Chapter

Television as a Surveillance Tool

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Abstract

"Television" has now become a screen for the projection of different kinds of data that operate in a full-duplex fashion where the screen and its accessories not only provide data to the viewer of the screen but also become a tool for the collection of data about the viewer. For instance, the moment a smartphone is connected to the screen to watch an episode on YouTube, data about the viewer and viewing habits of the viewer are available to a corporation. This process opens up significant opportunities for data collection that borders on surveillance, and different institutions are able to collect customized information about the individual. This chapter will explore the mechanisms of this process of surveillance and the benefits and burdens offered by this emergent technology.

Keywords: television, big data, surveillance

1. Introduction

Television (TV) that became a ubiquitous part of households in many parts of the world since World War II has been witnessing a significant transformation since the turn of the twenty-first century. Starting in the early 2000s, TV has morphed in many ways such as in the size and quality of picture it delivers, the kind of content it can offer, and the multiple ways in which it can be used.[1] Yet, in spite of these changes, it has been the case that TV has remained a site to consume narratives.[2] Within the narrative paradigm, narratives, as pointed out in the work of Fisher [7–9] and later in the research on narrative bits [10–13], are also windows to the lives of individuals and groups. While TV has brought narratives home, the knowledge of the narratives of people can allow one to better understand the person and predict and control what the person may do. This perspective on narrative suggests that every person has a "life story," and access to that story offers an insight into the person's life. The challenge has been accessing the story in detail. Creating a detailed narrative requires constantly watching the person and tracking the person's beliefs, interests, and behavior. The matter of watching and constructing the narrative was eased when the advent of the digital allowed the analog, flesh-and-blood person, to construct a digital representation of the self in the digital space. This was akin to creating the life story online, which could be the repository of the narrative of the person. Indeed, this is the realm of big data [14, 15]. In this essay I argue that TV, originally the conduit for offering passive narratives to the audience, is

[1] There are numerous books on the history of television and its development that are used for introductory courses in mass communication that enumerate this aspect of the development of television.

[2] The focus on narratives in television has been examined by many scholars who make the argument that television is eventually about story telling [1–6].

transforming into a tool that can watch over the audience and construct a dynamic narrative of the audience, thus operating as tool for surveillance.

2. The passive narrative

Since the early days of TV in the developed countries of the West, technology and medium had been considered to be a passive device that was the conduit that brought information to the people who would watch the screen seeking anything from entertainment to education. TV has sometimes been called the "idiot tube," for the mesmerizing effect it would have on the watcher who could be distracted to catatonic inactivity just watching TV in a "mindless" way without having to bring any intellectual energy to the process of watching TV. This phenomenon was examined copiously by scholars from many disciplines, and numerous theories were proposed and debated that examined the "effects" of watching TV as would be found in many introductory books on mass communication.

One important assumption that underpinned the emergent theories claimed that the audience of TV was a relatively passive and often disengaged person (see, e.g., early research by Klapper [16]). This assumption was especially true for the programs of research that mimicked the natural scientific methods of research devising experiments and interventions with samples selected from the population to understand the effects of TV in numerical terms, as in the case of development of theories such as cultivation theory often considered to be a central tenet of understanding the effect of TV. Other researchers who subscribed to a more cultural anthropological, critical, and cultural interpretations of the role of TV in everyday life sought answers in the ways the audience would talk about television or through observational studies where the audience would be observed to see how they interacted with the narratives and discourses on television, as in the case of scholar originating in the Birmingham Centre for Cultural Studies and offering the vast array of literature on the role of TV within popular culture starting with the work of scholars such as [17]. In both approaches, however, there was the shared presumption of relative anonymity of the audience where any individual member of the audience was a part of a larger similar kind of people where the specific individual was unknown to those who created and circulated the content of TV. This presumption worked well for the industry because the content producers were only concerned with creating content that could be of appeal to a certain type of audience and not to any individual person since there was no definitive way of knowing who the person was.

This lack of information about a specific member of the audience was largely a factor of the way in which TV technology worked from its inception to the time when the Internet became a part of everyday life for large groups of people. Traditional TV technology was designed to deliver a robust image and sound to the audience without the audience having to come to the place where the content was available as in the case of movies. Like its predecessor—radio, TV brought the message to the home of the audience. The content distributors had little knowledge of who was watching the content, why they were watching the content, or if the audience was liking the content. For the content distributors such as the NBCs and BBCs, once the content left the antennas, there was no way to "control" the content and trace where it went or what happened to the content. At the reception end of the process, TV technology was a "passive" tool that merely displayed the content on the screen. Once the TV was turned off, the screen was just a part of the furniture in the room. This status quo changed with the increasing adoption of the Internet in the public sphere.

For a length of time, the television screen achieved a sense of status quo until around the 1980s when one of the key quests was to push the size of the screen so that a cinema-like experience could be reproduced in the privacy of homes for those who could afford the huge back-projection units that often had pictures of poor quality. This trend to improve the picture quality continued for decades.

However, a change started to happen in homes of the developed nations in the latter part of the 1990s, and by the 2000s, there was an increasing interest in a different screen that had made its way into the households of the developed nations—the computer monitor—very similar in technology to TV but often only available for displaying text that would appear on the screen in monochrome. However, the magic of the computer screen was in the fact that there was an additional device, the computer, which was connected to the screen that allowed the user of the computer screen to interact with the screen unlike the user of TV screen who merely viewed the screen. This change was especially important, because the interaction produced an active audience who could personalize the experience of using the screen. Even if the use was restricted to typing words on the screen, it was a different form of interaction with a device that looked similar to TV screen that the user was already accustomed to.

This interactivity with the computer screen progressed in several different directions in the early part of the twenty-first century. With increasing home-based access to the digital network of global computers—the Internet—the interactive computer screen became a conduit to a larger virtual space with increasing libraries of data that the user could access. This data, often residing on computers all over the world, could be accessed by any of the computers using the computer screen. Even though the computer and the TV screen were beginning to look similar, their functions were constantly diverging with the TV screen becoming a site for narratives that the user could not control. The narratives of the TV screen were simply sent out to the user with the expectation that the user would subscribe to the narratives when the screen brought them home; indeed, the users were expected to manage the everyday life practices of their lives to suit the demands of the TV screen if the users wanted to access the narratives on the TV screen. Therefore, people would plan their evenings around the shows they would watch on TV [2]. On the other hand, the narratives were within the control of the user on the computer screen. Here, the user could build an unending narrative by accessing multiple data that were connected by hypertext to each other allowing the user to constantly explore, discover, and construct the personalized narrative that the user sought and not what the TV institutions handed out.

The seduction of interactivity, coupled with the primacy of the computer screen over the TV screen, led to the demand for a single-screen solution where the screens could be merged into one where the single screen would serve primarily as a conduit for interactions that would allow the user to construct their personalized narrative that would appear on this single converged screen. It is this demand for convergence that allowed the ubiquitous merged screen to become a site for collecting data about individuals.[3]

3. The interactive narrative

The notion of convergence is particularly important in the context of the emergent screen in the private spaces occupied by individual members of the audience. The duality between computer screen as a site with the potential of creating an

[3] The notion of the screen has a multifaceted implication as discussed elsewhere [18].

interactive narrative, such as writing a book, and the TV screen as a site of consuming narrative was increasingly being erased as a single converged screen was replacing the two where the single screen would converge the different functions into one site. The notion of technological convergence precisely states that new tools often diminish the need for multiple tools with multiple functions into a single tool that offers the convenience of doing many functions with one gadget.[4]

The new digital TV with access to the Internet built into TV was becoming commonplace by the early 2000s and became nearly ubiquitous within 5–6 years, especially in the USA where all TV broadcast changed to digital broadcast on June 12, 2009, and nearly 97.5% of the American homes were ready for the mandatory transition.[5] Within the next several years, the transition to digital TV, the nearly ubiquitous availability of broadband connection to the Internet, and the emergence of content conglomerators, producers, and distributors that were distinct from the traditional media content providers offered new narratives to the audience. Thus, the dominance of corporations such as Netflix, Amazon, Hulu, YouTube, and others less prominent institutions allowed for narratives to be converged on the now-interactive screen in the private home. The narratives could now smoothly travel from the screen of the smartphone to the screen of a tablet computer, to the screen in the living room, to the projection system in the den, to the screen on the back of the driver seat in a car, and to the seat-back screen on a transcontinental flight. The same narrative was available everywhere.

This narrative was also partially composed by the viewer and could be completely distinct from the narratives composed and consumed by other viewers. This narrative had a distinct characteristic of interactivity that was missing in the traditional TV narrative.

The notion of interactivity, as proposed here, is derived from the way TV narratives have traditionally worked. In discussing the "flow" of television, it has been suggested that the programming decisions by the traditional TV content providers, from the CNNs to the BBCs, were thoughtfully made to construct an intertextual narrative that would span an evening of watching TV where the passive viewer has no little choice but to follow the narrative pattern constructed by a network. The availability of hundreds of TV channels, and the simple remote control, allowed viewers to "interact" with the narrative, create a partially customized narrative by switching between channels, and construct a narrative that gratified the audience, albeit within the limits of what was available on the channels. The availability of recording technology from the traditional VCR to the DVRs allowed users to shift the viewing time to one under the control of the viewer and watch only the narratives that the individual viewer was interested in.

The popularity of the Internet, accompanied with the availability of content producers and distributors mentioned earlier, however, altered the way in which the viewer could interactively construct narratives. First, it became far simpler to shift the viewing time, an advantage that was already available through the more elaborate home-based recording technologies. The viewer now had the ability to seek and find narratives at any time the viewer wanted to consume narratives. The boundaries of space and time were disrupted because the ubiquitous connectivity to the Internet through multitude of digital devices, some of which were portable, allowed the viewer to call upon programs and narratives anywhere and anytime the individual wanted. Second, the narratives could be obtained from a multitude of sources where the viewer was no longer restricted to the traditional providers of narratives such as the TV channels. The increasing digitization of video (and

[4] https://www.sciencedirect.com/science/article/abs/pii/S0308596198000032

[5] https://www.nielsen.com/us/en/insights/news/2009/the-switch-from-analog-to-digital-tv.html

audio) allowed for narratives to be obtained from sources that would never be considered providers of narratives, including noninstitutional sources that could not have afforded to be in the public sphere before the availability of the Internet. In particular, YouTube is the example of the worldwide video-sharing platform. A viewer could now call upon narratives that were from individual composers of narratives who would never be found in the traditional media spaces. All that was needed was the ability to do the appropriate queries to yield the kinds of narratives that the viewer was interested in. Third, the viewer could interact with multiple sources of narratives and create a customized "playlist" that specifically would be designed to meet the interest of the viewer and could be distinct from other viewers. Even though the viewer was still restricted to the narratives that were connected to the network, the choice was sufficiently large that a viewer could construct a very specific playlist to satisfy the "taste" of the viewer. Finally, all of the narratives, and the queries that create the conglomeration of narratives, could now be done through the interface of the TV screen which transformed from the passive screen to a site of interaction between narratives and the viewer.

The common theme for this transformation is the interactive power attributed to the viewer with the privilege of being able to search for the narratives based on the interests of the viewer. It is precisely this interactivity, now happening through the press of buttons on a TV remote control, that transforms the relationship between the viewer and the TV screen which now serves as the gateway for the vast digital space where content is located. It is precisely the nature of the gateway that makes the TV screen the window into the world of the individual viewer who, while watching the narratives, is also being "watched" by the TV screen.

4. Watched by TV

In February 2018, an analysis by the reputed magazine *Consumer Reports* announced that their testing revealed that the increasingly ubiquitous "smart TV" was capable of "watching" the viewer and keeping a detailed record of the viewer's TV watching patterns and related behavior.[6] As more of smart devices find a place in the average home, there are other gadgets that can work in tandem with smart TVs to perform the task of "watching." Consider, for instance, the Alexa devise that responds to voice commands to perform simple tasks, including connecting with a smart TV to control the smart TV.[7] All such devices and functions rely on the fact that these devices always "surveil" its environment—watching with built-in cameras, listening with built-in microphones, and capturing data with built-in sensors. Real people occupy the space that is under the surveillance of these devices.

It is useful to briefly consider the way in which the process of surveillance has been examined over a period of time. The practice of surveillance has been around since the times that people wanted to "watch over" others. The need to watch has most importantly been related to the notion of security where the watcher has been concerned about the fact that the watched poses a threat to the interests of the watcher. Those interests could be intertwined with the interests of the watched as well; thus, the process of watching becomes particularly important to maintain a sense of order within a specific societal system. Indeed, this perspective was aptly summarized by Mike Rogers, the chairman of the intelligence committee in the American House of Representatives, following the embarrassing report in 2013 that

[6] https://www.consumerreports.org/televisions/samsung-roku-smart-tvs-vulnerable-to-hacking-consumer-reports-finds/

[7] https://www.zdnet.com/article/how-cia-mi5-hacked-your-smart-tv-to-spy-on-you/

the National Security Agency (NSA) was surveilling the phone conversations of European leaders such as Angela Merkel. Mr. Rogers was quoted to have said, "It's a good thing. it keeps the French safe. It keeps the US safe. It keeps our European allies safe." [19]

The intimate connection between the maintenance of order and discipline becomes the central thesis of the academic examination of the process of surveillance when scholars such as Foucault [20] begin to connect surveillance to power and discipline. Among the different ideas of surveillance that emerged as important was the notion of the Panopticon which claims that the powerful is constantly watching everything all the time [21]. The Panopticon society was built around a strict definition of discipline, and in the late 1800s and early 1900s, the metaphor was principally used to describe the ways in which totalitarian nations and despots would want to constantly watch everything to maintain power and discipline (see, e.g., [21–27]).

In some cases, however, there is the emergent interest in examining how the watchers could also include corporations and institutions that had a motive unrelated to discipline and power but more interested in understanding the "market" that the institution would be interested in serving (see, e.g., [28]). This is especially true for the type of interactive technologies described in this essay. The advent of the technologies described earlier in this essay is, however, concerned with the corporate watching rather than the discipline- and power-based Panopticon world that earlier scholars were concerned with. TV in the house is now constantly watching and monitoring the individuals that use TV not to stop sedition or to exercise power over the watched but to better understand the "taste" of the watched to ensure that the watcher can best deliver content to the watched that the watched is most likely to consume. In a transactional system where commodities would be sold for profit the process of TV watching, the audience is to better commodify the audience who can then be sold to appropriate institutions as a part of a potential market. The point of interest in this transaction is not the seditious behavior of the individual, as in the case of cameras watching for shoplifters in large shopping areas, but more in constructing the life story of the individual to analyze and predict what the individual may like to consume. The process of watching is thus tied to creating the life story of the audience that TV can obtain by "watching" the data that the individual generates. The data was being generated for a long period of time through a variety of digital tools that a person could be using, but TV converged all the functions of data collection into one console which increasingly becomes ubiquitous in the life of most individuals in the developed and developing worlds. The Panopticon TV in the living room is thus watching a set of different things that early surveillance studies have pointed toward, albeit no longer in the context of discipline and power.

The new Panopticon created by TV at home is however less about discipline and power and much more about the way in which the "customer" who is being watched can be analyzed as a commodity who can be sold to those that are interested in selling to the watched. Simultaneously, the Panopticon condition becomes far more benign and perhaps even comforting to the watched by creating a cocoon of comfort within which the watched can dwell, where the cocoon is created by the TV itself. This process is possible because the customer voluntarily interacts with the TV by offering information to the TV and the vast array of interests that the TV represents. There are broadly two kinds of information that the watched offers to the watcher through the modern television—attitudes and behavior.

The information about the attitudes, interests, beliefs, and tastes is offered by the specific discourse the watched offers to the different providers of information that bring content to the TV. Consider, for instance, the simple act of accessing a digital video service such as YouTube that can be accessed on a smartphone and

then projected on the TV. In some cases, the TV itself would offer the option of connecting directly to a service such as YouTube. Indeed, it is estimated that nearly 80% of TVs in American homes would be connected to the Internet by 2019 and any TV that is connected to the Internet can potentially be accessing YouTube without the need for any other ancillary device.[8] This connection makes TV the conduit for the vast amount of data available on YouTube as well as many other segments of the digital space that contain searchable data. One of the key aspects of this connection is the ability of the person being watched search for specific kind of content that can be accessed by TV and displayed on the screen. The person inscribes attitudes and preferences in the language of the search. Companies like Google have been using similar information for a long time and are thus able to offer personalized advertising when a person is working on a computer. There are ways in which such personalization of marketing messages can be turned off through the adjustment of specific settings on an application provided by a corporation. The matter becomes a little different on TV where the very purpose of the tool, the TV, is to watch narratives, and in the environment of services such as YouTube, the viewer must reveal interest information to customize what the person is watching or interested in watching. The process of using TV to access narrative content is intimately connected with the process of revealing to TV the watcher's interests, attitudes, and beliefs.

This information is also connected with the disclosure of behavior patterns. Given that much of the consumption of the content is happening through the content providers such as YouTube, Hulu, Netflix, and other Internet-based content delivery systems, there is a constant record of what was watched, when it was watched, how it was paid for, and in some cases greater granular information related to the particular watcher in a multi-people home. For instance, Netflix offers the opportunity to set up multiple subaccounts under one primary account for each member of the household, and the data that is built up actually shows which particular person was actually using specific content. In homes that have multiple TVs, it is also possible to surveil which particular TV was being used to watch what content offering a detailed understanding of the specific members who are being watched by the corporations through the conduit of TV.

The attitude and behavior data that such surveillance offers eventually become a narrative about the people who are being watched over. It is this narrative that becomes especially important in the new Panopticon system produced by the modern TV.

5. The story of the watched

As suggested in the opening of this essay, analog person has increasingly been supplemented by the digital self where the latter can be constructed as a story about a person using the data that is produced by the analog being. The surveillance that the TV does within the privacy of the home is geared toward the construction of that narrative. A specific and unique narrative is produced by the Panopticon TV which examines the different aspects of the life of a person, and this life story of the person becomes a part of the analog person itself. This narrative can be quite detailed with some specific characteristic because of the number of different aspects of a person's life that is being watched by the TV as indicated earlier.

[8] https://www.telecompetitor.com/report-percentage-of-smart-tvs-actually-connected-to-the-internet-on-the-rise/

First, the narrative is cumulative. TV is constantly watching and updating the narrative. Every time an individual interacts with the TV, a new segment is being added to the narrative of the life of the person. This process is similar to the way in which other data about an individual is constantly updated, as in the case of the combination of location based on Global Positioning System (GPS) and applications that offer mapping information such as Google Maps. These applications retain the records of the movement of a cell phone through space and are thus constantly updated offering a "time line" of spaces that a person might have inhabited.[9] The TV surveillance operates in a similar way because the attitude and behavior data being collected by the TV is also constantly updated and the ongoing narrative of the life of a person is stored for future reference. This certainly has its advantages, where a viewer can, for instance, resume watching a show from where it was left off, offering the Panopticon TV an opportunity to see how the "rhythm" of a person's life unfolds on a moment-to-moment basis. Similarly, because TV knows the story of a person's life, it knows, through its applications, what the person may like to watch next with very well throughout suggestions being offered by the TV with respect to what entertainment the watched individual may be encouraged to watch. The TV watcher's life story is now known to the TV, and TV can gently help to shape that story to reinforce the elements of the story that have been prominent over time. Thus, a person who watched a few episodes of a science fiction would be encouraged to watch other shows belonging to the same genre.

The longitude of the narrative is also connected with the way in which an attempt is constantly made by the different tools of surveillance, including TV, to triangulate the data to create a narrative about the individual which would encompass *all* the data about the person. Current laws may make it a little difficult to correlate all the data sets, as in the case of privacy laws in the USA where the medical data of an individual is held sacrosanct and unavailable and generally unconnected with other narrative elements of a person's life. However, there is sufficient data about a person that can be available to the Panopticon TV which would allow the TV to surveil the individual in a more precise manner and further help design the ongoing narrative of the person being watched. For instance, gadgets like the Alexa, which respond to voice commands, can be connected to the TV to control the TV with spoken words, as explained in a guide, "Once you link Quick Remote with your Roku device and Alexa, you can use voice commands to tell Quick Remote to navigate the Roku menu system and select any app to start playing.[10]" There are two important aspects that need to be noted in these instructions: first, it shows how to connect three different applications (Quick Remote, Roku, and Alexa) to each other to have the convenience of sending voice commands to the Panopticon TV. All these three systems are sharing the data with each other and thus creating a robust narrative about the person who is being watched.

The second important aspect pointed out in these and numerous other such instructions is that the user, or the watched, is offering the data to construct the narrative. There are no hidden cameras or stealthy sensors that are surreptitiously watching the person. On the other hand, the person chose to find the convenience of talking to the TV and thus voluntarily obtained the devices and the applications which help to create the dynamic narrative that eventually makes the life of the person more comfortable. Indeed, this comfort is best maintained if the person's life story is fully known to the Panopticon TV and its army of other devices that is constantly updating the narrative of the person and creating the zone of comfort for the person that eventually becomes comfort for the analog self where the digital

[9] https://www.wired.com/story/google-location-tracking-turn-off/

[10] https://www.lifewire.com/use-alexa-with-your-tv-4161152

narrative helps to predict what the analog self needs. Consider, for instance, the notion of Internet of Things (IoT) that hopes to convert information from and about every device that surrounds an individual to a centralized interconnected database about the person making the life story as complete as possible. When such projects come to fruition, the surveillance, aided by the voluntary data offered by the individual, would transcend the TV. In that future, all devices, including TV, would be geared to collating the most complete life story of the watched.

6. Where does this leave us? The watched

There are a few things worthy of note with respect to the way in which TV has transformed into a tool for watching the watcher. First, this process has not been forced upon a population who had no option but to be watched. A small amount of knowledge about the ways in which the tools are watching us can allow us to shut off the surveillance. None of these tools, including TV, makes the data collection process a "required" activity to use the tool in its basic and rudimentary way. One can certainly watch television shows broadcast "over the air" without connecting the TV to the Internet. In a similar way, it is possible to use the Alexa speaker as only a portable speaker connected to a smartphone that has music stored in it. Indeed, even a smartphone can be used to make phone calls only without connecting it to the digital realm.

However, as these examples show, when a user chooses to not connect the TV to the Internet, or Alexa to its manufacturer, and the smartphone to a data plan, the user is sacrificing the ability to use the tools to their full potential. Additionally, the user is sacrificing access to the numerous programming options offered through these tools. There is, therefore, a constant tension between the inclination to maintain a sense of privacy while watching TV and retaining the convenience of the TV making suggestions about what would be interesting to watch. If TV is allowed to surveil, and it is connected with the other tools that surround the TV, then it will eventually be able to create an increasingly complete life story of the person who uses TV. This complete life story could become the way in which TV constructs a mediated reality for the person who is being watched. As discussed earlier, this reality can become progressively myopic and an echo chamber within which the person would reside while the Panopticon TV creates the comfortable media space for the person.

This future is increasingly realistic since the function of TV as the bearer of the programs offered "over the air" or even through the cable system that became commonplace in the 1980s is quickly shifting. In many parts of the world, there is the increasing tendency to "cut the cord" and get rid of the cable delivery of programming. Cable companies are increasingly facing a threat where the centrality of program delivery by cable is being replaced by program delivery via the Internet. Numerous companies such as Amazon, Roku, and Apple are offering accessories that could be connected to the TV, and program would be delivered through the connection of the accessory to the Internet. Thus, a Roku "stick" can connect to the Internet, and the programs would be offered by Roku in collaboration with other content aggregators such as Sling, YouTube, and Hulu, to name a few. In some cases, a complete ecosystem is produced by a company like Amazon that would offer the accessory for TV, a household voice activated information retrieval system such as Alexa, and content through the vast store of content that Amazon owns. As the user is migrating to these options, the user is also required to share information through the conduit of the TV with all these different corporations that continue to watch the watcher. It is indeed a world of constant surveillance, whenever the TV is switched on.

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