

ORIGINAL ARTICLE

To Affinity and Beyond: Clicking as Communicative Gesture on the Experimentation Platform

James N. Gilmore 

Department of Communication, Clemson University, Clemson, SC 29634, USA

*This article analyzes how users' engagements with digital platforms through the act of clicking are coded as meaningful for the production of affinity, a way of assessing identity amongst users. Drawing on an understanding of identity as related to the Latin idem—or same—this article explores how streaming media company Netflix uses click-based A/B testing to create “taste doppelgängers” that live in “taste communities” and help structure the recommendations, home pages, and image thumbnails that users experience. Clicks are figured as communicative gestures that platform engineers decode and analyze as part of ongoing experiments for refining algorithms and interface design. Drawing additionally on an analysis of Netflix's recent move into interactive television—in particular, *Black Mirror: Bandersnatch*—this article ultimately argues for attention to how platforms like Netflix treat users as test subjects for the purposes of constructing idem-based affinities.*

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In Facebook's Ad Settings, users have the option to see some of the ways the company classifies them and their interests. These categories are used when Facebook sells user information to advertisers, as well to help determine which advertisements and page recommendations to display to particular users. Some of my presumed interests, like “Movies,” fit me like a glove. I am, according to Facebook, interested in the “industry” of “University” and “Esotericism” (one wonders to what degree the programmers have linked those two). But the platform also suggests I am interested in Stanford University and Concordia University, two institutions to which I have no affiliation, nor have I ever visited. In my “Lifestyle” interests, Facebook tautologically suggests I am interested in “Life.”

Corresponding author: James N. Gilmore; e-mail: jngilmo@clemson.edu

These Categories are not simply silly instances of guesswork: they are derived from the monitoring and measuring of how I log on, from where, what I click on and share within Facebook, and a variety of other metrics. This included, until 2017, the category “African American,” an ethnicity I cannot claim as part of my own identity. As part of Facebook’s “Ethnic Affinity” classifications—which are assigned “based on pages and posts [members] have engaged with on Facebook” (Angwin and Parris, Jr., 2016, para. 14)—Facebook’s algorithms interpreted my engagements as, for whatever reason, consistent with what constitutes African American. Following an investigation from website *ProPublica* that demonstrated how such ethnic affinities allowed for advertisers to discriminate against users (Angwin and Parris, Jr., 2016), the company disabled the feature (Goodman, 2017), although a follow-up investigation in 2018 revealed the company still relied on vague notions of “multicultural affinity” in how it grouped users together for targeted advertising (Tobin, 2018).

While Facebook has had a history of conducting experiments on its users based on classifying them in a variety of ways (perhaps most notably Goel, 2014), ethnic affinity categorizing raises a number of concerns about how Internet platforms make sense of their users: How are individuals classified? What is the basis of this classification? Existing research has attended to the ways in which the personalization of platform experience troubles the dissemination of content (Gillespie, 2018). The controversy over Facebook’s categorizations exemplifies the complicated relationships between human identity and machine learning, but many other digital platforms also rely on a variety of processes to classify and categorize their users in a variety of ways.

In order to demonstrate how these processes of identity classification operate on a specific platform, this article analyzes how streaming media company Netflix conducts experiments on its users through A/B testing that decodes user clicks as meaningful information. A/B testing, explored in greater detail below, is an experiment that places subjects in either a control or variable group to compare responses to any number of different circumstances. Netflix uses these test results to make decisions about how to design the platform interface and how to portray content to users that have been grouped in thousands of different so-called “taste communities” (Nguyen, 2018). In doing so, it may be more accurate to refer to Netflix subscribers not as users, but as test subjects. Moments like my experiences with Facebook’s affinity categorizations—where an individual who could not reasonably claim to be African American is nevertheless characterized as such—suggest that how a human understands their identity is often at odds with how technical systems are designed to process identity categories.

In the first part of this article, I establish a framework for thinking about identity as a set of affinities—what Netflix calls “taste doppelgängers” (Elkins, 2019)—that are mapped through clicks. Doppelgängers are doubles or lookalikes which are, crucially, not directly related to a living person. They have similarities, but they are distinct and separate entities (Doppelgänger, n.d.). Taste doppelgängers, then, are figures that claim to replicate a user’s tastes and preferences, effectively acting as their

double for data analysis purposes. The construction of Netflix's taste *doppelgänger*s is achieved, as I explore below, through **clicks**. Clicks are communicative gestures that are not only about navigation and selection, but also assist in the process of classifying users into various taste communities through testing clicks as indicators of preference, predictors of future behavior, and pathways to building identity. After establishing this framework, I provide an overview of Netflix's commitment to A/B testing as part of its wider model of "platform experimentation" (Urban, Sreenivasan, and Kannan, 2016) through an analysis of Netflix's public technology blog. Finally, I analyze Netflix's recent development of what they call interactive television, which embeds testing into content itself, providing users a series of binary decision options to assess how they click through narrative.

Focusing on the ways in which human gestures are processed contributes to an array of scholarship on digital culture, such as that focusing on personalization (Turow, 2011) and algorithmic information processing (Hallinan and Striphas, 2016) by emphasizing how communicative gestures are understood as data points that are used to compare users in the ongoing cultivation of affinity-based identity. Examining elements of the experimentation platform such as A/B testing—and how Netflix uses it to build affinity groups through data analysis—follows Jonathan Cohn's (2016) suggestion to move beyond recommendation systems and emphasize other functions of these complex platforms. The focus on identity-as-affinity, as a matter of finding similitude within data sets, is positioned here as part of a larger critique of these platforms, as well as how conceptions of culture are increasingly commingling with scientific experimentation and binary understandings of communication.

Identity as affinity

Facebook's ethnic affinity category exposes just one of the ways human identities are considered to be discernible through the data that users generate through their activity—often, their clicks—on a platform. With affinity, identity is related more to its Latin origin, *idem* (meaning "same"). Throughout this article, I use the term *idem* to frame an understanding of identity predicated on similarity (Ricoeur, 1991). Such understandings of identity are understood as the basis of social bonds and community formation, which scholars like Brock (2009) have explored as conscious acts of performance for social, political, and cultural purposes online. Facebook's categorizations use communications from users—such as clicks—to search for *idem*, which can be understood as the perceived qualities of "same-ness" that exist across categories including race, ability, and taste. On Netflix, as discussed below, this search for *idem* entails constant experimentation that aims to classify users within taste communities, where perceived affinities are grouped together. There are, as research in critical technology studies demonstrates, considerable risks with matching a click to some kind of affinity group without one's consent. From being mis-gendered by facial recognition technologies (Keyes, 2018) to having algorithms fail to recognize

black faces (Simonite, 2019), the ways in which technical systems define human identity is often limited, if not discriminatory.

Where Ricoeur (1991) developed the difference between *idem* (similarity) and *ipse* (self) as two ways to categorize identity, others such as de Vries (2010) have examined how algorithmic profiling impacts one's construction and experience of identity online. My contribution to the understanding of *idem* on digital media shifts the focus from an individual's intentional performance of identity (Goffman, 1959) or even how an algorithm processes such a performance, to emphasize how platform engineers treat digital platforms as experimentation sites for running tests designed to purportedly understand more about how *idem* can be grouped and processed through technical systems. While systems vary in terms of how they try and establish *idem*, my focus on Netflix emphasizes the communicative gesture of clicking. Clicking traditionally requires a human user to press some appendage (a finger) against a button (a computer mouse) to make a series of selections, such as choosing which pages to visit, which advertisements to explore further, and which video to watch next. These choices—these clicks—are communicative in that online platforms use them to categorize users based on shared qualities.

While Netflix's public-facing documents often use more general words like activity to describe how users communicate with this platform, I argue that clicking is the activity with which the company is primarily concerned. Activity—as a rather vague word—serves to mask the very particular processes, such as A/B testing, that Netflix uses to run experiments. Such processes of categorizing individuals based on available data about them have existed for some time, from state censuses (Anderson, 1983) to death records (Wernimont, 2019), and other infrastructures that are designed to classify large sets of people (Bowker and Star, 1999). The establishment of taste communities makes the categorization of human users—as well as the construction of their taste doppelgängers—a continuously unfolding process. Each click, in other words, might be thought of as an event that is then matched against some forms of data on an individual user (either their own historical data on the platform, or comparing their clicks to other users) to reassess the *idem* of their communities and doppelgängers over time to ensure that the presumed similarities still hold for each test subject.

The concept of “taste doppelgänger” helps to establish what *idem*, as a means of locating similarities, is trying to accomplish on Netflix. Soliman (2015) uses the related “digital doppelgänger” to describe “lookalikes” found through social media. Sandra Robinson (2018), following Bode and Kristensen (2015), suggests such doppelgängers are related to, among other things, “the production of facts about oneself” (p. 419). In this regard, Robinson suggests, the figure of the doppelgänger aligns with other extant concepts like “data double.” Data doubles (Poster, 1990; Haggerty & Ericson, 2000) generally entail “operations that first abstract human bodies by separating them into various data flows or streams and then reassemble them into data doubles targeted for intervention” (Ruckenstein, 2014, 69). For

Netflix, these interventions ostensibly entail the larger project of personalization and recommendation that shapes how users encounter streaming content, but this process also allows Netflix, as detailed later in this article, to use their platform to run ongoing experiments on user behavior.

This is all to say that these concepts are about identity, but not necessarily the cognitive and conscious construction of identity. Such doppelgängers are constructed primarily through clicks. The following section unpacks why it is important to center such an analysis on the act of clicking, and why clicks are the constitutive gesture that helps facilitate this development of *idem*.

Click as communicative gesture

“Click” entered human language as an imitative word—an onomatopoeia—echoing a particular kind of noise or utterance. It has since been used to describe distance (200 clicks northwest), interactions with graphical user interfaces (click the mouse here), the coming together of parts in a system (the seatbelt clicks into place) or abstract ideas (“it suddenly clicked”), as well as the compatibility between two people (“we just clicked”). Broadly stated, clicking seems to refer to a convergence of things, a signal whereby objects or subjects which were once separate come together in some sort of larger whole. Clicking in digital cultures is crucial to how people come to forge connections to platforms, and these connections are crucial for the ongoing accumulation of computer data based on these gestures and engagements. Clicks are part of the protocols by which things happen online. They help to formulate the metrics that guide how platform developers, advertisers, and content producers make sense of user behavior.

In communication and media industries research, clicks are often treated as one component of a larger system of measurement and valuation in analyses of platforms, algorithms, and user behavior. Some studies have focused on clicks in industrial and cultural contexts, where these metrics alter the ways users engage with media and industries learn about their audiences (Sienkiewicz & Marx, 2014) via more granular patterns of content engagement. In related discussions in advertising and journalism, clicks are often associated with the attention economy (Davenport & Beck, 2001), which confers capital to the ways in which individuals give attention to various objects, texts, and platforms. Attention is in part measured through clicks (often called “engagements” in advertising documents). The concept of “click bait” (Blom & Hansen, 2015)—often ascribed to fluff articles whose topics, headlines, or formatting are designed to elicit clicks or engagements from a wide population of potential readers (e.g., headlines with the ending, “You Won’t Believe What Happens Next”)—in part confirms this: the value of a link comes from the aggregation of clicks navigating to it.

Clicks are, then, part of structures that measure engagement based on registering interactions (Gerlitz & Helmond, 2013). As Turow and Couldry (2018) have put it, clicks are one element of larger apparatuses designed for data extraction built around

the creation of profiles and the “industrial constructions of audiences” (pp. 418–419). Hund and McGuigan (2019) have also demonstrated how these click measurements are also becoming important for so-called “influencers” who sponsor products in social media stories and are compensated based on a variety of engagements with their posts, including clicks. Conceptions of clicking as containing value go beyond industry concerns. Ali Na (2018), in a feminist analysis of the computer mouse, has provided a sustained consideration of clicking’s multiple meanings by suggesting “Clicking shapes fundamental contemporary relationships of technology, negotiating everything from consumerism to activism” (pp. 221–222). Here, clicks are enmeshed in operations of power that rely on aggregating and analyzing clicking behavior. For Na, clicks activate different desires for those who click, while also facilitating the continual gathering of data about user interaction.

My positioning of clicking as a gesture builds on Vilém Flusser’s understanding of gesture as an act of bodily coordination that is meant to serve as a means of communication (2014). Flusser suggests one way “of defining ‘gestures’ is as a movement of the body or of a tool attached with the body, for which there is no satisfactory causal explanation. To understand a gesture defined in this way, its ‘meaning’ must be discovered” (p. 3). Netflix’s A/B testing presumes to discover such meanings through analysis of user clicks. Flusser notes: “The words we use to describe this movement of our hands—*take, grasp, get, hold* (. . .) have become abstract concepts, and we often forget that the meaning of these concepts was abstracted from the concrete movement of our hands” (p. 32). What might be called the gesture of clicking has likewise been abstracted (or converted) into data points, which are used to assess an understanding of identity rooted in *idem*.

Because clicks entail the action of pressing one’s finger to, say, a computer mouse or a trackpad, they might be said to feel a particular way or produce a range of feelings, aligning their study with the use of affect in critical theory. The below analysis of Netflix’s blogs as well as news reports related to developments in the company’s algorithms and interface demonstrates how Netflix’s representatives rarely discuss affect. Rather, they emphasize the language of affinity, which is presented as a mathematical problem with engineering solutions. This aligns, at least to a point, with how Brian Massumi (1995) famously described affect as “autonomous” and as existing outside social relations (or, here, outside the relations described and manufactured through machine learning and experimentation). The data-driven production of *idem*—of identity predicated on similarity—on Netflix prizes metrics which do not, on their surface, overtly concern affect. As Clare Hemmings (2005) suggests, proponents of affect doubt the capacity for quantitative empirical approaches “to account for the fullest resonance of the social world we wish to understand” (p. 549). Netflix’s use of clicking in A/B testing presumes exactly that: to treat data science as a means of full accounting. Likewise, Nigel Thrift (2004) argues that “affective response can clearly never be guaranteed” (p. 68), but Netflix’s experiments rest on an assumption that, even if this is so, *idem* can work towards such guarantees through how it is designed into home pages, image thumbnails, and trailers through categorizations,

much as Thrift suggests affective response can “be designed into spaces” (p. 68). While this article is not overtly concerned with affect, I mention it here as just one example of the ultimate shortcomings of experimentation platforms, and how they cannot fully account for an identity based in *idem*, much less other models of identity and affect.

Clicking entails selection (Bhaskar, 2016), and that selection is communicative. It is a means of choosing a news story to read, a video to watch, or a website to visit. It indicates narrowing from a field of possibilities (i.e., a list of results from a search return). Programmers for platforms like Netflix construct experimental and machine learning processes that might be said to “decode” these gestures, to borrow slightly from Stuart Hall’s famous model of media reception (1993). Whereas Hall pointed to the multiplicity at work in how audience members may have competing but nevertheless valid understandings of a message, this data science mode of decoding makes assumptions about what clicking means: clicking on a Netflix show means one is interested in that program, according to such tests. The programmers and engineers in the next section repeatedly invoke the importance of getting users to click on titles. Through processes of algorithmic filtering, automated sorting, and pattern discovery (Karakayali, Korstem, & Galup, 2018), the full set of possibilities for how a platform understands a human identity is gradually stripped down in the search for *idem*; categorization produces constraint, rather than embraces multitude (Beer, 2017). Understanding clicking as a communicative gesture entails understanding it as meaningful and interpretable. These interpretations are built, as the following sections examine, on the constitution of *idem*; what a person *does* (how a person clicks) is equitable with who a person *is* (their identity).

Netflix as experimentation platform

The next two sections apply this framework to Netflix’s experimentation platform. First, I provide a discursive analysis of how Netflix’s technology blog discusses A/B testing to assess how its engineers position their work as an experimentation platform. Here, clicks are treated as activities which communicate taste, help the company’s engineers construct taste doppelgängers, and program personalization. Second, I interpret Netflix’s recent move towards interactive television—and, in particular, *Black Mirror: Bandersnatch* (2018)—to examine how the logics of experimentation are increasingly embedded into programming.

On Netflix, the data gathered from users’ clicks are presumably used to match them with personalized film and television content. The search for *idem* is figured as a process of placing a user within the appropriate data set which best reflects their interpreted identity, providing content recommendations that align with past behavior. Clicking is an activity that is interpreted as the production of *idem*—a production of a taste doppelgänger, as well as analyzing how that doppelgänger behaves, and how it interacts with Netflix’s platform and content. In public discussions, Netflix often defines identity in ways that resonate with *idem*’s focus on similarity. Vice

President of Programming Todd Yellin put it this way in 2016: “Geography, age, and gender? We put that in the garbage heap” (Morris, 2016, para. 2). As *Wired*’s Brian Barrett (2016) also framed it when Netflix expanded globally that same year, “Freedom from worrying about [these] signals (...) allows Netflix to hone its recommendations more sharply, and against less obvious criteria that for competitive purposes it doesn’t divulge” (para. 13). Each click matters for how it is interpreted and related to other clicks on the platform, and how the engineers can articulate discrete clicks into taste doppelgängers occupying various taste communities (Nguyen, 2018).

For instance, the company’s advertising department routinely produces multiple trailers for each original program designed to appeal to different taste communities (Bishop, 2017), as well as an array of thumbnails designed to make programs attractive for different taste communities (Nelson, 2016). The company’s algorithms are designed around personalization: they make determinations about users, deciding entertainment preferences based on what content is consumed, for how long, and on what devices or software (Lury & Day, 2019). Through testing, the platform is tweaked and refined based on controlled experimentation that values comparisons between sets of binaries—A and B, control and variable, yes and no, left and right. Scholars of algorithmic culture such as Blake Hallinan and Ted Striphas (2016) have argued such testing heralds a change in the production of culture, where modes of authority are transferred from human debate to machinic processes (p. 128). While much research in communication and media studies still interprets Netflix as an entertainment company participating in (if nevertheless disrupting) extant notions of television, cinema, and distribution (Lobato, 2019), Hallinan and Striphas’s analysis points to the importance of figuring Netflix as equally a technology company that bases much of its operations on computer engineering, experimentation, and data science.

The *Netflix Technology Blog*, which the company hosts on popular blogging website *Medium*, has been operating since November 2013 and features writing on the technical and engineering side of the company. The *Netflix Technology Blog* acts as a negotiated space, where members of the Netflix team disseminate information about its technical and infrastructural workings (Elkins, 2018), but always in ways that protect the proprietary nature of this work. While there are many themes and recurring conversations throughout the *Netflix Technology Blog*, I focus on A/B testing. These tests divide participants into a control (A) group and a variable (B) group. A 2016 blog post that is repeatedly referenced in subsequent posts outlines A/B testing as one of the core values of Netflix’s experiments and engineering, boasting that “even the images associated with many titles are A/B tested, sometimes resulting in 20% to 30% more viewing for that title” (Urban, Sreenivasan, & Kannan, 2016, para. 2).

Subscribers to the Netflix service are considered to be available for enrollment into A/B testing experiments at any time, and most are enrolled in several at once. These enrollments occur without notifying the subscribers—a right they have signed away

through agreeing to the platform's terms of service. Netflix tends to use two different types of allocation for conducting A/B testing. The first, "batch allocation," sorts members based on "a fixed and known set," which can allow for greater control over where members are grouped and in which tests they are engaged (Urban et al., 2016, para. 8). The second, "real-time allocation," looks for users who are demonstrating some sort of behavior (such as using the iOS version of Netflix on an iPhone), and then adds to them to the test in real-time (Urban et al., 2016, para. 9). The blog contributors call this "the Experimentation Platform: the service which makes it possible for every Netflix engineering team to implement their A/B tests" (Urban et al., 2016, para. 10). "Experimentation Platform" is a term used in other companies like Uber, allowing engineers to constantly test new features or work on developing machine learning models with minimal awareness or interference from users (Deb, Bhattacharya, Gu, Zhou, Feng, & Liu, 2018). Where Nick Srnicek (2017) classifies Netflix as a Product Platform—relying on subscription-based services and promises to subscribers that continuous clicking will produce a more pleasurable experience of the service—Experimentation Platform positions these companies as simultaneously interested in treating members as participants in unending experiments designed to learn more about their behavior and their affinities.

Netflix claims to use A/B testing as a way to run experiments on every element of its platform. The blog contributors use thumbnail image selection (the poster or image that is shown for any given title) as a recurring point of conversation and analysis. Early iterations of these experiments "built a very simple A/B test where members in each test cell get a different image for that title. We measured the engagement with the title for each variant," which included click-through rates and duration of play (Krishnan, 2016, para. 14). Subsequent iterations of this test experimented with more varied types of artwork to try and find repeatable strategies through "additional longitudinal A/B tests over many months" (Krishnan, 2016, para. 22). These A/B tests inspired Netflix to develop multiple still frames to serve as key artwork for these thumbnails. Some examples on their blog posts, such as images promoting season two of *Stranger Things*, show nine possible variations (Chandrashekar, Amat, Basilico, & Jebara, 2017). The results of these experiments—which measured and monitored how users clicked on content based on artwork—directly motivated changes in how images were shown to users.

Just as particular thumbnail images correspond to a member's taste doppelgänger and the taste communities to which it belongs, other changes to Netflix's interface and design also build *idem* from clicks. In April 2017, Netflix announced that it was replacing its five-star user rating system with a binary thumbs-up or thumbs-down rating: "A thumbs-up tells Netflix that you like something and want to see similar suggestions. A thumbs-down lets us know you aren't interested in watching that title and we should stop suggesting it to you" (Johnson, 2017, para. 3). Again, the gesture of clicking on "thumbs-up" is communicative; it tells Netflix something about the member's taste doppelgänger. In their blog post announcing this change, director of product innovation Cameron Johnson touted how testing (presumably A/B testing)

helped ensure them this was the right choice: “when we tested replacing stars with thumbs we saw an astounding 200% increase in ratings activity” (Johnson, 2017, para. 8). The ongoing personalization of home pages also entailed the programmers combining A/B tests with a “machine learning approach to create the scoring function by training it using historical information of which homepage we have created for our members, what they actually see, how they interact, and what they play” (Alvino & Basilico, 2015, para. 17). Again, the gesture of clicking is understood to be meaningful and is used to run tests that propose to build more engagement.

Throughout these and other blog posts, members of Netflix’s team extoll the virtue of their experimentation platform, and the melding of data analysis, machine learning, and human programmers. A post on the development of the company’s marketing strategies, for instance, suggests, “Just as we improve our Netflix product through A/B testing, our marketing team embraces experimentation to help guide and improve human judgement” (Parulekar & Krishnan, 2018, para. 9). This relates to what Ted Striphas (2015) has described as the “enfolding of human thought, conduct, organization, and expression into the logic of big data and large-scale computation” (p. 396). This section has traced how such conduct and expression are implicated—through the communicative gesture of clicking—into ongoing practices of experimentation melding data science and human judgement to learn about people.

Interactive television as click-based experimentation

As the above analysis of the *Netflix Technology Blog*’s focus on A/B testing makes clear, Netflix has expanded its click-based experimentation in ways that strive to more granularly define each member’s taste *doppelgänger* and analyze their click-based activities with the platform in the ongoing cultivation of *idem*. In December 2018, Netflix released *Black Mirror: Bandersnatch*, a stand-alone film for its science-fiction anthology series *Black Mirror* that exemplifies the company’s foray into what it calls “interactive television” (Newton, 2017). Currently, interactive television has also seen versions of children’s programming (*Puss in Boots: Trapped in an Epic Tale* [2017]) and reality shows (*Bear Grylls: You vs. Wild* [2019]), with Netflix promising to engage more genres over time (Schwartz, 2019). Modeled off of the “Choose Your Own Adventure” genre of storytelling and taking advantage of the capacity to build branching narratives into its programming, *Bandersnatch* repeatedly presents a test subject with two options—an A option and a B option.

Bandersnatch—and interactive television more generally—needs to be understood as *experimental*. This is not experimental in the generic sense, where experimental cinema or art is correlated with avant-garde sensibilities, but *experimental in the scientific sense, as these interactions convey Netflix’s preferred mode of* binary testing to run more and more types of experimentation on its members. These experiments, again, work through interpretations of clicking. To underscore the vital importance of clicking—and to set participants up for the experiment—*Bandersnatch* begins with

a short “tutorial video” which helps explain the interactivity. The tutorial begins by showing a small television, which opens onto an animation of a stick figure walking to the edge of a dock where two sharks swim in the water below. A narrator informs the test subject: “Throughout your viewing, there will be moments where choices will be presented at the bottom of the screen.” A small black bar raises onto the bottom-third of the animation, presenting two options. From here, depending on the device being used to watch *Bandersnatch*, the tutorial video provides one of four audio tracks. For example, when watching on a desktop or laptop computer, the narrator says: “To select one, just click, using your mouse or trackpad. Keep your mouse or trackpad close at hand. Do you understand?” Just as participants in a study are prepped on protocols, so too does Netflix take time to outline how to properly communicate during the experiment.

An early set of decisions in *Bandersnatch* exemplifies how it operates as experimentation. The first decision point asks the test subject to choose between two (real) breakfast cereals: Quaker’s “Sugar Puffs” or Kellogg’s “Frosties.” The second decision point asks the test subject to choose between two cassette tapes: “Thompson Twins” (which cues their song “Hold Me Now”) or “Now 2” (which cues “Here Comes the Rain Again” by Eurythmics). These choices—between two relatively similar options—mimic the subtle variations of A/B testing described above, where experiments show things like relatively similar thumbnail images to try and determine more granular distinctions between taste communities. While the choices in *Bandersnatch* do escalate in their consequence (forcing test subjects to decide, for instance, whether the main character or his coworker will jump off a roof while high on drugs), these initial decision points demonstrate how the program replicates some of the company’s larger trends in experimentation (Damiani, 2019).

Despite the presence of recurring binary options to navigate through *Bandersnatch*’s narrative—accepting or denying offers and making a series of yes-or-no choices—it does not truly play out as a choose-your-own-adventure with many available possibilities. While there are multiple pathways to explore, the overall progression of the narrative eventually forces a test subject to, for instance, talk with the main character’s psychiatrist about his mother’s death. Failure to progress the narrative satisfactorily will occasionally take the test subject out of the narrative and give them the option to “go back” to where the timeline broke down. If a test subject wants to progress further in the narrative, the design of *Bandersnatch* forces them to make particular kinds of decisions that advance the story along its predetermined rails. Its binaries offer the illusion of choice; to really progress through interactive television involves interacting a particular way.

Bandersnatch extends the experimentation platform. It offers the capacity to analyze decisions about narrative choices, soundtracks, featured products, and other components that are gathered and stored as data sets. Positioning *Bandersnatch* as an experiment reveals two key things. The first is that A/B testing is no longer confined to a set of behind-the-scenes, infrastructural operations that test subjects may only become aware of intermittently, such as changing image thumbnails or

shifts in recommendations. *Bandersnatch*—and so-called interactive television more broadly—embeds a variant of A/B testing explicitly into the programming itself, asking test subjects to repeatedly click on one of two options, and then storing those choices as records of engagement to be matched against others in taste communities.

The second thing this experiment reveals is that binaries themselves are troublesome things. In rendering narrative as a set of discrete binary options, *Bandersnatch* forces its viewers to repeatedly click on pathways without providing any middle ground; as Lawrence Grossberg (2010) has framed this problem, “the choice of one entails the negation of the other” (p. 16). Because *Bandersnatch* quite literally cannot continue unless some particular choices are made, it reveals how binaries are actually a constraining mode of experimentation. In Maximilian Spiegel’s (2019) overview of Grossberg’s work, he argues for a definition of experiments as “acts in which the outcome’s (. . .) unknowability is embraced” (p. 59). This emphasis in unknowability, based in cultural studies, seems a far cry from the data science experiments that pervades Netflix’s infrastructure and content production. At Netflix, the company’s executives and programmers pride themselves on the supposed capacity to engineer knowability.

In February 2019, researcher Michael Veale shared a dataset he was able to acquire through Europe’s General Data Protection Regulation (GDPR), which allows citizens to request information on how their data is being collected. Veale’s data set revealed Netflix gathered “the choices made during the playback” (labeled “input_type”) and named each of these choices (labeled “choice_code”); the data set provided to Veale also included notes on whether the individual user had taken a particular “path” through the narrative (labeled “has watched choice”), the “platform on which the title was streamed,” as well as “the date” and “the hour” in which each input type was selected (Gault, 2019). This metadata reveals what kinds of interactions Netflix values—times, choices, and platforms—and demonstrates that clicking is largely what generates the production of data sets.

Netflix’s storage of these data sets for all test subjects who have interacted with *Bandersnatch* suggests *something* is done with them, even if that something remains masked behind proprietary corporate policies. If Netflix uses these choices as part of their construction of *idem* (i.e., using a choice between two cassette tapes in *Bandersnatch* as indicative of a test subject’s personal preference and, therefore, the similar taste communities to which they belong), then this removes the capacity for the test subject to explain the reason behind this decision. What matters is the *perceived* capacity for identity to be communicated (though clicking), gathered (on the platform’s storage), and then decoded (through machine learning). As these data sets are analyzed—both by machine learning processes and human engineers—they come to be organized and articulated, such that inferences might be drawn between the choices made (the “input_type”) and the time the click was made. Through these analytic inferences, taste doppelgängers are constituted.

Writing for *Wired*, Peter Rubin (2019) describes *Bandersnatch*—and interactive television more broadly—as “Television in the age of psychographics” (para. 7), a

reference to marketing methods that purport to describe psychological attributes of consumers (Mittal, 2016). The *Netflix Technology Blog* and the Veale data set might not necessarily point to a psychological analysis of Netflix subscribers, but the experimentation platform does indicate the mobilization of data analysis for refining populations within taste communities. *Bandersnatch* underscores the imperatives of click-based metrics for performing A/B tests, classifying users, and building taste communities around all manner of decision-making within Netflix.

Conclusion

This article began with ethnic affinity categorization as one widely contested means of using clicks to classify platform users. This understanding of identity—based in *idem* and similarity—was explored in relation to clicking as a communicative gesture that is used to make a number of decisions about users on platforms like Netflix. From there, this article analyzed how Netflix's technology blog discusses A/B testing to explain how clicks are used to build affinity, before finally showing how interactive television provides its own set of experimentation for embedding A/B testing into programming, not just the choice of programming or the logging of how long a user views content.

Through its emphasis on clicking as a communicative gesture, this article contributes to ongoing discussions of how human behaviors fuel the constitution and refinement of digital *doppelgängers* based, in part, on experiments regarding on what and how human test subjects click. This rests on an understanding of identity-as-*idem*, as about finding matches and sameness that relate to programmed understandings of how to understand who people are. This article has focused on Netflix's experimentation platform and its commitment to A/B testing through analysis of how its company blog discusses practices like image visualization experiments, as well as how the shift towards interactive television heralds additional modes of experimentation. The technology blog itself affords many other potential directions for researchers to examine how the experimentation platform works, as well as to examine how the public-facing documents of other companies provide means to understand how they treat users as participants in ongoing experiments designed around locating affinity and *idem* through analysis of clicks.

Further, as experimentation becomes explicitly embedded within programming—as in *Bandersnatch*—it remains important to attend to how Netflix and other companies position users as test subjects. Such a shift challenges how media studies and communication imagine audiences and viewers, both as agents who negotiate taste as well as relatively stable demographics to which media industries cater. To propose describing subscribers of Netflix as test subjects rather than users or viewers is to continue to critically explore how the processes of media production and audience analysis are rearticulated through experimentation, A/B testing, and data science.

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