamin. "Benjamin Bratton: Geobiopolitics and Planetary-Scale Computation:

 Sensors, Abstractors, Governors." Sonic Acts Festival The Geologic Imagination.

 Paradiso, Amsterdam. 28 Feb. 2015. Web.
- Bratton, Benjamin. "Cloud Polis and Other Integral Accidents." The Center for Design and Geopolitics UCSD, San Diego. May 2013. Web.

 https://www.youtube.com/watch?v=dGZN2QYoRO8.
- Bratton, Benjamin H. The Stack: On Software and Sovereignty. N.p.: MIT, n.d. Print.
- Bratton, Benjamin. "The Stack and the Post-human User: An Interview with Benjamin Bratton."

 Interview by Klaas Kuitenbrouwer. *Het Nieuwe Instituut*. N.p., 29 Feb. 2015. Web.
- Bratton, Benjamin. "The Black Stack." *E-flux* 53 (2014): n. pag. Mar. 2014. Web.
- Bratton, Benjamin. "Machine Vision." Interview by Mike Pepi and Marvin Jordan. *Dismagazine*.

 Dismagazine, n.d. Web.

- Bratton, Benjamin. "New Perspectives: What's Wrong with TED Talks?" TEDxSanDiego 2013 Re:Think. San Diego. 30 Dec. 2013. Web. https://www.youtube.com/watch?v=Yo5cKRmJaf0.
- Bratton, Benjamin. "The Politics of Platform Technologies." Brain Bar Budapest. Budapest. 1

 July 2015. Web. https://www.youtube.com/watch?v=aeWr70c1_mE.
- Bratton, Benjamin. "The Post-Anthropocene." Evening Lectures. European Graduate School, Saas-Fee. June 2015. Lecture.
- Bratton, Benjamin. "Some Trace Effects of the Post-Anthropocene: On Accelerationist Geopolitical Aesthetics." *Eflux* 46 (2013): n. pag. June 2013. Web.
- Bratton, Benjamin. "The Stack: Design and Geopolitics in the Age of Planetary-Scale

 Computing." Institute for the Humanities SFU, British Columbia. 9 Nov. 2015. Web.

 https://www.youtube.com/watch?v=IXan6TvMqgk.
- Brown, Mark. "Nicaraguan Invasion? Blame Google Maps." Wired. N.p., Nov. 2010. Web.
- Clark, Krissy. "The GPS Fatally Misleading Travel Companion." NPR. N.p., 26 July 2011. Web.
- Clark, N., and K. Yusoff. "Combustion and Society: A Fire-Centred History of Energy Use." *Theory, Culture & Society* 31.5 (2014): 203-26. Web.
- Corbusier, Le. Urbanisme. Paris: G. Crès & Cie., 1924. Print.
- Costello, Genevieve. "Virtual Embodiment: Beyond the Death of Pig." Editorial. *ArtSlant*. N.p., Feb. 2016. Web.
- Crutzen, Paul J., and Christian Schwägerl. "Living in the Anthropocene: Toward a New Global Ethos." Weblog post. *Yale Environment 360*. N.p., 24 Jan. 2011. Web.
- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*.

 Minneapolis: U of Minnesota, 1987. Print.

- Deleuze, Gilles. "Postscript on the Societies of Control." October 59 (1992): 3-7. Web.
- "Dictionary.com The World's Favorite Online Dictionary!" *Dictionary.com*. N.p., n.d. Web. June 2016.
- Dummy. "Holly Herndon Home." Editorial. *Dummymag.com*. Dummy, 16 Sept. 2014. Web.
- Dussel, Enrique. "Eurocentrism and Modernity (Introduction to the Frankfurt Lectures)." *The Postmodernism Debate in Latin America* (1995): 65-76. Web.
- Easterling, Keller. Extrastatecraft: The Power of Infrastructure Space. N.p.: Verso, n.d. Print.
- Elliot, Kennedy, and Terri Rupar. "Six Months of Revelations on NSA." Editorial.

 *Washington Post. com. The Washington Post, 5 June 2013. Web.
- Foucault, Michel, Michel Senellart, François Ewald, and Alessandro Fontana. *Security, Territory, Population: Lectures at the Collège De France, 1977-78.* Basingstoke:

 Palgrave Macmillan, 2007. Print.
- Franke, Anselm. "Mapping And Being Mapped. Navigation Systems, Control Environments And Cognitive Maps." Bots, Bodies, Beasts. De Brakke Grond, Amsterdam. 10 Apr. 2016.

 Lecture. Rietveld Academie.
- Fuchs, Christian, Kees Boersma, Anders Albrechtslund, and Marisol Sandoval."Introduction:

 Internet and Surveillance: *The Challenges of Web 2.0 and Social Media*. New York: Routledge, 2012. N. pag. Print.
- Gallagher, Sean. "Facebook Tests Full-scale Solar-powered Internet Drone." *Ars Technica*. N.p., 21 July 2016. Web. http://arstechnica.com/information-technology/2016/07/facebook-tests-full-scale-solar-powered-internet-drone/.

- Gellman, Barton. "Edward Snowden, after Months of NSA Revelations, Says His Mission's Accomplished." Editorial. *Washingtonpost.com*. The Washington Post, 23 Dec. 2013. Web.
- Google. "Company Google." *Company Google*. N.p., n.d. Web. June 2016.
- Guattari, Félix. *Chaosmosis: An Ethico-aesthetic Paradigm*. Bloomington: Indiana UP, 1995.

 Print.
- Guattari, Félix. "The Three Ecologies." New Formations 8 (1989): 131-47. Web.
- Haraway, Donna, Noboru Ishikawa, Scott F. Gilbert, Kenneth Olwig, Anna L. Tsing, and Nils Bubandt. "Anthropologists Are Talking About the Anthropocene." *Ethnos* 81.3 (2015): 535-64. Web.
- Heidegger, Martin. *The Fundamental Concepts of Metaphysics: World, Finitude, Solitude*.

 Bloomington: Indiana UP, 1995. Print.
- Hill, David W. "Jean-François Lyotard and the Inhumanity of Internet Surveillance." *Internet and Surveillance: The Challenges of Web 2.0 and Social Media*. Ed. Christian Fuchs, Kees Boersma, Anders Albrechtslund, and Marisol Sandoval. New York: Routledge, 2012. N. pag. Print.
- Holly Herndon Defends Laptop Musicians- Pitchfork Weekly. Dir. PitchforkTV. Perf. Holly Herndon. Pitchfork, 5 Dec. 2012. Web.
- Holly Herndon Home [Official Video]. Dir. Metahaven. Perf. Holly Herndon. YouTube. RVNG Intl., 16 Sept. 2014. Web. 9 Oct. 2014.
- Holly, Herndon. "Home." *Holly Herndon*. N.p., 2014. Web. 9 Oct. 2014.RVNG Intl. "Holly Herndon Home." *RVNG Intl*. N.p., 16 Oct. 2014. Web. 9 Oct. 2014.

- "Holly Herndon Interview: "Computers Compute."." Interview by Dummy.

 *Dummymag.com.`Dummy, 23 Nov. 2012. Web.
- Holly Herndon Parts 1 & 2. Dir. Chromavision. Perf. Holly Herndon. Dummymag.com.Dummy and Chromavision, 13 Aug. 2013. Web.
- "Holodeck." Wikipedia. Wikimedia Foundation, n.d. Web. 29 July 2016.
- Horning, Rob. "Affective Privacy and Surveillance." Weblog post. *Marginal Utility*. The New Inquiry, 30 Apr. 2013. Web.
- Horning, Rob. "Google Alert for the Soul." Editorial. *The New Inquiry*. The New Inquiry, 12 Apr. 2013. Web.
- Horning, Rob. "Selfies without the Self." Weblog post. *Marginal Utility*. The New Inquiry, 23 Nov. 2014. Web.
- Isermann, Stephan. Pig Simulator. Computer software. Www.pigsimulator.com. N.p., 2016.
 Web. 2016.
- Kirby, Vicki. Quantum Anthropologies: Life at Large. Durham: Duke UP, 2011. Print.
- Kittler, Friedrich A., Geoffrey Winthrop-Young, and Michael Wutz. *Gramophone, Film, Typewriter*. Stanford, CA: Stanford UP, 1999. Print.
- Luisetti, Federico, John Pickles, and Wilson Kaiser. *The Anomie of the Earth: Philosophy, Politics, and Autonomy in Europe and the Americas.* N.p.: n.p., n.d. Print.
- Lyon, David. Surveillance After Snowden. N.p.: n.p., 2015. Kindle.
- Lyon, D. "Surveillance, Snowden, and Big Data: Capacities, Consequences, Critique." *Big Data & Society* 1.2 (2014): n. pag. Web.
- Lyon, David. "Facing the Future: Seeking Ethics for Everyday Surveillance." *Ethics and Information Technology* 3 (2001): 171-80. Web.

- Lyotard, Jean-François. *The Inhuman: Reflections on Time*. Stanford, CA: Stanford UP, 1991.

 Print.
- MacCormack, Patricia. *Posthuman Ethics: Embodiment and Cultural Theory*. Farnham, Surrey, England: Ashgate, 2012. Print.
- Marx, Gary T. "What's New about the "new Surveillance"?: Classifying for Change and Continuity." *Knowledge, Technology & Policy Know Techn Pol* 17.1 (2004): 18-37. Web.
- Mathiesen, T. "The Viewer Society: Michel Foucault's `Panopticon' Revisited." *Theoretical Criminology* 1.2 (1997): 215-34. Web.
- Massumi, Brian. "The Autonomy of Affect." Cultural Critique 31 (1995): 83. Web.
- Mattern, Shannon Christine. *Deep Mapping the Media City*. N.p.: U OF MINNESOTA, 2015.

 Print.
- Mattern, Shannon. "Infrastructural Tourism." Infrastructural Tourism ASCA Masterclass. Singel Library UvA, Amsterdam. 13 May 2016. Lecture.
- Mattern, Shannon. "Infrastructural Tourism." Places (2013): n. pag. Web.
- McHugh, Gene. *Post Internet: Notes on the Internet and Art, 12.29.09 09.05.10.* Brescia,: LINK Editions, 2011. Print.
- Mignolo, W. D. "Citizenship, Knowledge, and the Limits of Humanity." *American Literary History* 18.2 (2006): 312-31. Web.
- Mignolo, W. D. "The Geopolitics of Knowledge and the Colonial Difference." *South Atlantic Quarterly* 101.1 (2002): 57-96. Web.
- Mignolo, Walter. *The Darker Side of Western Modernity: Global Futures, Decolonial Options*.

 Durham: Duke UP, 2011. Print.

- Mignolo, Walter. "Delinking." *Cultural Studies RCUS Cultural Stud.* 21.2 (2007): 449-514. Web.
- Moore, Jason W. "The Capitalocene Part II: Abstract Social Nature and the Limits to Capital." (n.d.): n. pag. Web. June 2014.
- Newman, Saul. "Politics in the Age of Control." *Deleuze and New Technology*. By Mark Poster and David Savat. Edinburgh: Edinburgh UP, 2009. N. pag. Print.
- Povinelli, Elizabeth A. "The Rhetorics of Recognition in Geontopower." *Philosophy & Rhetoric* 48.4 (2015): 428. Web.
- Povinelli, Elizabeth A. "The Three Figures of Geontology." *Geontologies: A Requiem to Late Liberalism*. N.p.: n.p., n.d. N. pag. Print.
- Povinelli, Elizabeth. "Interview With Elizabeth Povinelli By Mat Coleman And Kathryn Yusoff." Interview by Kathryn Yusoff and Mat Coleman. *Space & Society* Mar. 2014: n. pag. Web. https://societyandspace.com/material/interviews/interview-with-elizabeth-povinelli-by-mat-coleman-and-kathryn-yusoff/.
- Régine Debatty, Interview with Marisa Olson. *We-make-money-not-art*. N.p., 28 Mar. 2008. Web. 29 Nov. 2014.http://we-make.money-not-art.com/.
- Rosello, Mireille. "Rudimentariness as Home." *A Companion to Comparative Literature*Behdad/A Companion to Comparative Literature(2011): 312-31. Web.
- Schmitt, Carl, and Gary L. Ulmen. *The Nomos of the Earth in the International Law of the Jus Publicum Europaeum*. New York, NY: Telos, 2003. Print.
- Srnicek, Nick, and Alex Williams. *Inventing the Future: Postcapitalism and a Worldwithout Work*. N.p.: n.p., n.d. Print.

- Steffen, W., J. Grinevald, P. Crutzen, and J. Mcneill. "The Anthropocene: Conceptual and Historical Perspectives." *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369.1938 (2011): 842-67. Web.
- Steffen, Will, Paul J. Crutzen, and John R. Mcneill. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature." *AMBIO: A Journal of the Human Environment* 36.8 (2007): 614-21. Web.
- Steyerl, Hito. "Politics of Post-Representation." Interview by Marvin Jordan. *DIS* 2014: n. pag.Web. Jan. 2015.
- Steyerl, Hito. "The Spam of the Earth: Withdrawal from Representation." *e-flux* 32 (2012): n. pag. *e-flux.com*. e-flux, Feb. 2012. Web. 30 Nov. 2014.
- Unpatentable Multi-touch Aerobics. By Liat Berdugo and Phoebe Osborne. Haus Der Kulturen Der Welt, Berlin. 4 Feb. 2016. Performance. transmediale/conversationpiece
- U.S. Strategic Command. The Cyber Warfare Lexicon: A Language To Support The

 Development, Testing, Planning, And Employment Of Cyber Weapons And Other Modern

 Warfare Capabilities. N.p.: n.p., 2009. Version 1.7.6. Public Intellince. Web.
- Van Dijk, José. "Datafication, Dataism and Dataveillance: Big Data between Scientific Paradigm and Ideology." *Surveillance & Society* 12.2 (2014): n. pag. Web.
- Vickers, Ben, Sarah T. Gold, Ola Möller, and Carina Namih. "Exploring Planetary Scale Design." *2016.transmediale.de*. Transmediale, 2 Feb. 2016. Web.
- Vierkant, Artie. "The Image Object Post-internet." (n.d.): n. pag. *Art Lurker*. 2010. Web. 30 Nov. 2014.
- Wark, Mckenzie. "What the Performative Can't Perform." Web log post. *Public Seminar*. N.p., June 2016. Web.

Weerkamp, Wouter, and Maarten De Rijke. "Activity Prediction: A Twitter-based Exploration."
SIGIR 2012 Workshop on Time-aware Information Access: #TAIA2012 (2012): n. pag.

UvA-DARE. Web. http://dare.uva.nl/record/1/381106>. Microsoft Research. conference contribution. Faculty of Science, Informatics Institute (II), UvA.

Wikipedia. "Edward Snowden." Wikipedia. Wikimedia Foundation, 2013. Web. 20 Jan. 2015.

Young, Eugene B. The Deleuze and Guattari Dictionary. N.p.: n.p., n.d. Print.

Yusoff, K. "Anthropogenesis: Origins and Endings in the Anthropocene." *Theory, Culture & Society* 33.2 (2015): 3-28. Web.