Searching, Sorting, and Managing Glut: Media Software Inscription Strategies for 'Being Creative'

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Introduction: Inscribing creative figures

Critical scholarship in studies of cultural production claims that creativity has been used to redefine cultural work by displacing and masking its previous associations with critical political traditions (Garnham, 2005). For Angela McRobbie (2016), the shift from cultural work to creative work represents a shift towards a more individual economic activity. She describes contemporary politics of creative work as encouraging young people to shed any aspiration to job security or social welfare. Creative work drives young and old to internalise risk and uncertainty as middle class values. Capitalist forms of labour organisation have absorbed artistic critiques of early- to mid-twentieth-century European avant gardes by elevating the artistic career as the template for success in a networked information economy (Boltanski & Chiapello, 2005). The romantic ideal of the free-spirited artist has become a subject for everyone to aspire to and has been used as a model for a new order for cultural work based on short-term projects

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between enterprising networked individuals. Education and media institutions incite people to 'be creative' through what McRobbie (2016) calls the 'creativity dispositif': 'The creativity dispositif comprises various instruments, guides, manuals, devices, toolkits, mentoring schemes, reports, TV programmes and other forms of entertainment' (pp. 10–11).

The ubiquity of such instruments as part of everyday life renders the creativity dispositif and the imaginary it sustains as a key part of the new normal in cultural, creative, and media work. Media institutions foster narratives of creative visionaries who 'make it' in fields of cultural practice because of their individual passion and talent. Pedagogical institutions blur the boundaries between capitalist and artistic labour. And while business schools have adopted the art school's idea of the artistic spirit, the entrepreneur has become the model art school student (McRobbie, 2016, p. 59). The parallel between both pedagogies is that they encourage students to eschew traditional categories, embrace uncertainty, and model their careers on the 'unpredictable pathway':

The personal pathways, individualized on the basis of possession of an original portfolio of skills, have an accumulative momentum, which in turn allows us to analyse how short-term, or project-based 'creative' careers develop. (pp. 70-71)

If education and media are instrumental in sustaining imaginaries of the creative as an ideal subject and of creativity as an ideal objective, then the tools of creativity are certainly key objects of the creativity dispositif. The artistic imaginary has always been entangled with its paraphernalia and its spaces for practising culture: the studio, the theatre hall, the gallery, instruments of creation and dissemination, and appreciation.

One of the dimensions that McRobbie (2016) leaves underdeveloped in her critical analysis of the creativity dispositif is how digital tools are integral to its development and reproduction, particularly to sustaining a creative subjectivity. In this chapter, I would like to extend the conceptual construct of the creativity dispositif to an analysis of how it mediates and is mediated by digital technologies, specifically media software; that is, software for creating, editing, and sharing media content and the institutions for designing, marketing, and consuming the software (see Manovich, 2013, p. 24). In particular, I will introduce the concept of 'glut' as a software inscription strategy and then develop a case study of media software that exemplifies the qualities of glut. I will examine three ways in which this strategy is operationalised for the widely used software Adobe Photoshop: its design, its commodification as part of upgrade culture, and its instruction through a just-in-time learning platform. Through this case study, I hope to show how technologies like media software are essential to the creativity dispositif and how they enable and constrain what it means to 'be creative' today.

Glut as dis-ordered order

The instruments of the creativity dispositif shape and are shaped by digital infrastructures that support and sustain political, economic, and cultural flows. We live in a technological society (Barry, 2001) that promotes a conception of innovation that conflates invention and technological change in ways that are inextricably tied to the deployment of creativity discourse:

Innovation, in turn, is embedded within a broader cultural imaginary that posits a world that is always lagging, always in need of being brought up to date through the intercessions of those trained to shape it: a world, in sum, in need of design. (Suchman, 2011, pp. 4–5)

I do not want to argue that the creativity dispositif is ensconced in or the product of digital technologies. Rather, in this chapter, I will explore how media software has been a crucial means by which cultural production is designed to 'be creative'. Even the most seemingly innocuous tool for cultural production reflects, through its design, beliefs and prejudices stemming from cultural, political, and economic values. If creativity is one such value, then it is likely designed into the tools used to make culture.

I will use the concept of scripts as developed in science and technology studies (STS) (Akrich & Latour, 1992; Suchman, 2007, pp. 187–205) to examine to what extent, and in what ways, creativity is part of media software. This approach means conceiving of technological designs like software as something that different social actors 'inscribe' with traits and qualities, beliefs, and values (e.g., see Born, 1997; Knochel, 2016).

Designers and engineers give meaningful form to the technologies in ways that can be 'read' as instruments (Ihde, 1998, p. 150). Sociotechnical inscriptions, much like texts, generate figures or 'figurations' for action. In this sense, designers and marketers not only create affordances for users when designing media software, but they also generate a material and semiotic model of who acts with/through these affordances. Scholarly research in STS as well as in media studies working with (or in reaction to) this conception of design has convincingly shown that technological scripts do not determine how technologies are read. People who use technologies can develop de- or re-inscriptions that challenge the designer's original intended reading. Therefore, by analysing technological inscriptions and their figurations, and how both are read or reinterpreted, the researcher is able to examine the power dynamics contingent between different social and technological actors involved in mediation.

Inscribing a creative figuration cannot simply trick people into thinking they are being creative. It must enable some form of cultural work that is deemed creative through its design *and* its use. Media software must in some way embody qualities that are consistent with social and technical imaginaries of creativity. Designers of digital technologies draw from creative and technical imaginaries to ensure that software enables the expression of, for example, spontaneity and skill, choice and invention. In this chapter, I will focus on one inscription strategy (or what some in STS would call 'programme') for creativity: *glut*. This strategy entails designing software for cultural production that figure creativity along McRobbie's 'unpredictable pathway': enabling and constraining cultural work as an individual, unpredictable, yet economically grounded activity.

Vannevar Bush's influential 1945 article 'As we may think' in the *Atlantic Monthly* of July 1945 set the tone for the mid-twentieth century's postwar concern with the incredible potential of information and communication technologies.

There is a growing mountain of research. But there is increased evidence that we are being bogged down today as specialization extends. The investigator is staggered by the findings and conclusions of thousands of other workers—conclusions which he cannot find time to grasp, much less to remember, as they appear.

Bush's solution to tackling this mountain of research was the Memex, 'a sort of mechanised private file and library'. Bush's vision is credited as the inspiration for future digital innovations including the personal computer, the graphical user interface, and the Internet (Barnes, 2000, pp. 355-357). The ironic twist to Bush's vision is that instead of becoming the solution to information surplus, digital technologies inspired by the Memex are now blamed as the primary source of this surplus. Alvin Toffler's 1970 bestselling book Future shock popularised this connection as 'information overload'. He predicted that the affordances of digital technology would make it so easy to replicate and disseminate so much information that it would exceed decision-makers' capacity to absorb it and thereby impede their ability to make decisions. The concern for the technological effect of this glut of information has been a recurring theme ever since. David Shenk's 1997 book Data smog: surviving the information glut, for example, examines its psychological cost and its link to profit motives. Some have reinterpreted this same infoglut as a necessary evolution of human culture (Wright, 2007), whereas others have attempted to prescribe techniques for dealing with its effects. Kristin Luker (2010), for example, warns aspiring academic researchers that the only way to survive the 'world of info-glut' is to remember the adage 'work smarter, not harder' (p. 93). To critical communication scholar Mark Andrejevic (2013), however, infoglut is tied to capitalist and reactionary interests, who use it to cast 'an equal regard on all objects of data collection' (p. 160), thereby privileging comprehensiveness over simplicity and clarity. He refers to glut as a strategy used by those in power, to dominate by disseminating uncertainty under the semblance of facticity-an attempt to spur the demise of the kind of 'symbolic efficiency' necessary for critical engagement with the world.

Concern for information glut is therefore deeply rooted in digital culture. Infoglut implies an undifferentiated data mass that encapsulates both valuable information and 'infojunk' (Koski, 2001, p. 484). The distinguishing feature of glut is not its quantity per se; there is no magic amount of information that tips it over from comprehensible into glut. Rather, its key feature is that digital data's mass *dis*-order undermines our ability to make it intelligible, to find its stable meaning or worth.

Lev Manovich argues that the way in which the dis-order of digital data undercuts our ability to create narratives is not an accidental outcome of digital media but one of the essential characteristics. If, he claims, 'the world appears to us as an endless and unstructured collection of images, texts, and other data records, it is only appropriate that we will be moved to model it as a database' (Manovich, 1999, p. 81). Using de Certeau's (1984) complementary concepts of strategy and tactic, Manovich argues that digital media, particularly social media platforms like YouTube, have adapted tensions between narrative and database as a design strategy. Social media platform designers strategically organise software in ways that will allow its users to use tactics to customise and change the platform; tactics become a design strategy.

Both Manovich's conception of the digital database and some of the elements of Andrejevic's work on infoglut can be usefully incorporated into a conception of glut as a software inscription strategy. If strategies for designing software are exercised by those in power to impose a proper order, then tactically using the adaptability and open-endedness of software affordances entails working within the proper order for which the design is intended. This re-territorialisation of tactical agency into a set of inscriptions has important implications for power relations. If tactics such as individual customisation are part of the strategic architecture of software, then they are no longer a form of resistance or de-inscription but arguably are part and parcel of a disciplinary technology closer to Andrejevic's conception of infoglut. Glut, when applied to software design, entails a strategy that figures an individual actor who searches, sorts, and manages a dis-ordered order in the (potentially futile) hopes of finding meaning and value. In other words, it generates a disciplinary figure that, upon first reading, seems anathema to a creative figure. However, in the next two sections, I will show how the creativity dispositif is reproduced through glut in the Adobe Photoshop software tool.

Adobe Photoshop's command glut

During the late 1980s and early 1990s, as personal computers and digital imaging software became more popular, cultural practitioners were apprehensive about the changing role of the digital image and also about how to *figure digital image creation*: how to ensure that humans are the ones making 'judgments and choices' (Mitchell, 1992, p. 76). During this same period, new commercial, consumer-oriented software tools began to emerge as the future de facto standards of digital imaging workflows. Since then, these same software tools have become essential for 'daily production of typography, symbols, images, and information systems' (Lupton, 2007, p. 149). Few of these tools are as ubiquitous today as Adobe Photoshop. It has been a mainstay of digital image production workflows in numerous fields of cultural production for more than 25 years.

Photoshop is digital image editing software that packages together thousands of individual commands nested in tool bars and dropdown menus. Its designers originally intended Photoshop 'to be a very powerful and easy-to-use tool for everyone from naïve users to the top of the high end' (John Knoll in Poole, 1991, p. 146; see also Lesage, 2016, p. 224). The number of commands it affords has grown extensively since it was first licensed by Adobe in 1990. It was relatively easy to increase the complexity and sophistication of the software over the years because of the continuing decrease in hardware costs for storing and running digital information, the software's object-oriented architecture, and because it was profitable for Adobe to sell new versions of the software as individual and institutional licences. However, as I argued above, glut as a software inscription strategy is not about increasing quantity so much as it is about creating a 'dis-ordered order'. My goal here is not to ascertain the reason for Photoshop's commercial success but to show how glut is used as an inscription strategy to design the application in ways that figure creativity. If, as argued above, creativity is modelled in part on the 'unpredictable pathway', then glut is a powerful strategy for (dis)ordering cultural production into 'being creative' with Photoshop.

As a starting point for my analysis, I draw from Manovich's (2013, p. 125) attempt to develop a typology for systematically analysing its features and commands. Manovich's formal analysis of its commands focuses on one subset of digital imaging effects, called 'filters'. One of the formal differentiations he initially uses to devise his typology is based on whether individual filters are a simulation of an older medium or whether each represents a new medium itself (p. 129). But Manovich soon abandons this distinction because it does not capture the different meanings of fabrication. Unlike Photoshop filters, older media provide clues about

how they work: 'the possibilities of each tool and material were driven by what was meaningful to a particular human sense. A paintbrush could create brushstrokes that had colour, thickness, and shape—properties directly speaking to human vision and touch' (p. 133).

For Manovich, the phenomenological points of reference of earlier media are no longer available in individual Photoshop commands unless they are each encoded with information about their effects. Building on Manovich's work, I would argue that we must extend our analysis from individual commands to how multiple commands combine to enable and constrain creative figurations. To illustrate how this might work, I will examine a different aspect of Photoshop's design and use: colour correction and management.

As mentioned, Photoshop was designed to afford as broad a range of commands for altering digital images as possible. One of Photoshop's key features is therefore that it includes commands that are appropriate for different groups of cultural practitioners: photographers, graphic designers, web designers, prepress specialists, 3D designers, 2D animators, and so on. This is not to claim that Photoshop is superior to other media software for any or all of these disciplines, but that its extensive suite of discrete commands are relevant for some or all of these disciplines. An example of how this wider range of different commands works for various practitioners is how Photoshop affords 'colour correction and management'.

When creating a new document on Photoshop, the software offers the creator a number of choices to determine some key aspects of the document's size and format, including a dropdown menu to determine its 'colour mode'. The creator can choose between modes such as bitmap colour, greyscale, RGB colour, CMYK colour, and lab colour, as well as additional 'advanced' options related to the document's colour settings (the exact number of options will vary, depending on what profiles have been downloaded to the computer in use). Once the document is open, the application affords many different commands for altering the image's colour mode or altering specific aspects of the image's hue, contrast, brightness, and so on—also known as colour correction—in different dropdown menus, toolbars, and windows. These various commands are available to all users without the contextual phenomenological cues discussed by Manovich above. A casual Photoshop user is unlikely to consider most, if not all, of these commands, and is free to simply accept the

application's generic 'pre-sets' when creating and editing an image. It is entirely possible to create and share images with Photoshop in ways that leave colour correction and management up to the software. However, specific settings and commands will have implications for specific workflows such as photography, web design, and prepress or video colour correction. For example, a graphic designer may want to ensure that an image's colours will be printed in a particular way with a specific printer, or a web designer may want to ensure that an image is displayed in a particular way on a screen by a web browser.

The ability to identify and properly apply commands related to colour correction and management has become one of the indices of a creator's skill and professionalism with Photoshop. In 23 in-depth interviews conducted with Photoshop users between 2012 and 2014 (see Lesage, 2015), half of the respondents referred to the proper management and/or correction of colour as important markers of an individual's talent and/or expertise, and its absence as a sure sign of unprofessionalism. However, Photoshop affords the opportunity to achieve similar (if not identical) types of colour effects through very different combinations of commands. For example:

[41:50] ... a lot of people use Photoshop and they might know 'levels' [a set of commands for colour correction]. A lot of people use auto-levels and they don't really know how to read a histogram [that accompanies the levels commands]. That's another thing, to be comfortable to read a histogram and know what those peaks of colours mean and to understand where you're clipping it is gonna affect your lights and your shadows. [Steve, photographer working in Vancouver, interviewed in June 2012]

In this case, the photographer being interviewed distinguishes and prioritises a particular feature (histograms for visualising colour intensity) that is included as part of a set of commands for colour correction (levels). But when asked to elaborate in the same interview on how he would teach these techniques to others:

[44:11] It doesn't mean that it's the right way or the only way. It's the way that works for me but there's 18 different ways to end up with the same results and you need to know what's gonna work best for you. [Steve]

Steve relates a typical account from many of the interviews: that each individual should find their own pathway through the glut of Photoshop commands (Lesage, 2015, p. 103). By providing access to sets of commands with few cues for how to order them through practice, Photoshop figures creativity as individually searching, sorting, and managing large swaths of extraneous commands. A common statement in the Photoshop literature and among those I interviewed is that people only use a certain 'percentage' (10%, 25%) of the commands available. I use the term 'Photoshop ratio' to refer to the vast difference between the total number of commands available in Photoshop and the number of commands an individual actually uses or knows (Lesage, 2015, p. 100). An individual's ability to define and apply his or her own Photoshop ratio stands as a sign of creativity and experience.

Matthew Fuller (2003, p. 143) suggests that one can glean the 'forces and drives' that shape how software is designed by studying how deeply some commands and features are nested within toolbars and menus: 'To many users it is likely that [an] option should be so far down a choice tree that it drops off completely'. Glut turns this depth into a disciplinary technology, placing onus on the individual to sort through and separate the frivolous and unrelated from the valuable. What emerges in this analysis of Adobe Photoshop's design is a creative figuration based on searching, sorting, and managing commands; the pathway through its command glut simultaneously enables and constrains the exercise of human judgement and choices while aligning itself with the individualised 'unpredictable path' espoused by the creativity dispositif.

In the example above, meaning is not only undermined at the level of individual commands, but the individualised dis-ordered path through combinations of commands also undermines the ability to generate collective meaning through shared practice: Steve's way works for him, but he does not believe his approach is necessarily of value to anyone else. But a complete picture of how Photoshop's command glut is inscribed as part of the creativity dispositif requires more than attention to the application's design and use. Steve's approach to using Photoshop is not determined by its design. One of the ways that this dis-ordered entanglement is reinforced is through Photoshop's marketisation as a consumer product. There have been 13 major versions of Photoshop

between 1990 and 2013, not including spinoffs and minor upgrades. This 'versioning' approach is consistent with a broader 'upgrade culture' (Dovey & Kennedy, 2006, pp. 52-53), in which cultural production and consumption are subjected to the perpetual threat of technological obsolescence. The constant churn increases the likelihood that the order of commands that one is familiar with has changed and so compels the practitioner to try to keep up with the pace of change as both a consumer and a creative practitioner. As each new version arrives on the market, individuals are faced with questions of if and how to re-engage the same process of searching and sorting to re-learn the application. Adobe's shift in 2013 to a software-as-a-service model (called the Creative Cloud) refined its alignment with upgrade culture even further by providing updates directly through an online subscription service. I have now established two ways in which a dis-ordered order is created with Photoshop: its technical design and its marketisation as a consumer product. A third way in which glut is used to entangle software and cultural practitioners through the creativity dispositif requires that we return to McRobbie's concern with pedagogy.

Lynda.com as just-in-time learning platform

One of the emerging trends in pedagogical technology is 'just-in-time' education (Selingo, 2014): the possibility of learning a specific skill when it is called for without having to commit the time or money required by more traditional forms of education. These digital platforms promise to give their clients personal access to a limitless selection of up-to-date information about countless subjects in a format that fits their schedules. Just-in-time can be characterised as a trend that subscribes to a discourse of self-service—empowering students and giving them greater control over their education through digital infrastructure. This discourse has increasingly gained currency within institutions of higher learning (Pollock, 2003). Just-in-time learning platforms are able to mimic and replicate the individualisation and self-responsibilisation required of the creativity dispositif as defined by McRobbie (2016).

Pedagogy seems like the perfect way to bring meaningful order to Photoshop's command glut. Before the development of proper documentation and its own certification programme, Adobe provided little in terms of instructional documentation to accompany early versions of the software (McClelland, 1993, p. 1). Thousands of third-party product reviews, promotional materials, software demonstration videos, and training manuals have been published to fill that void and continue to supplement the newer Adobe material. With so many different and competing sources of training, it is difficult to clearly distinguish what constitutes formal from informal learning. Learning Photoshop represents a particularly complex entanglement between the creativity dispositif and the technological society. At this same intersection are other emerging for-profit media and technology firms that present transformative technologies as the solution to an under-resourced public education sector that finds it difficult to develop curriculum for Photoshop (Sefton-Green, 1999, p. 142). Education institutions are undeniably also dealing with the challenges presented by upgrade culture.

One just-in-time learning platform for Photoshop is Lynda.com, one of the longest-running providers of just-in-time learning materials for cultural practitioners. Established in 1995, it found initial success in providing web-design training material such as classroom training, books, and instructional videos by mail, before turning to digital platforms for the delivery of its training services. By 2013, Lynda could claim two million members and more than US \$100 million in revenue the previous year, while adding 400 new courses per year (Roush, 2013). LinkedIn acquired the platform in 2015 for US \$1.5 billion (LinkedIn, 2015). In 2002, it started selling subscription services to all of its videos online. Through its design, Lynda mediates Photoshop's glut as part of the figuration of creativity. However, as will be made clear in the following analysis, how it re-inscribes Photoshop as something to be learned does not necessarily mitigate the glut's dis-ordered order but instead reproduces upgrade culture and the personal pathway through Photoshop commands. To show this, I will provide a basic overview of the platform's architecture, followed by a more detailed examination of its section dedicated to learning Photoshop.

Lynda's online platform is conceived as a data repository for instructional videos. By creating an account with the platform, each client is offered the opportunity to tailor a custom learning programme out of the repository. At the time of writing, it offered 226 categories of courses listed on its main subject webpage (Lynda.com, 2014b), ranging from '2D Drawing' to 'Writing', from 'Business Intelligence' to 'Creativity'. Within these categories are listed a total of nearly 20,000 different courses, with each course containing its own series of individual video clips of various length ranging from approximately 1 minute to more than 10 minutes. Lynda refers to its entire repository of videos as an 'online training library'. This database structure is one of the ways in which Lynda.com replicates the just-in-time self-service discourse. As Lynda Weinman, one of Lynda's founders, explains, 'It's not about what grade you're in, it's not about certification, [...] It's really about needing knowledge and having a resource that will give you that knowledge exactly the way you need it, wherever, whenever, on any device.' (Quoted in Roush, 2013)

Lynda's own course, 'How to use Lynda.com', (2014a) explains how the platform was designed to be used, including demonstrations of how to individually search and sort through the videos. The instructor takes the viewer through a search on the platform with advice such as:

[1:11] 'So, currently I have 59 results for CSS, and if I switch over to Videos in the filtered by section, now we have over 1600 results for videos. That's a pretty large list. So, you can further narrow down the list of videos by selecting the filter terms under these headings on the left, of Skill Level, Subject, Software, Version, Company, Author, and more options for closed captioning.'

The student is encouraged to filter the ever-expanding repository of videos through category lists, using additional keywords according to personal interests and desires. The platform also provides numerous tools to help track and monitor progress. There exists a growing body of scholarly literature, particularly around YouTube and similar types of video data repositories (see Gehl, 2009 for an excellent example) that develop the idea of curating as a practice for working with these platforms. But the term 'curating' may be problematic in Lynda's case, because it

suggests a level of personal control over the data. The videos are labelled within an ordered set of categories but in a way that provides little in terms of re-editing or collective sharing of remixes. Lynda's designers likely have determined an underpinning order for the library, but this order is not revealed to the client, affording instead a categorical order that is contingent on the individual's personal learning path.

Photoshop is not one of the 226 subject categories, but a sub-topic. Although a detailed examination of how Lynda classifies Photoshop is beyond the scope of this chapter, it is instructive to consider how some of the basic elements of the Lynda site mediate it as an object of learning. The main header for Lynda's Photoshop Tutorials and Courses page invites the learner to:

Watch our expert-taught Photoshop tutorials and learn image editing, retouching, and color correcting for all skill levels. Find out how to use Photoshop shapes and layers, how to retouch photos, and more. (Lynda. com, 2016)

The Photoshop topic is subdivided into: 'Photoshop Version', 'Subject', 'Author', and 'Photoshop Skill Level'. These subcategories connect to other categories beyond Photoshop-for example, it connects to subject categories like graphic design, web design, and photography. From 1 September 2015 to 6 September 2016, the material labelled Photoshop grew from 415 Photoshop courses (made up of a total of 20,809 videos by 70 different authors) to 458 courses (with 22,299 videos by 74 authors). Estimating that the average length of time for each video is 5 minutes, this archive grew from approximately 1734 hours of Photoshop-related material to 1858 hours. Some videos were taken down and others updated during this period, but the total amount continued to climb steadily. Just as with Photoshop commands, it is highly unlikely that all of these videos are relevant to any one individual. Lynda is designed to be too much information, requiring the user to search, sort, and manage according to personal preferences. It represents a classificatory order based on glut through which the learner is invited to advance and develop an 'unpredictable pathway'.

In line with Photoshop's numerous features and continuous upgrades, Lynda's video instructions are continuously edited and updated. Instead of prescribing a limited and clearly defined curriculum, Lynda meets glut with glut. It offers an abundance of video instructions that can be navigated as a personalised self-serve learning path and thereby inscribes a figure of the Photoshop student searching, sorting, and managing glut.

Conclusion: Beyond searching, sorting, and managing to 'be creative'

Any understanding of the new normal for contemporary cultural work, I have argued, requires attending to the ways in which the creativity dispositif is inextricably intertwined with the imaginaries and inscriptions of the technological society. This analysis of Photoshop may lead the reader to think that I am arguing that people who use Photoshop are doomed learners-a group of exhausted, pathological digital foragers forced to try to keep up with its perpetually growing trove of commands. This is not the case. What I set out to analyse here is how media software like Photoshop is designed, sold, and taught using the inscription strategy of glut and how this strategy is the product of the unpredictable pathways prescribed by the creativity dispositif. Although the inscription strategies for ordered dis-order described here do represent a powerful means through which the creativity dispositif is reproduced, it in no way prevents alternatives and tactics of resistance. Although the case study described in this chapter presents Lynda as a platform that perpetuates glut, other media platforms have provided opportunities for creating meaningful exchanges and debate about creative practice with Photoshop (Lesage, 2016). The pursuit of a vigorous critique of what it means to be creative today is only possible if we identify and nurture techno-social arrangements that help us resist and replace inscription strategies such as glut.

References

Akrich, M., & Latour, B. (1992). A summary of a convenient vocabulary for the semiotics of human and nonhuman assemblies. In W. E. Bijker & J. Law (Eds.), *Shaping technology/building society: Studies in sociotechnical change* (pp. 259–264). Cambridge, MA: MIT Press.

- Andrejevic, M. (2013). *Infoglut: How too much information is changing the way we think and know*. New York: Routledge.
- Barnes, S. B. (2000). Bridging the differences between social theory and technological invention in human-computer interface design. *New Media & Society*, 2(3), 353–372.
- Barry, A. (2001). *Political machines: Governing a technological society*. London: Athlone Press.
- Boltanski, L., & Chiapello, E. (2005). *The new spirit of capitalism* (G. Elliott, Trans.). London: Verso.
- Born, G. (1997). Computer software as a medium: Textuality, orality and sociality in an artificial intelligence research culture. In M. Banks & H. Morphy (Eds.), *Rethinking visual anthropology* (pp. 139–169). New Haven: Yale University Press.
- Bush, V. (1945, July). As we may think. *The Atlantic*, *176*(1), 101–108. Retrieved November 24, 2016, from http://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881/
- De Certeau, M. (1984). *The practice of everyday life* (S. Rendall, Trans.). Berkeley: University of California Press.
- Dovey, J., & Kennedy, H. W. (2006). *Game cultures: Computer games as new media*. Maidenhead: Open University Press.
- Fuller, M. (2003). Behind the blip: Essays on the culture of software. Brooklyn: Autonomedia.
- Garnham, N. (2005). From cultural to creative industries: An analysis of the implications of the 'creative industries' approach to arts and media policy making in the United Kingdom. *International Journal of Cultural Policy*, 11(1), 15–29.
- Gehl, R. (2009). YouTube as archive: Who will curate this digital Wunderkammer? *International Journal of Cultural Studies*, *12*(1), 43–60.
- Ihde, D. (1998). *Expanding hermeneutics: Visualism in science*. Evanston, IL: Northwestern University Press.
- Knochel, A. D. (2016). Photoshop teaches with(out) you: Actant agencies and non-human pedagogy. *Visual Arts Research*, 42(1), 71–87.
- Koski, J. T. (2001). Reflections on information glut and other issues in knowledge productivity. *Futures*, 33(6), 483–495.
- Lesage, F. (2015). Middlebroware. Fibreculture Journal, 25, 89-114.
- Lesage, F. (2016). Reviewing Photoshop: Mediating cultural subjectivities for application software. *Convergence*, 22(2), 215–229.
- LinkedIn. (2015, 9 April). LinkedIn to acquire lynda.com. Retrieved November 2, 2016, from https://press.linkedin.com/site-resources/news-releases/2015/ linkedin-to-acquire-lyndacom

- Luker, K. (2010). Salsa dancing into the social sciences: Research in an age of infoglut. Cambridge, MA: London: Harvard University Press.
- Lupton, E. (2007). Learning to love software: A bridge between theory and practice. *Artifact*, 1(3), 149–158.
- Lynda.com. (2014a). Finding content with the search feature, 4m58s. Updated 7/5/2014, Released 2/21/2011.
- Lynda.com. (2014b). All subjects. Accessed at the time of writing. https://www.lynda.com/subject/all
- Lynda.com. (2016). Photoshop—Online courses, classes, training, tutorials on Lynda. Retrieved November 5, 2016, from https://www.lynda.com/ Photoshop-tutorials/279-0.html
- Manovich, L. (1999). Database as symbolic form: Convergence. *International Journal of Research into New Media Technologies*, 5(2), 80–99.
- Manovich, L. (2013). *Software takes command*. New York: Bloomsbury Academic.
- McClelland, D. (1993). *Macworld Photoshop 2.5 bible*. San Mateo, CA: IDG Books.
- McRobbie, A. (2016). *Be creative: Making a living in the new culture industries.* Malden, MA: Polity Press.
- Mitchell, W. J. (1992). *The reconfigured eye: Visual truth in the post-photographic era*. Cambridge, MA: MIT Press.
- Pollock, N. (2003). The 'self-service' student: Building enterprise-wide systems into universities 1. *Prometheus*, 21(1), 101–119.
- Poole, L. (1991). Pictures perfected. *Macworld*, 8(1), 144–151.
- Roush, W. (2013, March 28). Knowledge when you need it: Lynda.com and the rise of online education. Retrieved November 5, 2016, from http://www. xconomy.com/national/2013/03/28/knowledge-when-you-need-it-lynda-com-and-the-rise-of-online-education/
- Sefton-Green, J. (1999). From hardware to software: The resource problem? In J. Sefton-Green (Ed.), Young people, creativity and new technologies: The challenge of digital arts (pp. 138–154). London: Routledge.
- Selingo, J. (2014, 21 April). The new lifelong learners. *Slate*. Retrieved December 1, 2014, from http://www.slate.com/articles/technology/future_tense/2014/04/just_in_time_education_is_a_technological_reality_eco-nomic_necessity.html
- Shenk, D. (1997). *Data smog: Surviving the information glut*. San Francisco, CA: HarperEdge.
- Suchman, L. (2007). *Human-machine reconfigurations: Plans and situated actions* (2nd ed.). Cambridge: Cambridge University Press.

- Suchman, L. (2011). Anthropological relocations and the limits of design. *Annual Review of Anthropology, 40*(1), 1–18.
- Toffler, A. (1970). Future shock. New York: Random House.
- Wright, A. (2007). *Glut: Mastering information through the ages.* Washington, DC: Joseph Henry Press.

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