

Interfacing with Power: Orders and Computers¹

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Abstract

Any interest in the relationship between today's popular culture and images or visibility cannot escape the sustained significance of images delivered by various forms of graphical user interfaces. Since these interfaces are not only tools or even mere preparations of presentations but meaningful presentations themselves, this essay proposes to analyze them as operative images. By delivering a sort of signs, that combine iconic as well as symbolic and indexical qualities, operative images sketch out and perform interrelated concepts of both: the user and the computer/the digital.

From this follows the importance of analyzing popular interfaces as a special kind of staging – as a *mise-en-scène* 'depresenting' the power and work of the computer and interrelating with the promises/fears shaping the myth of 'the digital' since the late 1980s. Struggling for a critical position against the mythical term 'digital', I have proposed the neologism 'digitalicity' [*Digitalizität*]. I will argue that establishing the analysis of 'interface-*mise-en-scène*' as something like a vital part of today's media studies is largely and indeed long overdue. The graphical user interface of YouTube will be taken here as a case study. It will be discussed as a particular performance of the 'aesthetics of regulation' [*Ästhetik der Verfügung*], that informs the aesthetical appearance of computers, allowing and framing our handling with them. Characterized by a dialectic motion, the aesthetics of regulation raises questions of power: interfaces empower users to regulate and condemn them to be regulated at the same time.

If the present is to be understood as what is frequently and interdisciplinary called 'our digital era',² the triumph of the computer is nominally all-encompassing

¹ This article further elaborates a paper presented at the Media Archaeology Section of the XV MAGIS — Gorizia International Spring School in April 2017, devoted to explore the interrelationships between the machinic networks and the processes of subjectivation inherently to the 'There is No Turning Back. Re-thinking the Postmodern' general project.

² Cathy N. Davidson and Danica Savonick, 'Digital Humanities: The Role of Interdisciplinary

and decisive. That seems to leave ‘us’ with just one task: deal with it. This essay is interested in the various conditions and implications of this highly charged issue: dealing with computers. It addresses the real and imaginary, the well-prepared and consequential relationships between humans and computers, as applied in computers and implemented through many-faceted interfaces. This essay combines several aspects of a research project that started in 2012 and led to the published volume *Machtzeichen. Anordnungen des Computers*.³ The latter presents the computer as a unique power machine, studying its interface politics and in particular its ordinary manifestations: graphical user interfaces, that build powerful models but have been underestimated as tools for a long time. Its ambition is to pose a series of questions on interface politics as an important part of today’s digitality.

Of course, graphical user interfaces describe only one of the multilayered aspects that characterize interfaces in digital computing. These ‘symbolic handles’, as Florian Cramer and Matthew Fuller have put it, ‘which [...] make software accessible to users’ depend on four other interface aspects: ‘[h]ardware that connects users to hardware’, ‘[s]oftware, or hardware-embedded logic, that connects hardware to software’, as well as ‘[s]pecifications and protocols that determine relations between software and software’.⁴ Moreover today’s interface culture is shaped significantly by several non-graphical forms of interface with computers, such as gestures, voices, and embedded interfaces.

The ongoing development of the increasingly concealed dissemination, interconnection and implementation of computers — described for instance by Mark B. N. Hansen’s view on ‘twenty-first-century media’⁵ — cannot be investigated without also accounting for interface processes. Interfaces induce the various procedures of connectivity and transferences, marking the current presence of computers — so often described as being ubiquitous. It is important to remember, that the term ‘interface’, introduced by the physicists James and William Thomson in the late-nineteenth century, was originally used to describe the transmission of energy.⁶ With this in mind, the question of the pursued

Humanities in the Information Age’, in *The Oxford Handbook of Interdisciplinarity*, ed. by Robert Frodeman, Julie Thompson Klein and Robert Carlos Dos Santos Pacheco (Oxford: Oxford University Press, 2017), pp. 159–72 (p. 159); Nicholas Rombes, *Cinema in the Digital Age* (New York: Columbia University Press, 2008), p. 4; William A. Cohn, ‘Led Astray: Legal and Moral Blowback from the Global War on Terror’, in *Assessing the War on Terror: Western and Middle Eastern Perspectives*, ed. by Charles Webel and Mark Tomass (New York: Routledge, 2017), pp. 163–95 (p. 173).

³ Jan Distelmeyer, *Machtzeichen. Anordnungen des Computers* (Berlin: Bertz + Fischer, 2017).

⁴ Florian Cramer and Matthew Fuller, ‘Interface’, in *Software Studies: A Lexicon*, ed. by Matthew Fuller (Cambridge, MA: MIT Press, 2008), pp. 149–52 (p. 149).

⁵ Mark B. N. Hansen ‘Ubiquitous Sensation: Towards an Atmospheric, Impersonal and Microtemporal Media’, in *Throughout. Art and Culture Emerging with Ubiquitous Computing*, ed. by Ulrik Ekman (Cambridge, MA: MIT Press, 2013), pp. 63–88 (p. 73).

⁶ See Pater Schaefer, ‘Interface: History of a Concept, 1868-1888’, in *The Long History of New Media: Technology, Historiography, and Contextualizing Newness*, ed. by David W. Park, Nicholas

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ubiquity and networked embeddedness of computing, relying in essence on the transportation of signals and the transmission of electricity, is a question of interfaces to an even greater extent. The term interface helps to describe the ‘interior telegraphy’⁷ of the computer as well as all forms of its networks, its relations to us and its incorporation.

Mark B. N. Hansen’s description of the experiential shift in *twenty-first-century media* depicts the complex diversity of interacting interface politics:

Thus, well before we even begin to use our smart phones in active and passive ways, the physical devices we carry with us interface in complex ways with cell towers and satellite networks; and preparatory to our using our digital devices or our laptops to communicate or to acquire information, the latter engage in complex connections with wireless routers and network hosts.⁸

Though these devices are constantly (and ‘calmly’⁹) interfacing with networks and servers, we also use our smart phones in *active* ways: this is the reason for which we buy and update them. Even today, graphical user interfaces are so obviously omnipresent, that this manifestation of software still is, to quote Cramer and Fuller, ‘often mistaken in media studies for “interface” as a whole’.¹⁰ Nevertheless, media studies analyses of common user interfaces remain noticeably infrequent.¹¹ This absence ought to be addressed, in order to elaborate an understanding of our interrelationship with all sorts of computers, computerized media, and computerized things.

In the second half of the twentieth century, film studies and film analysis became institutionalized in European universities. Given the growing relevance of computing and graphical user interfaces in the last 35 years, it is high time to establish the discipline of interface studies and its analysis in the humanities. These analyses are necessary because interfaces define today’s reality in manifold

W Jankowski and Steve Jones (New York: P. Lang, 2011), pp. 163–75; Branden Hookway, *Interfaces* (Cambridge, MA: MIT Press, 2014), p. 59.

⁷ Hartmut Winkler, *Prozessieren. Die dritte, vernachlässigte Medienfunktion* (Paderborn: Wilhelm Fink, 2015), p. 294.

⁸ Hansen, *Feed Forward. On the Future of Twenty-First-Century-Media* (Chicago: University of Chicago Press, 2015), p. 62.

⁹ Florian Sprenger, ‘Die Vergangenheit der Zukunft. Kommentar zu “Das kommende Zeitalter der Calm Technology”’, in *Internet der Dinge. Über smarte Objekte, intelligente Umgebungen und die technische Durchdringung der Welt*, ed. by Florian Sprenger and Christoph Engemann (Bielefeld: Transcript 2015), pp. 143–68.

¹⁰ Cramer and Fuller, ‘Interface’, p. 149.

¹¹ For exceptions see *Interface Politics*, ed. by Teresa Martínez Figuerola and Jorge Luis Marzo (Barcelona: Bau, 2016); *Interface Critique*, ed. by Florian Hadler and Joachim Haupt (Berlin: Kulturverlag Kadmos, 2016); Margarete Pratschke, ‘Interacting with Images. Toward a History of the Digital Image: The Case of Graphical User Interfaces’, in *The Technical Image: A History of Styles in Scientific Imagery*, ed. by Horst Bredekamp, Vera Dünkel and Birgit Schneider (Chicago: University of Chicago Press, 2015), pp. 48–57; *Interface Criticism: Aesthetics Beyond Buttons*, ed. by Christian Ulrik Andersen and Søren Pold (Aarhus: Aarhus University Press, 2011).

ways. Understood as the complex of various processes of connectivity and conduction, interfaces do carry — on all levels of its acceptance — the worldwide computerization, whereby graphical user interfaces create the equivalents of blockbusters in today's visual politics. The fact that they function so differently to cinematic and televisual appearances and inevitably rely on other interface processes between hard- and software makes interface analysis and critique so urgent. One example I would like to comment on here is the YouTube interface: those immensely popular conditions with which we organize and encounter the vast array of videos on the second most popular website worldwide.¹² But before that I would like to outline my approach a little more.

Depresentation by Operative Images

The interdependency between aesthetics and dispositifs signals the need for attention to the special status of these images and signs, which, to quote a *Windows 10* commercial, 'help you do your thing' (2015). Of course, these so called 'computer icons' could likewise be symbolic, and depend merely on the specific interface design. But regardless of the potentially iconic or symbolic character of these images and signs, all these clickable or touchable appearances correspond to Peirce's idea of indices. These images and signs must have a physical relation to the (variously) presented processes of computing, to the 'interior telegraphy'¹³ of the computer; they 'show something about things, on account of their being physically connected with them.'¹⁴ Were this not the case, they simply would not work.

Graphical user interfaces visualize, in a special way, what the computer offers to perform, albeit without actually showing what is happening 'inside' the machines. 'Software, or perhaps more precisely OS', as Wendy Chun has stated, 'offer us an imaginary relationship to our hardware: they do not represent the motherboard or other electronic devices but rather desktops, files, and recycling bins.'¹⁵ This is obviously true, but at the same time this relationship, deprented by symbolic or iconic signs, offers not only an *imaginary relationship* to the working hardware of the computer, such as the motherboard. Simultaneously these clickable or touchable signs are electronically linked to the inner processes of the machine, to its interior telegraphy, where the flow of electronic signals connects, among many others, the motherboard and the indexical signs of the graphical user interface. We click or touch them in order to initiate the promised,

¹² See <<http://www.alexa.com/topsites>> [accessed 23 June 2017].

¹³ See Winkler, *Prozessieren*, p. 294.

¹⁴ Charles S. Peirce, 'What Is a Sign', in *The Essential Peirce: Selected Philosophical Writings (1893-1913)*, ed. by The Peirce Edition Project, 2 vols (Bloomington: Indiana University Press, 1998), ii, pp. 4–10 (p. 5).

¹⁵ Wendy Hui Kyong Chun, *Control and Freedom: Power and Paranoia in the Age of Fiber Optics* (Cambridge, MA, MIT Press, 2006), p. 20.

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hidden algorithmic processes; precisely for this reason Frieder Nake calls them ‘algorithmic images’.¹⁶

The contradictory character of these images and signs has led Marianne van den Boomen to the very fruitful term of ‘derepresentation’. They present what *we* can do; they do not (re)present the ‘procedural complexity’ and the multitude of attached requirements and consequences:

[T]he icons on our desktops do their work by representing an ontologized entity, while derepresenting the processual and material complexity involved. This is the way icons manage computer complexity, this is the task we as users (in tacit conjunction with designers) have delegated to them.¹⁷

To address this special quality of the ‘symbolic handles’,¹⁸ I have defined them as ‘operative images’, adopting a term introduced by Harun Farocki to describe the production of images by machines for machines.¹⁹ The term ‘operative image’ or ‘operational image’ is driven by an interest in processes: not processes that *are represented by* such images themselves, but rather the processes to which operative images contribute and are themselves a part of. The adjective *operative* is thus used to indicate less the existence of these images *per se* nor their opposition to a potential beholder, than their presence as components of electronic technical operations. With this in mind, as Farocki has noted, these images are made for ‘operative purposes and not for edification or instruction’.²⁰

This last point is crucial, and it marks a productive difference between Farocki’s concept and my appropriation of it. Whereas the operative images of the interface-*mise-en-scène* may not be made *for edification or instruction* in a classical sense, they of course do (and have to) instruct the so-called ‘user’ on what could be done. What they instruct, and are a part of through derepresentation, is a form of knowledge of computers, of their usage and of us — an ‘implicit knowledge’²¹ that Wendy Chun has labelled ‘implicit memory’.²²

Operative images as derepresentations of computer labour are, in my opinion, parts and thresholds of mutually connected operations — that is *interface operations* within the meaning of the multilayered aspects of the term interface — and four in particular are as follows:

¹⁶ Frieder Nake, ‘The Semiotics Engine: Notes on the History of Algorithmic Images in Europe’, *Art Journal*, 68.1 (2009), 76-89.

¹⁷ Marianne van den Boomen, *Transcoding the Digital. How Metaphors Matter in New Media* (Amsterdam: Institute of Network Cultures, 2014), p. 36.

¹⁸ Cramer and Fuller ‘Interface’, p. 149.

¹⁹ Distelmeyer, *Machtzeichen*, pp. 92–98.

²⁰ Harun Farocki, ‘Quereinfluss / Weiche Montage’, in *Zeitsprünge. Wie Filme Geschichte(n) erzählen*, ed. by Christine Ruffert and others (Berlin: Bertz, 2004), pp. 57–61 (p. 61).

²¹ See *Medien Interfaces und implizites Wissen*, ed. by Christoph Ernst and Jens Schröter, *Navigationen – Zeitschrift für Medien und Kulturwissenschaften*, 17.2 (2017).

²² Chun, *Updating to Remain the Same: Habitual New Media* (Cambridge, MA: MIT Press, 2016), pp. 87–88.

1. Operations of the various interrelations between hardware and software, that have these ‘general purpose machines’ fulfil their tasks;
2. Operations of the correlation of several computers, leading to further co-action between hardware and software through protocol-driven networks;
3. Operations of the connection and communication between computers and forms of interconnected materiality that are not computers — like, for instance, human bodies or technical artefacts, thus creating problems of surveillance and cybernetization of beings and (an internet of) things under programmed control;
4. Operations of ‘us’ dealing with ‘them’, i.e. handling and dealing with computers, and hence operations within the meaning of technical, physical and cognitive processes, including questions regarding the links between software and ideology raised by Wendy Chun²³ and Alexander Galloway,²⁴ as well as Cynthia and Richard Selfe.²⁵

Let me highlight here just two aspects of the last category. The first aspect relates to the indexicality of these images, that is, confronting us with one of the most (if not *the* most) thought-provoking characteristic of computers, computer-based media, and computer-based things: their programmability. Graphical user interfaces constantly propose ideas and representations not only of the computer, rather ‘[i]nterfaces and operating systems produce “users” — one and all.’²⁶ And since all our computer use has to be envisaged and enabled by programming, computer interfaces always empower users to regulate, while nonetheless forcing them to be regulated at the same time. Hence — and this is my central thesis — the representing interface-*mise-en-scène* shapes the aesthetical appearance of the computer as an *aesthetics of regulation* [*Ästhetik der Verfügung*].²⁷

This aesthetics of regulation is marked by a specific power structure: actively regulating users are being regulated in a system, in which they have to play by the default rules and with the provided tools and prerequisites. However, this is not one-way. Given that every computer operation relies on programs, all programmed functions, regulations, barriers, and pre-settings are principally alterable and expandable by users or hackers. Bearing in mind this processuality of the aesthetics of regulation, the act of dealing with computers becomes a power struggle, thus triggering political issues.

The second aspect of operations relating to the human use of and interaction with computers relates to knowledge, which informs that interaction. Criticized by various media scholars,²⁸ the mythical term ‘digital’ has become an extremely

²³ Chun, *Programmed Visions: Software and Memory* (Cambridge, MA: MIT Press, 2013).

²⁴ Alexander Galloway, *The Interface Effect* (Cambridge: Polity, 2012).

²⁵ Cynthia L. Selfe and Richard J. Selfe, ‘The Politics of the Interface: Power and Its Exercise in Electronic Contact Zones’, *College Composition and Communication*, 45.4 (1994), 480–504.

²⁶ Chun, *Programmed Visions*, pp. 67–68.

²⁷ See Distelmeyer, *Machtzeichen*, pp. 65–126.

²⁸ See for instance Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001); Chun, *Control and Freedom*.

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powerful buzzword and sales argument since at least the early 1990s. To define ‘the digital’ as a myth, and to bear in mind the problems of coping with mythical terms as illustrated by Roland Barthes, another not yet mythical term was introduced some years ago: the neologism ‘digitalicity’.²⁹ Following Barthes’ mythology, the term digitalicity offers the opportunity, to discuss popular ideas and productions of ‘the digital’, without automatically reproducing the mythical quality of this term — instead ‘digitalicity’ seeks to indicate and enable a critical discussion of these mythical aspects.

In Western-European and US-American discourse, from the early 1990s digitalicity has been shaped to a special degree by the promises (and fears) of interactivity, flexibility, control, freedom and empowerment — with a common celebration of the victory of digital media’s acclaimed elasticity, as opposed to rigid, inflexible, passive and hierarchy-based predecessors. In the sustained debates about NSA and CIA scandals, and the fundamental criticism of internet-regulation, these promises have since been somewhat re-evaluated. But even these critical discussions often repeat the old myths about empowerment and freedom in something like an act of grief.³⁰ I would like to quote just one very influential, quintessential, protagonist of digitalicity from the 1990s, Nicholas Negroponte: ‘[M]ore than anything, my optimism comes from the empowering nature of being digital. The access, the mobility, and the ability to effect change are what will make the future so different from the present.’³¹

Understanding digitalicity as one important discursive aspect of computers, computer-based media, and the highly praised *fourth industrial revolution*, the question thus arises of how a given interface-mise-en-scène corresponds to the promises and fears that have shaped digitalicity. With this question in mind, I would like to turn now to YouTube as an example.

YouTube: Operating Data

If you enter the URL www.youtube.com or follow a corresponding link, bookmark or presetting, the front page of YouTube deploys several selectable, operative images, representing potentially upcoming video events.³² Even without accessing a personal account, the personalizing ‘you’ of YouTube is taken seriously from the start: thanks to recorded, evaluated, and conjugated former visits and interactions with YouTube, every front page provides a customized

²⁹ See Distelmeyer, *Das flexible Kino. Ästhetik und Dispositiv der DVD & Blu-ray* (Berlin: Bertz + Fischer, 2012) and Tom Holert, ‘Globodigitalität. Über die Zumutung des Evidenten’, Lecture at the Kunsthochschule für Medien Köln, 4 June 2002, <www.khm.de/kmw/kit/pdf/holert.pdf> [accessed 23 June 2017].

³⁰ See Distelmeyer, *Machtzeichen*, pp. 98–126.

³¹ Nicholas Negroponte, *Being Digital* (New York: Knopf, 1995), p. 230.

³² I describe the YouTube-interface performed by a browser — the interface designed for the YouTube-app differs in details.

performance. This customization is ‘our’ outcome or yield of our work within the YouTube interface, which Till A. Heilmann has described as ‘data labour’ in current ‘capture capitalism’.³³

If you make a selection, the former derepresented video begins in a frame, where the video is a working as an operative (moving) image in its own right. If one clicks into the running video, it pauses, until another click on the now frozen operative image starts the movement and sound again. A double-click leads to the full screen mode, another double-click brings back the YouTube website interface. Here the expandable video frame is escorted by another arrangement of selectable operative images to the right of the frame. This arrangement could be described as a remaining gesture of wealth and richness — a power of control related to a variety of derepresented audiovisual material classified by taglines, genres, categories, and other visualized metadata. It maintains the empowerment gesture and the *ability to effect change*: even though I have already chosen a video, this choice is accompanied by a selection of other to-be-selected material.

This choice-empowerment relies heavily on a mode of presentation that dominated and still dominates more than a few interface enactments. This tradition presents the aesthetics of regulation as an ‘order of selectivity’,³⁴ offering options and reassuring usability as a freedom of choice in the form of menus, buttons, lists and the like. This ‘freedom as control’³⁵ is a question of strictly defined and prepared choices.

We encounter this traditional (and surprisingly long-lasting) WIMP cosmos for instance when using popular online shops like iTunes or Amazon, the grid-apposition of apps on multi-touch devices like Google Nexus, Samsung Galaxy, the iPhone and the iPad, on the ‘active app’ and ‘ideal app’ arrangements on the Fairphone 2, the ‘Launchpad’ from Mac OS X ‘Lion’, the ‘tiles’ from Windows 8, and the Linux-Interface GNOME 3 with its ‘Activities Overview’ described by the GNOME Project as ‘an easy way to access all your basic tasks. A press of a button is all it takes to view your open windows, launch applications or check if you have new messages.’³⁶

Considering our familiarity with this widespread freedom as prepared choice-control, other common aesthetics of regulation could easily be overlooked. Computer games in particular challenge and play with this dominant overview order. Examples can be found in different sorts of games, perhaps the most obvious and long lasting are first-person shooters like for instance the popular *Rainbow Six: Siege* (Ubisoft, 2015), where crucial objective is, of course, not to know but to explore, to find out what actually is offered and waiting around the corner.

³³ Till A. Heilmann, ‘Datenarbeit im “Capture”-Kapitalismus. Zur Ausweitung der Verwertungszone im Zeitalter informatischer Überwachung’, *Zeitschrift für Medienwissenschaft*, 2.13 (2015), 35–47.

³⁴ See Distelmeyer, ‘Objektwahl. Internetpornographie und personalisierte Ermächtigung’, in *Explizit! Neue Perspektiven zu Pornografie und Gesellschaft*, ed. by Lisa Andergassen et al. (Berlin: Bertz + Fischer, 2014), pp. 92–102.

³⁵ See Chun, *Control and Freedom*.

³⁶ See <<https://www.gnome.org/gnome-3/>> [accessed 23 June 2017].

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Nevertheless, this exploring mode of aesthetics is quite often supplemented by another order of selectivity, showing available weapons, equipment, maps and the like.

Hence, an order of selectivity, invoking our wealth of choice by menus and similar arrangements, is not in the least determined by technology. Instead this order of selectivity is a cultural construction and just one still dominant mode of regulation aesthetics. It presents the computer as an empowering decision-making device and shapes YouTube to a great extent.

The aforementioned flexibility of the video appearance in the YouTube-frame is increased by the possibility to transform the video's appearance with regard to language, subtitles and resolution, all potentially adjusted using the operative image of a gearwheel on the bottom right of the video frame. Furthermore, from 2012 YouTube videos have been presented in a paradigmatic way: when the cursor moves the progress bar, the video blurs and a collection of somehow representative single frames pop up as a preview, offering the viewer the possibility to navigate through the whole video by means of this frame collection.

In this way the video does not play, but is displayed as an area, as a visible set of not-yet operative images. This YouTube approach to the order of selectivity raises fundamental questions regarding moving images, elucidated by an even more obvious and radical change in programming that altered the look of YouTube, shortly after it has been sold to Google at the end of 2006. In the early days of the video-hosting website, immediately after a video has been played it continued to fill the entire video frame with one somehow representative image, ready to start anew. From 2007, however, when a video concludes it is replaced with a collection of thumbnails of selectable videos: a new grid order of choice in exactly the frame that was supposedly reserved for moving images. This programmatic displacement becomes especially picturesque, if the video is watched in full screen mode. Regarding this familiar *mise-en-scène* — this grid of selectivity — Geert Lovink's summary of YouTube from 2008 appears loaded with a new intention: 'We no longer watch films or TV; we watch databases.'³⁷

Instead of the video's appearance (that is: the chosen succession and process of moving images and sounds as a syntagmatic gesture), now the exact opposite takes over: the invitation to select from a series of replaceable images is a paradigmatic gesture, one that consists of operative images. Thus YouTube's additional service — an additional transformation of moving images into operative images — is demonstrated, once more insistently. Hence, this augmentation engenders the semiotic shift, whereby the potential indexicality of the de-presented videos is no longer only generated by a potential trace to pre-filmic reality (not to mention the value of YouTube's 'authenticity'³⁸), but also by the trace to the interior telegraphy of

³⁷ Geert Lovink, 'The Art of Watching Databases. Introduction to the Video Vortex Reader', in *Video Vortex Reader: Responses to YouTube*, ed. by Geert Lovink and Sabine Niederer (Amsterdam: Institute of Network Cultures, 2008), pp. 9–13 (p. 9).

³⁸ See Matt Gielen, *Ten Commandments of YouTube* (Westport: Frederator Books, 2016).

the networked computer. Bearing in mind the second type of interface operations, the indexicality of collected videos is based not only on the fact that they ‘all refer causally and physically to a set of software instructions to be executed’,³⁹ but also their operative trace to the processing of recorded and algorithmically evaluated data labour, with which these appearances are causally and physically linked. The grid collection of recommended videos — that is, the idea and promise of this reference — refers to the recorded viewing and search history. Precisely because these operative images are therefore both representing and (inter)acting, these aesthetic questions are also and unavoidable political ones.

With this in mind, a displacement, or more precisely, a diversification of film/video aesthetics by regulation aesthetics can be witnessed here. The logic of the filmic syntagm becomes involved in the paradigmatic logic of digitality and its performed freedom as choice-control. In this way, I would like to add, another relationship could be conceived: the connection of this exhibited flexibility, a crucial promise of digitality, with the sociocultural ideal and pressure of flexibility in today’s formations of flexible and communicative capitalism. Jodi Dean and Franco Berardi describe ‘a key contradiction of communicative capitalism’: if you ‘want to survive you have to be competitive and if you want to be competitive you must be connected, receive and process continuously an immense and growing mass of data.’⁴⁰

The preliminary and replaceability of the selected video can be interpreted as the visualization of and perhaps familiarization with what Dean calls ‘the competitive intensity of neoliberal capitalism’.⁴¹ This aesthetic fate of chosen videos may be understood as a reminder of the competitive pressure, analysed by Boltanski and Chiapello,⁴² and as an echo of Gilles Deleuze’s ‘societies of control’.⁴³ Even these, which may once have been selected among the many, have always to face new competition, immediately after the very selection. Ongoing flexibility and changeability is to learn and to become reliant.

I would like to conclude with the observation that even this well-established, paradigmatic logic of YouTube is subject to changes. The installation of the ‘Autoplay’ mode, switched on by default from 2015, forms a counterpart to the order of selectivity: ‘The Autoplay feature on YouTube makes it easier to decide what to watch next. After you watch a YouTube video, we’ll automatically play another related video based on your viewing history.’⁴⁴ With its ‘Autoplay’,

³⁹ Marianne van den Boomen, ‘Interfacing by Material Metaphors: How Your Mailbox May Fool You’, in *Digital Material: Tracing New Media in Everyday Life and Technology*, ed. by Marianne van den Boomen et al. (Amsterdam: Amsterdam University Press, 2009), pp. 253–64 (p. 257).

⁴⁰ Jodi Dean, ‘The Limits of Communication’, *Guernica*, 1 October 2012, <www.guernicamag.com/features/the-limits-of-communication/> [accessed 23 June 2017].

⁴¹ *Ibidem*.

⁴² See Luc Boltanski and Ève Chiapello, *The New Spirit of Capitalism* (New York: Verso, 2007).

⁴³ See Gilles Deleuze, ‘Postscript on the Societies of Control’, *October*, 59 (1992), 3–7.

⁴⁴ See <<https://support.google.com/youtube/answer/6327615?co=GENIE.Platform%3DAndroid&hl=en>> [accessed 23 June 2017].

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YouTube creates a new emphasis of ‘flow’ that can be discussed from various perspectives: for instance, both in terms of YouTube’s acclaimed reputation as ‘the new television’⁴⁵ and in terms of the ‘data stream’. Lev Manovich has described the latter as the new cultural form of presenting data in web-based social network services, heightening ‘the experience of the “data present”’.⁴⁶ Another form of flexibility is performed here — an ongoing flow of change that seems to be no longer under our (prepared and advised) control, but rather controlled by information processing, as a showcase for ‘algorithmic governmentality’.⁴⁷

This deserves a closer study. My observations here are intended as starting points for an interface analysis that — in the case of YouTube — account for the complex procedures enabling and pursuing the options of uploading, searching, watching/hearing, ‘sharing’, classifying, valuing, and exposing data in the form of videos, comments, clicks, and all sorts of metadata.⁴⁸ In the end, all of the options depend on processes that challenge new attention for intertwined interface operations.

⁴⁵ Jonathan Ford, ‘Is YouTube the New Television?’, *Financial Times*, 24 November 2014.

⁴⁶ Manovich, ‘Data Stream, Database, Timeline’, *Software Studies Initiative*, 27 October 2012, <<http://lab.softwarestudies.com/2012/10/data-stream-database-timeline-new.html>> [accessed 23 June 2017].

⁴⁷ Antoinette Rouvroy and Bernard Stiegler, ‘The Digital Regime of Truth: From the Algorithmic Governmentality to a New Rule of Law’, *La Deleuziana – Online Journal of Philosophy*, 3 (2016), <http://www.ladeleuziana.org/wp-content/uploads/2016/12/Rouvroy-Stiegler_eng.pdf> [accessed 23 June 2017].

⁴⁸ In the case of YouTube interface analyses overlap with ‘platform studies’ insofar as ‘platform’ is understood as ‘a broad enough category to capture a number of distinct phenomena, such as social networking, the shift from desktop to tablet computing, smart phone and “app”-based interfaces as well as the increasing dominance of centralised cloud-based computing’. Joss Hands, ‘Introduction: Politics, Power and “Platformivity”’, *Culture Machine*, 14 (2013), 1–9 (p. 1).