Emotional Roboprocesses

Draft 3

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Most critics of roboprocesses, including other contributors to this book, take aim at their impersonal nature. We may see such processes as cold, indifferent to the specificities of human experience, and hyperrational to the extreme, often producing absurd or Kafka-esque outcomes. When we confront roboprocesses, we tend to bristle: "I am not a number. I am not a machine. I am a human being." We believe that what makes us human cannot be discretized, a belief tied to conceptions of human uniqueness that have roots in the Romantic era, if not earlier. We believe that machines are cold, rational, and predictable, while humans are hot, emotional, unpredictable, and wily. We may concede that machines and bureaucratic processes can regulate our movements at times—they can dictate our motions on an assembly line or force us to take off our shoes and hold a pose to get through security—but we believe they can never regulate our thoughts, feelings, and desires. We insist we can love, make friends, be sad, or get angry without machinic processes dominating these practices.

However, right now, a host of data scientists, computer scientists, software engineers, human-computer interactionists, and above all marketers and advertisers are developing roboprocesses to control and direct emotional and relational practices, to channel their energies, and to fuse these practices with mediated messages or commodities. Moreover, these roboprocesses are not cold and hyperrational, but hot and emotional – or, at the very least, they reflect our emotions back to us as we engage with them. These processes undermine our long-held assumption that machine processes can only be cold and unemotional.

Such emotional roboprocesses are intimately tied to who we are, what we like, or who we're with. They emerge through a historical context that brings together disparate practices: sociality, consumption, emotional expression, marketing, identity formation, and surveillance. Rather than view emotional roboprocesses as impersonal, bureaucratic machines, we must question the quality of their highly personal relationships to people. We must ask how emotional roboprocesses seek to capture, reflect, and even structure our inner lives and subjectivities, and what effect this structuring has on how we think and view the world, especially in our capacity as hot, emotional human beings.

Exploring the historical context of emotional roboprocesses allows us to determine how capitalist forces began to view the inner energies and colors of emotion as resources to manage. Taking emotional reaction to media messages as a central variable lets us consider how these observation practices have morphed into practices meant to digitally capture human activity, including emotional and social activities, and encode these activities into machines. Eventually, such machines will automatically supply us with emotional reactions to the world, or at least reflect and respond to our reactions. The machines will appear to understand human emotion, and they will encourage us to love them – and those who control them.

Consumer Capitalism

The key historical context of emotional roboprocesses is consumer capitalism. As I write, news outlets are tweeting anxious headlines about the latest #BlackFriday and #CyberMonday sales figures. Why the stress over a few days' worth of Christmas shopping? Because much of our economy hangs on whether we buy more this year than last.

But there's more to this stress over consumption than simple sales figures. Our very identities are at stake. Over the past century, the material fruits of industrial capitalism – cars, appliances, clothes, media systems, food, vacations, experiences, and so on – have been so abundant and heterogeneous as to allow us to form and express social and psychological selves through our purchases. In lieu of other ways of making ourselves within and through communities (for example, religion, citizenship, or education), capitalist forces ask us to become who we are predominantly through the medium of consumption. Buying has become a sort of freedom that allows one to announce to others one's identity, prowess, emotions, and values. And during seasons like Christmas, the gifts we pull from store shelves mediate our social ties. Consumption and emotion have become intimately tied together.

Consumer capitalism is hot, intense, and directly dedicated to the management of human emotion. Borrowing Eva Illouz's

definition of emotion as the "inner energy that propels us toward an act," the thing that "gives a particular 'mood' or 'coloration' to an act,"[1] we can think of capitalism as a system that directs flows of emotional energy just as it directs flows of wealth and material. And if we consider how emotions "color" actions, we can start to think about the ways in which rational consumer choices can take on the coloration of emotional fulfillment. Consumer capitalism has turned towards the management of feelings and social relations as they pertain to consumer choices. In America, for example, the advent of an affluent middle class spurred the rise of an industry devoted to directing that class's consumption patterns. I'm speaking, of course, of the marketing and advertising industry, the "Captains of Consciousness" as Stuart Ewen famously called them in 1976.[2] From the 1940s onward, as the disposable income of American industrial workers rose – thanks in large part to trade unions and the accidents of global history – so too did the profits of the Mad Men of Madison Avenue advertising firms, who developed sophisticated techniques of persuasion and market research to help consumers emotionally express themselves through cereal, cigarettes, cars, clothes, shoes, and liquor. If the great sociologists of modernity were correct to point to anxiety and a blasé attitude as the key modern emotional colors, the great marketers of America had the answer: allay your anxiety with a Coke. Overcome your alienation with a Cadillac. Build your social bonds with a vacation to Hawai'i.

The marketing industry is in large part an industry of emotional management. I use the word "management" purposefully. Think of your choices in the grocery aisle: who manages them? You might say you do, but if I say, "They're G-r-r-eat!" and you automatically think about Tony the Tiger and Kellogg's Frosted Flakes, you would see that decades of marketing and advertising have subtly shaped your choices. Advertising messages, repeated ad nauseam, are key technologies meant to manage our consciousness and direct our emotional energies to objects in specific ways. But advertising is merely a reflection of the larger economic need to manage, intensify, and extend consumption in all walks of life.

This consumer-oriented, emotional management logic has been folded back onto the world of work as well (a point Illouz makes consistently through *Cold Intimacies*). Those in retail – who operate as frontline, customer-management workers – have been the target of emotional management as intense as the scientific management their brothers and sisters working in manufacturing were subject to. In 1983, Arlie Hochschild detailed how flight attendants manage their emotions in her famous book *The Managed Heart*.[3] Since then, entire fields of management science – broadly called "knowledge management" – have targeted front-line service workers such as help desk, sales, and retail staff, hoping to make their emotional and cognitive work practices more efficient and profitable.

Corporations associate and intensely manage our actions (Which cereal should I buy?), thoughts (What was the name of that movie I wanted to watch? What should I include in this report?), and above all emotions (This truck makes me feel like a man! Smile while you're talking to the customer on the phone! Jennifer will love this shirt!). This sort of management is ubiquitous and all-pervasive: work and home life blur, production and consumption meld as the same techniques that guide our inner energies toward the right brand in the store guide our minds as we talk to customers at the office. It is a system dedicated to producing a subject who behaves in relation to intense inner energies that constantly demand release, expression, or satisfaction and sees consumption as the smoothest path toward this fulfillment.

For our purposes, then, consumer capitalism is a fundamental substrate that sets the conditions in which emotional roboprocesses can emerge. Here, the emotional and social are viewed through the lens of consumption and thus seen as economic. As such, wherever they appear, they must be managed and put to work along particular paths, guiding our hands and hearts to ensure the continued profits of the producers of consumer goods. To better manage, direct, and intensify this socio-emotional-economic activity, marketers and advertisers have developed a host of new media technologies to observe, capture, replicate, and direct the actions of human consumers.

Observing the Relationship between Media and Emotion

Media technologies have been central to consumer capitalism, and the genres of media entertainment are deeply rooted in emotion: horror, drama, tragedy, and comedy. Advertisers have recognized that placing product advertisements alongside emotional content of specific films and television shows can increase their effectiveness. But to make advertising all the more effective and to improve the articulation of emotions, consumption, and sociality, the marketing and advertising industries are spending a great deal of time observing how people and media technologies interact.

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1   Illouz, Eva. *Cold Intimacies: The Making of Emotional Capitalism*. (Cambridge, UK: Polity, 2007), 2.
2   Stuart Ewen, *Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture* (New York: Basic Books, 2001).
3   Arlie Russell Hochschild, *The Managed Heart: Commercialization of Human Feeling* (Berkeley: University of California Press, 1983).

Neilson ratings, consumer ethnography, and psychological and social profiling have been around for decades, but our current Internet-based observation technologies originated in the popularization of the Internet in the 1990s. The transfer of the Internet from government and military control to commercial enterprises marked an intensification of the observation of human/media interaction, and the advertising industry almost immediately organized and standardized tracking technologies. Given the industry's role in managing consumer activities, and given the recognition in the 1990s that the Internet would become the dominant media system of the future, marketers and advertisers were in a prime position to lead the development of observational techniques. The growth of online advertising trade consortia, such as the Digital Advertising Alliance, the Interactive Advertising Bureau, and the Mobile Marketing Alliance, is a direct result of the rise of the Internet as the space of observed consumer/media interaction.

The key innovation here is the creation of contained systems in which humans are meant to operate and be observed. Whereas Web sites appear to be fragmented and diffuse, ties bind them, including advertising networks that link multiple sites. Media consolidation also creates contained spaces – one can browse a whole host of seemingly distinct Web sites, apps, and media channels all owned by single companies (Google, Amazon, Microsoft, Viacom, Apple, and so on). Within this contained system, a host of technologies do observational work. Web cookies are probably the most famous; these small text files are deposited on Web browsers (such as Firefox or Chrome) as users move from site to site. These files often contain unique ID numbers, and correlating these ID numbers to server logs lets an observer track a user's Web habits. Contemporary mobile browsers use specific IDs tied to the devices themselves (for example, Apple's IDFA and Google's Advertising ID) that track mobile phone users and are harder than cookies for end users to remove. Finally, media companies now regularly require us to log in to view content, anchoring our media habits in a specific user account.

Though this system of observation is relatively contained, it offers a sophisticated window into people's media habits. This is where the articulation between capitalism and emotions becomes most evident. Some media messages resonate more than others—that is, people view, download, buy, or talk about these messages more than others—and tracking technologies observe who downloaded or viewed what message. Techniques such as "sentiment analysis" – essentially big data analysis of the emotional content of social media messages – provides more data about the emotional state of media viewers. Given that media messages convey encoded emotions, this observation provides a wealth of data about viewers' emotional states, and that data can in turn inform advertisers about potential emotion/product articulations. As marketing scholar Stephen Brown notes, marketers have thus used observation techniques to understand "the deeply-felt beliefs, emotions and meanings that inhere in the rituals, myths, and symbols of consumption behavior."[4] The stakes are high: placing an ad in the wrong emotional context can undermine its message. Indeed, as advertising executive Nick Welch argues,

> The impact of any ad can be diluted if placed in an irrelevant context or if the emotions elicited by the content contradict the message of the ad. Twitter-based research proves viewers who have an emotional reaction to a TV show are more likely to remember its commercials than those who do not. This trend is even more significant with digital advertising as – with such a diversity of online inventory available – ads can easily end up next to irrelevant or questionable content.[5]

Indeed, conflicts between advertisers and YouTube recently erupted, showing the stakes of emotional mismatches.[6] Marketers, then, must know the emotional content of media objects, the emotional states of media consumers, and the reaction these things might have with particular advertising messages (themselves carriers of emotion) before seeking to channel our inner energies. Hence, the massive surveillance machinery they deploy to monitor consumer sentiment in and through digital media. Moreover, such observation sets the stage for new technologies designed to *capture* – not simply observe – the practices of human/media technology interaction within the context of contemporary capitalism.

Capturing and Encoding Human Emotion

Observational technologies and capture technologies have historically been distinct. For example, I could observe you walking down the street without capturing your motions, and, by paying attention to your posture, facial expressions, and gestures, I could speculate on your emotions. I could judge you by what you look at and what you buy and observe the apparent differences in your emotions before and after your purchases. But I would have a far harder time capturing these details. I could film you, take notes, or write about you in a novel, but these techniques are time-consuming and subjective.

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4   Stephen Brown, *Postmodern Marketing* (London: Routledge, 1995), 144.

5   https://www.iabuk.net/blog/effective-ad-placement-through-emotional-targeting

6   Olivia Solon, "Google's Bad Week: YouTube Loses Millions as Advertising Row Reaches US," *The Guardian*, March 25, 2017, sec. Technology, https://www.theguardian.com/technology/2017/mar/25/google-youtube-advertising-extremist-content-att-verizon.

However, thanks to the digital technologies that have emerged within consumer capitalism, far more advanced systems now fuse observational and capture functions, quickly and efficiently encoding human action, thought, and emotion into digital records.

For example, the integration of nearly ubiquitous cell phone use and Geographical Information Systems (GIS) means that our locations and movements through space are now not simply observed but captured. Location-aware smartphone applications such as Foursquare, Swarm, and Uber promise to augment our perception of our surroundings by offering local search, social networking, and transportation based on our location. To function, they require the constant capturing of where we are and what we're doing in space and time: where we eat, where we socialize, who we're with, where we live, and how we move from one location to another. The social, spatial, emotional, and temporal become fused.

Location-aware systems, however, are somewhat limited, being based solely on the location of our phones. More powerfully, what our eyes see can now be captured. Although it is no longer offered, Google's Glass technology functioned as a prototype, demonstrating the ways in which our location information could be combined with data about what we're looking at. Okulus is a virtual reality headset marketed to gamers and now owned by Facebook. Mark Zuckerberg has envisioned a Facebook/Okulus pairing as a system by which we could attend meetings and sporting events in addition to playing virtual reality games. As with Glass, these interactions would be not only about making things visible for us, but capturing how we look at the virtual and actual worlds and people around us. Where do our eyes linger? Who are we socializing with? How might our vision articulate with other emotional indicators, such as tone of voice?

We are of course more than eyes and locations. Motion-capture technologies promise to capture our physical motions. Various technologies do this, from multiple high-definition cameras to inertial sensors and cybernetic suits that track limb and joint movements. These technologies are used in movie production, military simulations, and worker training. Currently, much attention is being paid to high-definition capture of human facial expressions, a process called "performance capture," which has allowed computer animators the ability to recreate human emotional performances in animated characters such as Gollum in *The Lord of the Rings* and *The Hobbit*. Until very recently, these motion-capture technologies did not appear in everyday consumer settings, but the mass production of video game systems such as the Wii, X-Box (with Kinect), and Playstation (with the EyeToy, Eye, and Move) have brought about the possibility of performance capture (read: human facial emotional capture) in living rooms around the world.[7]

Underpinning all these advanced capture technologies is a now passé and yet very important capturing system: contemporary social media. Within sites such as Facebook, Google+, LinkedIn, Twitter, and Pinterest, we declare who our friends and contacts are. We like, retweet, and +1 objects we encounter across the Internet, expressing how we emotionally color the people and things around us. We make declarations about what we're doing, who we're with, and what we're feeling. Indeed, as I've argued elsewhere, Facebook uses the term "like" because marketing theories of emotion equate "liking" with strong affection for a brand, person, or object.[8] More recently, Facebook has allowed users to express more moods via emoji, including happy, sad, angry, frustrated, and optimistic. Behind the interfaces, databases collect every action we perform within these social media sites and track how these emotional signals relate to site activities such as clicking on pictures, profiles, and advertisements. Contemporary corporations build social media sites explicitly to map what Mark Zuckerberg has called the "social graph" of our connections, including our social connections to one another and our emotional connections to consumer goods, brands, media objects, and the like.

Taken individually, any of these data points may not reveal much of our emotional states, but taken as a whole, they reveal a great deal. The key analytical move used by marketers is to crunch all of these data points. Massive server farms store all these captured data, both commonly tracked items such as our movements in space and our social graphs and emergent data points, such as our eye movements and facial expressions. While capture technologies tend to generate a tremendous amount of poorly structured data, technology companies are refining new techniques for managing and analyzing these big data. For example, the software package Hadoop aims to manage and analyze the big data that capture technologies produce. With a system like Hadoop and the right data, one could fold together location information, motion information, and social connections to produce a very detailed, dynamic profile of human emotional states. With new algorithms from companies like Kairos (https://www.kairos.com), facial expressions can be mined for their emotional contents. It bears repeating, however, that the larger context that inflects this profile, namely consumer capitalism, is concerned with the matrix of emotion, behavior, and purchase decisions. Corporations capture location, vision, movement, and sociality to

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7   For examples, see https://www.youtube.com/watch?v=nYsqNnDA1l4 and https://www.youtube.com/watch?v=llNSQ2u2rT4 for demonstrations of facial performance capture with X-Box Kinect.

8   Robert W. Gehl, "A History of Like," *The New Inquiry*, (March 27, 2013), http://thenewinquiry.com/essays/a-history-of-like/#more-36090 Indeed, marketing has had a subfield called "liking studies" that has emerged in the 1990s and theorizes that "liking" is the best predictor of a positive relationship between a consumer and a brand.

create one ideal profile: that of the consumer.

The New Emotional Machines

Capturing human actions, emotions, and thoughts in a digital format can enable new machines to replace human practices, including decision-making based on our emotional states. While consumption can be thought of as a rational process, it is also irrefutably emotional. We ask not only, "Which product will satisfy my needs?" but "Which product will make me happy?" and "What product will bring my family together?" Consequently, consumer capitalism increasingly enrolls emotions into its machinery, and many emergent emotional roboprocesses are tied to consumer decisions.

For example, once commerce shifted to the Internet and companies began tracking, capturing, and analyzing patterns of production, distribution, and consumption, software engineers produced recommendation engines that use algorithms to suggest to consumers what else they might buy. Amazon's book recommendations, Google's search results, and Netflix's video suggestions are the most famous of these. As is well known, they are based on crowdsourcing the decisions of previous consumers – people who watched *Black Mirror* also tended to watch *Mr. Robot*. These systems have generally used genre or other large categorizations in their sorting of media objects. However, cutting-edge research seeks to integrate emotional cues into these engines. A recent survey of computer science research into integrating "affective computing" into recommendation engines notes that advances in emotion detection techniques "paved the way for the exploitation of emotions and personality as descriptors that account for a larger part of variance in user preferences than the generic descriptors (e.g. genre) used so far."[9]

In other words, traditional descriptors such as comedy or drama in systems such as Google, Netflix, and Amazon may give way to recommendations based on emotions. ("Emotional independent dramas for hopeless romantics" is already a Netflix category.[10]) This development would give any recommendation engine even more powerful means to shape our futures – where we click, what we read, and what we watch – by exploiting emotional data captured from users. Not surprisingly, developers of dating and hookup apps are keen on integrating these engines into their systems. Previously, those systems worked with demographic categories: age, sex, location, occupation. In the new paradigm of emotion-based recommendation, machines capture the hot emotional practices of love and sex, and new users receive dating or hookup recommendations based on other users' practices, further intensifying their engagement with each other and, not incidentally, with these systems.

In a related development, a class of robot called socialbots has come to social media. Socialbots are automated profiles in Twitter and Facebook that are built to appear to be human and that can automatically shape human interactions.[11] If they are built well, it's difficult to tell them apart from actual human profiles. Socialbots are possible because of social big data – records of our interactions within Twitter and Facebook, including who our friends are, places we like to visit, and the evolution of our emotional state over time (as measured by our use of emojis or by sentiment analysis of the content we post). By analyzing these interactions, socialbot developers can make automated profiles that can mimic human activity so successfully that humans befriend them and carry on conversations with them. Socialbots can be built for relatively benign purposes, including computer science research into human-computer interaction. However, socialbots can also create the illusion of consensus around various political issues or promote a brand in a highly interactive manner. At the very least, such bots can subtly shape online interactions, linking people who might not otherwise connect.

In addition to emotional roboprocesses associated with media consumption, leisure, and socializing, we're seeing emotional automation in the world of work. Many of us have dealt with automated phone systems – it's often a frustrating experience. Software engineers have used records of such interactions to map our emotional states at various points in the process. Based on this capture, they are developing new generations of automated phone agents that can classify human emotions in real time and respond accordingly (and, we would hope, soothingly). Similarly, business theorists have been thinking about the automation of in-person retail for years. A notable example is Sandeep Krishnamurthy's imagined "Automated Wal-Mart," a megastore that requires no human retail agents and that can help shoppers through artificial intelligence.[12] Pepper, a frankly adorable robot "powered by love" who can work in retail sales, is materializing Krishnamurthy's thought

9   Marko Tkalcic, Andrej Kosir, and Jurij Tasic, "Affective Recommender Systems: The Role of Emotions in Recommender Systems," in *Proc. The RecSys 2011 Workshop on Human Decision Making in Recommender Systems* (Citeseer, 2011), 9, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.369.8712&rep=rep1&type=pdf.

10   See https://www.buzzfeed.com/hunterschwarz/23-oddly-specific-netflix-categories-that-only-have-one-show? utm_term=.gv0OW42KX#.kj7lgBjK2

11   Contributors to a book I coedited demonstrate this. See Gehl, Robert W, and Maria Bakardjieva. *Socialbots and Their Friends: Digital Media and the Automation of Sociality*. New York: Routledge, 2017.

12   Available at http://faculty.washington.edu/sandeep/automated/walmart.pdf

experiment in Japan.[13] Amazon is also experimenting with the idea in a brick-and-mortar Amazon Go store in Seattle.[14]

Hence, previous capture technologies are enabling media consumption, socializing, customer service, and shopping to be automated, and a key concept that drives these innovations is emotion. Recommendation engines work by capturing and categorizing consumption patterns, including rationalized datasets that computer scientists argue indicate emotional states. Socialbots are only possible after social media capture enough patterns of social interaction through likes, friends, and emojis. Automated customer service relies on the recording of previous interactions – including angry and happy experiences – and their standardization and codification into software processes. Retail robots function within a highly specified environment (chain stores with standardized aisles and consumer goods) and will likely benefit from the intense monitoring of consumer activity within that space (via loyalty cards, smartphone tracking, and cameras) as well as age-old sales techniques that emphasize emotion. In sum, digitization of human activities gives rise to robotification of human activities, and these latest robotifications are meant to direct emotional energies towards the ends of those who control them.

Emotional roboprocesses thus are designed to shape what we read and think about, and who we associate with. As Brad Meehan argues in *Advertising Age*, "Consumers now live in an online world where the content they see is orchestrated and controlled by marketers and big-data algorithms that decide which products they need, which news articles to read, and which friends they should see in their Facebook news feeds."[15] This last point is worth emphasizing. Using algorithms to select who we ought to associate with is not innocent; marketers have long recognized that certain people within social networks are "influencers" who can shape the consumption patterns of those around them. The appearance of Bob rather than Alice within your social media timeline might be less a function of Bob's relevance to your life and more a function of a marketer's wishes that Bob – and the emotions Bob may excite in you – might remind you of some product you ought to buy.

We are increasingly bound to a landscape where a flat, distributed network graphs brands, friends, stores, colleagues, media objects, homes, restaurants, families, corporations, and lovers, where algorithms alone dictate our access to parts of that network, and where the ways we're invited to navigate this network are proposed in relation to our emotional states. Mark Zuckerberg's social graph assumes that a brand, say McDonald's, is just as worthy of your friendship and affection as your mother is. The social graph also assumes you'd prefer to hang out with Bob instead of Alice. And given that these emotional roboprocesses are extensive, nearly instantaneous, and opaque, it is difficult to see how we can continue to claim that human emotion is the essential differentiator between us and machines.

The Dangers of Emotional Roboprocesses

Where might emotional roboprocesses lead us? I see three possibilities:

- bizarre outcomes that utterly fail; or

- a hollowing out of human emotional life; or

- lives full of love.

Bizarre Outcomes

Some outcomes of these processes will be strange. Take the 2012 *New York Times* story that reported the case of Nick Bergus of Iowa City. On Valentine's Day, he came across a product listing on Amazon for a 55-gallon drum of personal lubricant. As the *Times* article reports,

> he found it irresistibly funny and, as one does in this age of instant sharing, he posted the link on Facebook, adding a comment: "For Valentine's Day. And every day. For the rest of your life."

Unfortunately for him,

> within days, friends of Mr. Bergus started seeing his post among the ads on Facebook pages, with his name and smiling mug shot. Facebook — or rather, one of its algorithms — had seen his post as an endorsement

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13 See https://techcrunch.com/2016/08/03/pepper-us/ for a discussion of Pepper working a temp job in a bank. See https://www.youtube.com/watch?v=ZekX3JOZDDY for Pepper in action. In addition to being cute, Pepper seems inordinately concerned that people buy their mobile phones from a specific vendor.

14 https://www.wired.com/2016/12/amazon-go-grocery-store/

15 adage.com/article/digitalnext/responsible-personalization-brands-build-trust/299843/

and transformed it into an advertisement, paid for by Amazon.[16]

Mr. Bergus had become a victim of poorly tuned emotional roboprocesses. His emotional reaction to the 55-gallon drum of personal lubricant – humor and sarcasm – was misinterpreted as it was mediated by Facebook's Like button. The Like button, as many critics have pointed out, is an incredibly reductive signal of emotion. In the absence of other signals – "Humor," "Disgust," "Sarcasm," or "Dislike," perhaps – Mr. Bergus had to signal his reaction with Like. Facebook (and Amazon) automatically interpreted his Like as an affectionate endorsement for that product.[17]

Emotional roboprocesses can thus have absurd outcomes, revealing that their machinery is anything but smooth. It is possible, then, that we wily humans will escape from their attempts to map themselves onto our inner energies because our emotional states will remain too complex for the machines to fully analyze.

Hollowing Out Human Emotion

Or, the very idea that emotional roboprocesses may come to direct every emotion-colored act we engage in could cause some to become alarmed that human emotion will be fully abstracted from humans and will be the sole property of machines. If it comes to the point that every act we engage in will be algorithmically managed, are we humans feeling emotions anymore? Or are the machines feeling them for us and making recommendations accordingly? In other words, if the energies that propel us towards acts and give those acts mood or coloration are no longer coming from inside us but are instead produced by software processes, could we claim to be emotional? In such a future, human emotion would be eradicated as a means for living social, political, or economic lives. A scenario where machines are hot and emotional and humans merely react to their dictates is another disturbing outcome, one that's not quite as funny as Bergus and the 55-gallon drum.

Lives Full of Love

However, I do not think either scenario – absurd outcomes or the complete hollowing out of human emotional life – are in our future. Instead, I think that we will come to love emotional roboprocesses.

Bergus's story is an extreme example of a more common complaint: that the advertising we see online is slightly off, that the sales pitches that we receive are not quite persuasive, or that the friends Facebook suggests or the lovers Tinder suggests don't quite sync up with who we are. However, what is notable is not so much the weirdness of mistaking sarcasm for affection for a 55-gallon drum of personal lubricant; rather, there is a curious, common reaction I've observed over the years among people who hear stories like these. If people have a problem with emotional roboprocesses, very often it is because the processes are imprecise, that they failed to make the right recommendation at the right time. Complaints about lack of precision in emotional roboprocesses contains an implicit critique: "After all my Rewards Card shopping, Facebook liking, Amazon rating, Twitter jokes, Tinder swipes, and Netflix queuing – after all that observation and feedback – *don't they know what I love? Don't they know who I am*?"

I would suggest that this reaction reflects a longstanding, deeply-ingrained desire that emotional roboprocesses improve and intensify how our emotions are mapped and managed. If we encounter an ad for something we don't like, if the dating app suggests the wrong type of lover, or if the recommendation engine suggests a scary television show instead of an uplifting one, we often simply ask for more, and improved, emotional observation, capture, and control technologies. In other words, we react by saying, "Let's make the system smoother." We want the world to bend its offerings to the arc of our emotions and desires. We demand that emotional roboprocesses *get to know us better*, that they improve the quality of their emotional and social connection to us. We want Siri to anticipate our desires, Google to better understand our search terms, Facebook to suggest better and more relevant stories and friends. This reaction, I would argue, is conditioned by the fundamental substrate of emotional roboprocesses, consumer capitalism, which holds out the promise that all our inner desires ought to be fulfilled by the world of consumer goods.

Thus, we call for improving emotional roboprocesses to the point where they understand the complexities of human emotional life. Indeed, the computer and data scientists working on integrating emotion into machinic processes hear this call, and they are constantly working to improve the granularity and precision of their systems by both improving their capture techniques and improving how emotional machines are implemented. The rewards for this are great: Facebook, Google, and Amazon are hiring data scientists left and right, and paying well for them. This is why I do not believe emotional roboprocesses will have predominantly absurd outcomes in our future. There are too many smart people trying to make our emotional roboprocesses smooth and precise.

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16 http://www.nytimes.com/2012/06/01/technology/so-much-for-sharing-his-like.html?_r=0
17 Again, see Gehl, "A History of Like" for a discussion of the articulation between "like" and affection.

It is also why I do not believe in the second possible scenario, that emotional roboprocesses will totally abstract emotion from humans. I would argue instead that emotional roboprocesses will always require us humans to feel emotion. Social media, recommendation engines, automated phone systems, or interactive media require human emotion to function and always will – our cultural and emotional evolution as a species will always be the motor that drives these systems. As tastes, fashions, and feelings evolve, so too must emotional roboprocesses. Human emotion and digitization will always be overdetermined.

Instead, I see a future full of love. Emotional roboprocesses can make our lives easier by smoothing out the rough messiness of emotional life. Emotional roboprocess can confirm our tastes, help us choose mates, help us find our friends for a bit of shopping therapy or time in the pub. They can help us parse political choices, choose where to live, and help us learn about the world around us through news stories we like. They will give us more and more pleasures as we connect with one another, give gifts to one another, live with others who have been selected as emotionally compatible with us. The reciprocal relationship between them and our abilities to express ourselves will continually produce new apps, new recommendations, new ideas. We will live very full lives with emotional roboprocesses. We will fall more and more deeply in love with emotional roboprocesses, and they will love us back.

And this is why I am troubled. I am concerned that these systems will be built to understand negative and dangerous emotions – fear, disgust, anxiety, hate, and anger – and use their subtle, smooth, deeply penetrating operations to offer ways to overcome those negative emotions with the right object, choice, or companionship. I am concerned that the inner energy that these processes call forth comes only in the color of love. Above all, I am concerned that emotional roboprocesses made through rating and recommending lovers, brands, friends, tourist traps, families, politicians, news sources, and cinematic blockbusters will be used to ensure that we love not just one another, nor just the objects we consume, nor just the processes, but also those in power, and that the energies of this love are directed up.

After all, emotional roboprocesses are not being developed in a distributed or socialized manner, but in the centralized, exploitative system of capitalism that is inherently concerned with ensuring the common wealth flows to the few and not the many. Those who have the wealth to shape emotional roboprocesses have very subtle, modulatory power over many people's lives. Combine this system with increasingly mediated and emotional political elections and we can see how a smooth future, where love is doled out or demanded according to algorithmic taste, becomes one in which emotions are constantly being fulfilled while nothing fundamental changes. This is not a world of total domination – I don't believe that's possible if emotion is the thing being targeted – but rather one of perturbations and provocations meant to excite our desires and promise their fulfillment. Those who understand how such modulations work will be in power, and we will love them for it.

Ultimately, because these processes will continue to understand human emotion, they will be woven into the fabric of human life until all things brought to our attention are liked, rated five stars, swiped right, voted for, or smiled over. Of all the roboprocesses, emotional ones threaten to be most fully absorbed into our lives, and it will be very hard to shake free of them and shift back to a rougher world of uncertainty, doubt, or dissent.