

Algorithmic Television in the Age of Large-scale Customization

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Abstract

One challenge that Television Studies faces today is how to respond to the rise of an industry increasingly organized by what Antoinette Rouvroy calls “data behavioralism.” The rise of streaming prestige television, exemplified by Netflix, has significant implications within the U.S. screen industry, but the “Netflix effect,” as McDonald and Smith-Rowsey call it, is more than just a change in the industrial mode of production, means of distribution, and method of consumption. The datalogic turn on which Netflixism is based also undermines the theoretical models on which Television Studies was largely built, including theories of representation, visual interpellation and pleasure, and power as “productive.” Hence, the rise of algorithmic television is not simply a new “object” or “wave” for us to study and comment upon; it challenges the mode of knowledge-production (or *dispositif*) on which the field has grounded itself.

Keywords

Netflix, algorithm, data, semiotics, prestige television, subjectivity

Television & New Media faces a new challenge today. Here, I do not simply mean the technical implications of a post-cathode era, wherein television has an aspect ratio similar to cinema and has been freed from the spatial constraints of “the box,” as a flat-screen device can operate on mobile tablets and phones or hugely scaled billboards. Nor do I mean the forthcoming challenges of a two-dimensional form wakening up to its three-dimensional possibilities, where advancing image technology will radically alter the tasks of visualizing story-space.

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Instead, I mean a more basic and historically transformative challenge to the continental shelf of theories about meaning-making (narrative, broadly defined), subjectivity, and capitalism. Three major conceptual cornerstones on which Television Studies has been built may become increasingly unable to cement the discipline and object of study. These eroding frameworks include the conventional account of Saussurean-derived semiotics, as well as the theories about viewer subjectivity and representation derived from the so-called linguistic turn; the problem of Fordist cultural industry and mechanical reproduction that so preoccupied the Frankfurt School; and the Foucauldian model of productive power. To this list, we can even add some initial assumptions about the digital turn.

For example, how can Television Studies come to terms with what Antoinette Rouvroy (2012) calls “data behavioralism”? Data behavioralism is based on the

implicit belief . . . that provided one has access to massive amounts of raw data . . . one might be able to anticipate most phenomena (including human behaviours) . . . thanks to relatively simple algorithms . . . without having to consider either causes or intentions. (Rouvroy 2012, 143)

The purpose of this data mining is not to discern the motivations or “object choices” by integral subjects, but rather to seek traces and fragments of actions that exist below the signature of the individual. These particulates are then used to create a supra-individual datalogic profile formed by the correlative aggregation of bits of otherwise imperceptible and weakly intentional activity. By operating at the micro- and macroscopic levels without needing an intervening figure, data behavioralism forms a new kind of algorithmic governmentality that is *without an individual subject*. As the datalogic turn does not call any subject into existence to account for itself, Rouvroy believes that algorithmic governmentality erodes individual experience, since the recursive feedback loops (in nearly real time) mean that both the producer and the consumer of exchange do not know why an act occurred or even if it may recur in the future.

Rouvroy’s work is useful for filling out the implications of Foucault’s work on neoliberalism, as a mode of social regulation that targets liberalism’s civil society and its disciplinary power. A key theoretical gesture was Foucault’s argument that the dominant mode of power in the post-eighteenth-century West was not repressive (invoking the right to take life), but productive. Identity was created, not repressed, through constant evaluations of subjectivity scored through binary oppositions and quasi-Linnaean nomenclature. Foucault claimed, however, that neoliberalism brought forward a new, postdisciplinary form of power, one that we can today name algorithmic (Shapiro 2019). Foucault argued that neoliberalism degraded liberalism’s civil society, the social mediation that integrated the marketplace with the liberal subject’s interior self and so-called “private” relationships (Foucault, 2008). Neoliberalism replaces these social forms with one highlighting a Game Theory–like player who is constantly within a competitive contest.

Neoliberal ideals are brought to fulfillment with digitization and algorithmic calculation, which allows for vaster data sets to become more dynamic as they approach

real-time incorporation of new responses. Algorithmic mathematics differs from older statistical forms (the mathemesis of the liberal era). While statistics seek to establish a relatively static model for prognostic purposes, the algorithm looks to a predictive model that changes with each new input and within a far more complex relational ecology. The consequence is that the algorithmic viewer intuits that everything is a competition, but also that no experience will be gained from playing a game that has its basic frameworks in constant flux.

The rise of streaming, “prestige” television through algorithmic predictions (“if you liked this, you’ll like that”) exemplified by Netflix and Amazon deploys algorithmic logic for the purposes of this different sort of subjectivity-formation. The viewer of algorithmic television is one radically alienated from liberalism’s civil society formation (like that involving so-called “water-cooler” television) and thrust into the void of a dynamic, but silent unknown, as with the strictures against spoilers among viewers, now separated by asynchronous transmission and consumption schedules. If algorithmic television is often binge television, the deeper meaning is that this is not like modernist-era addiction, where one seeks to replicate or maximize pleasure. Algorithmic addiction is a more desperate and empty feeling, as consumption is not meant to consolidate identity, but to gain any social knowledge, even if this will be fleeting, and indeed may have the effect of diminishing, rather than aiding, consumer decisions given how quickly the knowledge (of a series) becomes obsolete.

The implications of algorithmic television are even more radical as it reinforces the turn away from producing meaning through semiotics and toward “signals.” Dominique Cardon (2015) suggests one way to understand this move. He claims that Google Translate does not seek to transcode a sentence based on semiotic word substitution (for instance, “hund”= “dog”), even for ones that do not have a complicated syntax. Google instead looks for two- or three-word clusters from its vast digitized library to see how these have been previously used together. In this way, Google Translate does not work through signifier-signified codes of semiotics, but signal correlations and close approximations (“likes” as it were) found in its large archive of digitized material. If algorithmic television shapes its viewers in similar ways, then it is producing a quasi-subject that is very different from the one suggested by frameworks that relied on the semiotic model, like that of Althusserian interpellation or Lacanian motions of desire, where the unconscious is claimed as being structured like a language.

The algorithmic turn has another twist. Mario Carpo (2017) argues that we have entered a second digital age, one exemplified by the move (in architecture) from parametric splines to algorithmic voxels. Carpo claims that the first digital age was exemplified by the rise of “blob” architecture that rejects modernist rectilinearity as it used the new CAD (computer-aided design) software’s ability to effortlessly create a smooth Bezier curve between two points. This “spline” would become manifested by the subtractive production of material by CNC (computer numerical control) milling machines that would create the curvilinear skin of “blob” buildings like the Guggenheim Bilbao.

Carpo (2017) feels that the vastly amplified power of computing and the decreased costs of data storage mean that all forms of information compression, like mathematical equations such as the Bezier curve which uses two endpoints to sculpt an

intervening trajectory, are no longer necessary. Instead, today's computers can create every individual aspect and, furthermore, make each distinctive and unique, without reference to a data-compressing equation. The ability to fabricate large structures based on many small unique units (a "voxel") is achieved through the additive manufacturing of three-dimensional (3D) printing. The turn from CNC milling toward 3D printing speeds the "end of scale." Whereas the Fordist age of mechanical reproduction sought to lower unit costs by finding a limited set of design actions, exemplified by the creation of a fixed mold, and then repeating these in mass reproduction, the new technologies no longer require economies of scale to reduce production costs, since the expense of a digitally created and additive-manufactured object is functionally the same whether 1 or 10,000 copies are made. While the first digital age still relied on spliny economies of scale, the second digital age uses the voxel, as the smallest individual unit of variable fabrication, to create an age of large-scale (or "big") customization.

If the second digital turn no longer requires prefabricated containers for mass reproduction, then does algorithmic television similarly no longer require the molds of the mass cultural industries, such as group viewing categories and narrative genres that were depended upon in earlier forms of television production? Netflix's proliferation of "taste clusters," rather than Fordist-era viewer quadrant models, suggests that consumers are no longer fabricated through "disciplinary" cohorts created from binarized differences of representation. The taste cluster model similarly proliferates categories for which there is no Fordist-era semiotic tag for several reasons.

This gesture amplifies neoliberal competition because as these clusters are formed on the basis of proprietary algorithms, viewers have no sense of how their microscopic consumption choices relate to anyone else's. Given that Amazon owns Wholefoods' data profile and has bought into Deliveroo, giving it access to food delivery profiles, a taste cluster might not even involve preferences for a classic genre or even a single medium. A taste cluster might not necessarily be for "westerns" but "those who like movies with a lot of green in the *mise-en-scène*" or "those who order a food delivery on Tuesdays that includes a side of blueberry kefir," and so on. Even these examples may involve possible correlations that are still too gross and not particular enough. Just as voxelated manufacture does not require large-scale models, televisual distribution may similarly no longer require the economies of scale sought for in the Fordist-era construction of a mass audience. Viewing numbers might no longer determine whether a series is renewed, as that decision may now be based on more discrete correlations.

I have sketched out certain lines that suggest *Television & New Media* has a new set of theoretical questions to consider for the next phase. Let me end with a slight counterclaim. Carpo (2017) suggests that mass customization returns to something like the artisanal production prior to the age of mechanical reproduction. This turn, however, also resurrects the monopoly capital of the late nineteenth and early-mid twentieth century. While *US v. Paramount Pictures* (1948) began the end of classical Hollywood cinema as it broke the great studios' vertical integration of production and distribution, television was slower to achieve post-Fordism until the 1980s deregulation that

allowed cable TV to challenge and erode the networks' nationalist monopoly within advertisement-based television. The rise of streaming television returns us back to something like a pre-*Paramount* moment, as content producers regain control of their own distribution. The moment of the vertically integrated Big Studio is back, even if their new names are Disney, Amazon, Netflix, and so on. Yet, we have the paradox of monopoly capital that does not depend on the presence of its twin, the mass cultural industry or the semiotic mechanisms used to encode and decode its content. How might we begin to respond to this contradiction?

Here, one mode of older criticism may serve as a start. Wisconsin formalism, epitomized by Bordwell et al. (1985), made a sort of Big Data investigation as they catalogued a large set of Hollywood films to establish patterns of narrative construction and formal composition. Today, this kind of formalist inquiry may be useful in capturing some of the new formal signatures of prestige TV, such as increasingly common violation of the rule-of-thirds composition (tenable only for viewers who do not have to worry that someone in the cinema row in front will block the view), negative space blocking, dialogue that ends with an unanswered question, increasingly longer duration shots (in contrast to the frenetic cuts of prior decades), composition that uses fluorescent colors that are more easily visible on computer screens than cinema ones, and lighting that is more comfortable with uniformly dark screens, rather than an older noir *chiaroscuro*.

Wisconsin formalism might still provide service today, even if my notation of formal continuities in algorithmic television cannot unproblematically revive Frankfurt School critiques of the culture industry, since as suggested the Fordist model of large-scale moldings is gone. Such a combined and uneven development of the digital contemporary and capitalism's past familiarities is the challenge that faces *Television & New Media* today.

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