Desire by design: pornography as technology industry

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Globally, pornography is a US$97 billion global media industry (Morris 2014). As the primary platform by which people interact with pornography today, online pornography companies wield enormous influence over the ways viewers learn about, play with, explore, and construct sexuality and sexual desire. Each day, tens of millions people visit Pornhub, xHamster, and Xvideos, three of the most frequently visited online pornography sites (Alexa 2017). These websites may seem like amateurish distribution services. However, they are sophisticated technology companies that employ hundreds of technical staff to design and develop interfaces, algorithms, data mining software, data analytics software, video streaming software, and database management systems. They are part of an innovative industry engaged in the kinds of algorithmic and data science practices that drive the profits of more widely recognized industries, such as social media, online gambling, online games, search engines, and electronic commerce. These designers are responsible for making strategic choices about information management and the graphical organization of content that translates into large profits, innovative capitalist media techniques, and dominant modes for curating, distributing, and regulating our experience of sexual desire today. Studying the online pornography industry is therefore vital to understanding the contemporary capitalist media landscape. Whereas many pornography studies focus on the representational, labour, or historical aspects of the industry, the technical science of online pornography has gone largely unexamined.

The profit motives of the pornography industry have long driven new forms of media and technological innovation, including the development and proliferation of cable television, VCR, Blu-ray, broadband, and 3G mobile services (Tynan 2008). In recent years, the industry has driven the development of web technologies and online business practices, such as hosting services, live chat, secure credit-card processing, banner advertisements, pop-ups, web promotions, mouse-trapping (which prevents users from leaving a site), and streaming video technology (Paasonen 2011). Another influence of this industry manifests through two technical design strategies: first, by structuring and regulating sexual desire through algorithmic categorizations that attempt to softly persuade viewers into continuing to search for an ‘imagined perfect image’; and second, by designing an immersive viewing experience to increase attention retention and ‘time on site’. Examining the pornography industry’s technical design strategies builds upon but is distinct from the emerging fields of study into the ethics of algorithms and values in design. It also makes a contribution to mechanistic understandings of design, which focus on feedback loops
that minimize frustration and maximize satisfaction and efficiency. Ultimately, the pornography industry reveals the social and political implications of technical design in our engagements with sexuality, representation, and desire, blurring the line between surveillance and access, design and experience, bodies and capital, and autonomy and automation.

By data mining individuals’ browsing habits, the online pornography industry uses ‘algorithmic identities’ (Cheney-Lippold 2011) to mediate sexual categories, to fetishize racial, class, and cultural difference, and to suggest content and advertisements. Importantly, each viewer’s identity is always changeable, based on newly observed behaviour or the input of new metadata. The purpose of this adaptability is to create a capacity of suggestion. That is, to softly persuade viewers to continue searching for an imagined perfect image and to enable repetitive and recursive browsing, encouraging viewers to forgo the pleasures of the known for the pleasures of the unknown. Drawing on both individually generated data and aggregated data in calculating search results, these computer algorithms also track geographic locations, IP addresses, and viewer-generated tags, categories, and video titles. As Evangelos Tziallas explores further in this issue, examining the design of these systems helps us better understand the workings of biopower (i.e. the regulation of individuals through diverse technics of subjugation) at the level of the category, computer code, statistics, and surveillance as a form of interpellation. In this way, the design of pornographic streaming sites works as a disciplinary regime that structures and regulates sexual desire to fit within the context of algorithmic categorization.

The collection of browsing data works hand-in-hand with strategic graphic design to increase ‘time on site’ and ‘attention retention’. The longer viewers browse the site, the more data viewers produce. The graphical interface of pornographic video streaming sites reveals the organization of pornographic content as a cultural value system that structures and regulates individuals’ sexual desires. For many proponents of ‘design thinking’ in the field of human–computer interaction, design attempts to map a direct relation between structure and effect. Its goal is to design an environment to maximize efficient accomplishment of tasks by individuals who are imagined as autonomous agents whose behaviours can be constrained in a mechanical feedback loop. Often the assumption is that minimalist design and ease of use are the most effective approach to graphic design (Drucker 2014). Under this assumption, pornographic streaming sites might be seen as a good example of poor graphic design due to their seemingly chaotic nature.

Yet the design of these sites is highly strategic: many pornography websites provide an enormous range for selection that seems to promise satisfaction. These sites are designed to keep viewers searching for an imagined perfect image. Following Lacan (1992, 2007), however, nothing compares to an imagined perfect image, leaving every image inadequate. Therefore, viewers forego the pleasures of the known for the pleasures of the unknown. This concept of design participates in an aegis of ‘getting what you want’ but in excess of it. Its intention is to create the technological conditions by which interacting with a pornography website becomes an entry point for immersion. The scripts of the sites’ graphical interfaces preclude certain actions while inviting or demanding others. In this way, designers delegate to technology the task of soliciting and sustaining absorption, or what The Atlantic technology writer Alexis Madrigal (2013) refers to as the ‘Dark Side of Flow’, a reference to the work of Csikszentmihalyi (1994), the psychologist who
popularized the term ‘flow’ to describe states of absorption in which attention is so narrowly focused on an activity that a sense of time and the concerns of daily life fade.

The graphical interfaces of pornographic video streaming sites create a space of dwelling, wandering, browsing, meandering, or prolonging engagement for the purpose of pleasure, or for keeping boredom at bay, idle distraction, and time squandering. The organization of pornographic video streaming sites lends itself to viewing across modalities, creating a media convergence that includes animation, gifs, live action, graphic design, and sound, to name only a few. In this sense, online pornography is much more mutable than film and video. Viewers immediately engage with multiple media simultaneously when they land on a pornographic video streaming site. Pornhub, Xtube, Redtube, YouPorn, Xvideos, and xHamster all feature (not coincidentally) similar interface design: animated gifs in rows and columns, juxtaposed with a distracting live-action advertisement on the right-hand side of the screen. The effect is to draw the viewer’s eye clockwise, beginning with the company’s logo and search box in the upper left-hand corner, across the page to the live-action advertisement, then back to the rows of animated gifs.1 The result is a cyclical viewing pattern that compels viewers to browse the entire space, to ‘take in’ the volume of videos, well known to designers of other consumer spaces, such as supermarkets, department stores, malls, and, perhaps the epitome of this design, Ikea (Penn 2011), Walmart (Underhill 2015), and malls like Toronto’s Eaton Centre (Jameson 1992). These spaces are designed to give viewers routes to follow while distracting them with an abundance of products. In doing so, this mode of design promises satisfaction while delivering unintelligibility and disorientation in order to remove one’s sense of autonomy and intentionality through capital-productive distractions.

Live action and gifs function together as an aesthetic contrivance to create a rambling and chaotic sensory overflow. That the images have been arranged in rows and columns ostensibly gives viewers a sense of method and control for navigating the abundance of images. As viewers roll their onscreen cursor over the images, the images flash pixelated clips (gifs/thumbnails) of a longer video to which the images link. The result is an interactive environment in which viewers feel they can control and manipulate images into animation. Yet this sense of interaction also serves to draw the viewer further into a labyrinth of serendipitous discovery. When a viewer clicks on an animated gif, a new webpage opens featuring a live-action clip, alongside a dizzying array of new advertisements and more rows and columns of animated gifs algorithmically determined to ‘relate’ to the featured clip. Viewers are thus presented with an entirely new set of images to navigate. If the featured clip does not fit a viewer’s imagined perfect image, one completely adequate to a viewer’s desire, they are invited to shift to any number of other gifs featured on the page. The process structures pleasure as the delay and deferral of satisfaction through browsing, and incrementally intensifies the elements of surprise.

For many of online pornography’s detractors, this analysis might be misunderstood as speaking directly to fears about a lack of control and autonomy of the body when confronted with cyberporn, particularly during the culture wars of the 1990s and the paranoia around internet porn (Chun 2006). These fears manifest in images of what Kipnis (1996, 161) has called the ‘asocial compulsively masturbating misfit’, a sex-obsessed individual whose unwholesomely dissolute body contributes nothing to society but, instead, contributes variously to the destruction of family, morals, and the nation-state.2 Yet my purpose is
to intervene in both the materialist tendency to treat technology as an autonomous, determining force as well as human-centred approaches that tend to regard technology as inanimate or neutral. Instead, following Latour (1999), objects and subjects act together through their encounters with each other, a co-production. As a multi-billion-dollar industry, online pornography functions paradoxically as both an ideal of late capitalist production and a source of great cultural anxiety. Through immersive design and data collection, online pornography turns the sexed body over into the service of capital: browsing as labour production. Despite its economic value, expressions of its lack of value abound, particularly when it supposedly threatens the heteronormative reproductive and procreative interests of society. Yet for Bataille (1991), social prohibitions and the transgressions attached to the realm of eroticism have found expression in the ‘uselessness’ of erotic life. According to this logic, it is just the kind of expenditure of excess energy associated with online pornography that demarcates the realm of human autonomy relative to ‘useful’ ends.

Notes

1. Western readers have been habituated to read from left to right, top to bottom. This method of design relies on that pre-existing habit but disrupts it.
2. In addition, recall the images that accompanied the first mass-media exposé of the dangers of online pornography in *Time* magazine (Elmer-Dewitt 1995). These images have been discussed at length in the now widely cited studies from Chun (2006) and Patterson (2004).

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References


