

**EMOTIONS**

**GO**

**TO**

**WORK**

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**ZOE**

**BELOFF**

**Emotions go to Work**

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**INTRO**

**EMOTIONS  
BECOME  
CAPITAL**



*Emotions Go to Work* investigates how technology is used to turn our feelings into valuable assets. One might call it the transformation of emotion into capital. It is an exploration of what I call the “dream life of technology” - our imaginative relationship with machines, how we create them in our image and shape them to serve our desires and, in turn, how they reshape us.

It is common knowledge that people have long been emotionally invested in their tools, but a profound shift is underway. Today digital devices are increasingly designed to create the illusion that they are not simply objects but subjects, caring and sentient beings. They actively elicit our responses so that while it appears that they are our servants, they are in fact training us, shaping us from earliest infancy. It is we who are working for them. (Fig 1)

Some obvious examples might include the fact that as well as performing paid labor many people spend time working voluntarily, posting their “reactions” on Facebook or rating products online. This enables commercial companies to turn those feelings into data and then use these data to market new gadgets to those same people in a kind of endless and very profitable feedback loop.

Increasingly, companies are looking to make our connection with their technological avatars ever more natural and seamless so that we are not even aware that we are revealing more and more of ourselves while technology penetrates deeper into our lives. Many of these new technologies belong to the Internet of Things (IoT), networked machines that are always on. They can be as apparently harmless as a thermostat, a light that turns on when we enter the house, or a security camera. These products are presented as friends and helpers that can anticipate our desires and frustrations and become



indispensable members of our families. If the companies that make them are to be believed they are also “smart,” “autonomous,” and above all desirable.

The marketing of the Internet of Things plays upon our wish for safety, for warmth, and for companionship. Some of the devices converse with us in natural language. The little girl in a commercial for Amazon’s latest smart object declares “Alexa” is pretty neat because she knows all sorts of things. “All you have to do is ask.” She adds, “How can she know so much when she’s so small?” (1) The fact is that Alexa will soon know even more. Once installed in kitchens, living rooms, and bedrooms these devices collect data on their host families, streaming it to their parent companies. And the more these companies know about our feelings, the closer their surrogates like Alexa will be involved in our lives. There is even “emotion aware” software such as Affectiva that can read our expressions and extrapolate our emotional states to give real-time feedback to advertisers and retailers, but more on this later.

Even as I write this, I find myself slipping into anthropomorphism. We must always stop and remember that machines, even the most sophisticated computers, do not have consciousness, let alone desires or plans. They do nothing but perform numerical calculations. Nonetheless their algorithms have consequences. It is to the people who write these algorithms and to the companies that own them that we must ascribe responsibility.

### **Biopower**

IBM calls the new relations between people and things the “cognitive era.” To begin to understand what this might mean on a political and social level it is important to grasp the concept of affect, which can be described as that which pulls the

human body beyond its surface boundaries connecting us with the world. Emotions fall under the term “affect” but more fundamentally “affect” is a word that describes what connects us with the world through feelings below even the threshold of consciousness. This involves both our biological and psychological states: heartbeat and blood pressure as well as emotions and anxieties.

For affect to become instrumentalized, that is, a useful commodity, it must first be transformed into data. The archaeologist of knowledge Michel Foucault created the term “biopower” to explain how these kinds of data can be used by those in control to shape society. He documented how, starting in the seventeenth century, the government of France began to compile statistics with the goal of organizing and optimizing the population. This might involve building schools or compiling statistics on public health. He argued it was a crucial element that fueled the rise of capitalism. Workers needed to be trained and ready to obey orders. The productive worker needed to be not only physically healthy but also emotionally stable. Thus data on affect were an essential part of the equation.

Today biopower resides not only with the governments of nation-states but in transnational companies. One of the largest with the greatest reach into our lives is Alphabet Inc., parent of Google, and a great many other companies that deal in everything from fiber optics to finance to bio-technology. Its logo incorporates a handful of children’s alphabet blocks. They seem sweet and innocent yet just as letter blocks teach children to read, these images signify the corporate mission to train us to fulfill the roles they map out for us in Alphabet’s digital domain. (Fig. 2)

*Emotions Go to Work* investigates biopower at work in the collection and deployment of affective data that are used to

1 Amazon commercial for Echo, accessed November 11, 2016, <https://www.youtube.com/watch?v=KkOCeAtKHlc>



Fig. 2 Alphabet Inc. Logo

tie us ever more closely to the realm of smart objects, our digital companions. It asks what is at stake in our relationship with the objects that make up the Internet of Things. Do they deliver on their promises of freedom, freedom for instance from mundane tasks such as driving or shopping? Or are they a threat, facilitating corporate control as they ever so gently penetrate ever deeper into our bodies and our minds? Do they train us simply to become more efficient consumers and docile citizens? Or, I will argue, perhaps they hold a potential within their shiny carapaces to inspire in us a way to imagine a different social order, a new social relationship in which things, rather than masquerading as the fulfillment of pre-ordained desires, instead unleash creative partnerships based on sharing and play.

In our search to understand the commodification of emotion through digital technology, we must always remember that unconscious desires are as relevant as scientific facts and technological discoveries. Thus fictions can have very real effects on our lives and metaphors can shape actual power relationships. To address these questions is to undertake an imaginative journey where nothing is quite what it appears at first glance. The journey will take us back to the beginnings of the industrial revolution, then forward into potential futures. It will involve drawing new timelines and exploring alternate realities.

It will also involve travel in time not only across centuries but back to earliest childhood, to the moments when we enter into language and thus into the social world, when we first interacted with things and people; when the boundaries between the real and the imaginary were porous and mysterious.

The philosopher Walter Benjamin held great store in dreaming as a necessary prelude to revolutionary action, comparing it to "the child who learns the practical task of grasping by

trying impossibly to catch the moon in his hands.” (2) With this in mind *Emotions Go to Work* will visit children’s cartoons in which technology gets very smart and very animated. In *The Little Screw* heavy machines get into an argument in a Moscow factory one winter’s day in 1927. In *Ha! Ha! Ha!*, set in Brooklyn in 1934, technology and infrastructure become completely hysterical. Perhaps these lively objects will open up ideas for new ways of coexisting with our digital companions and comrades, for what might seem fanciful in one epoch may prove to be an inspiration for the next.

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# **PART I**

## **AFFECT BECOMES DATA: A HISTORY**

## The Eighteenth Century

We might well start with a bolt from the blue, lightning tearing through the clouds. It was through this naturally occurring phenomenon that electricity began to be understood and harnessed in the mid-eighteenth century. Long before it powered our industrial world and made “thinking” machines a reality, electricity sparked people’s imagination. It made the body twitch, move, jump. It had the power of life and death.

In Austria Franz Anton Mesmer tried treating patients with magnets. He started to obtain strange and inexplicable results. He believed he had discovered another elemental force of nature. He called it *animal magnetism* or *the magnetic fluid*. He believed it flowed through the body like an electrical current and that it was powerful and invisible; it had poles, streams, discharges, con-ductors, isolators, and accumulators. His *banquet*, an instrument that was supposed to concentrate the fluid, was an imitation of the recently invented Leyden jar. (3) A skilled magnetic operator could change a subject’s mood, intelligence, and personality. Certain individuals who entered into a mesmeric trance even appeared to gain special powers, such as clairvoyance. (Fig. 3)

Although Mesmer was incorrect from a scientific perspective he did discover something important. Our inner lives are complex and open to change. For this reason Mesmer is often considered the founder of dynamic psychotherapy. Though we know that the magnetic fluid was no more than a fiction, the idea of animal magnetism as electricity’s twin imaginatively links our affective nature to that of technology at the dawn of the industrial age.

3  
Henri F. Ellenberger, *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry* (London: Allen Lane/Penguin Press, 1970), 63.

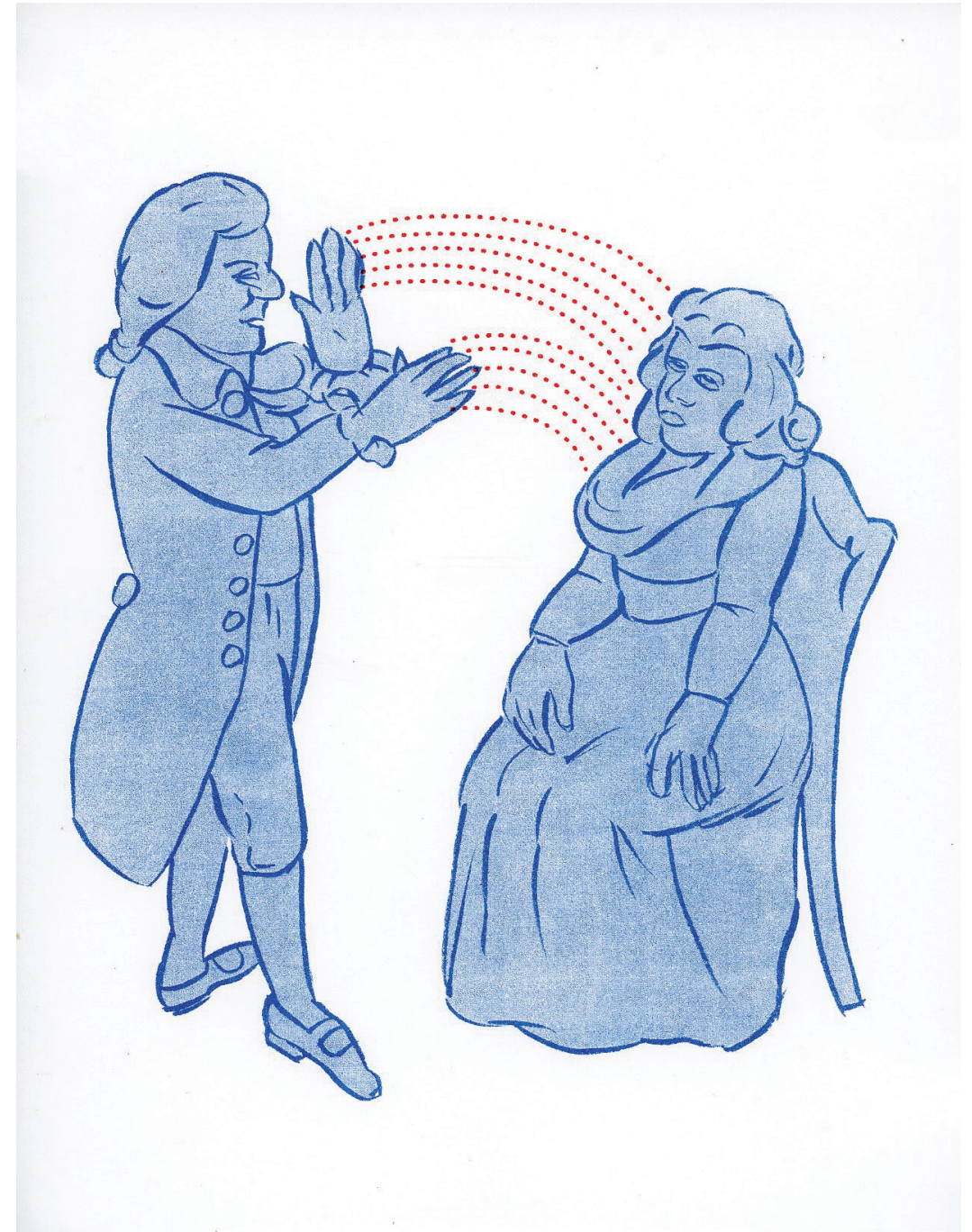


Fig. 3 Mesmer magnetizing a patient



### The Nineteenth Century: An Alphabet of the Passions

In a much more pragmatic fashion the French neurologist Duchenne de Boulogne used electric currents to create what might be described as a database of human emotions. Duchenne de Boulogne was an eccentric man with a passion for order. He believed that facial expressions were the outward sign of emotions, sentiments, and intellectual reflection. He understood them as an immutable, unchanging “alphabet of the passions,” a universal language that was a direct reflection of the soul. (Fig. 4)

Working in the 1860s he set out to create this database very practically, not by attempting to provoke different feelings in his subjects but by using electric currents. He applied electrodes to the facial muscles. He then photographed the resulting expressions and labeled each one as exhibiting a specific emotion. Here are some examples from his table of “primordial expressions.” On the left he lists the emotion and on the right the names of the facial muscles that were activated.

**Disdain or Disgust** — *m. depressor angulari oris* plus *palpebral* part of *m. orbicularis oculi*,

**Irony, ironic laughter** — *m. depressor anguli oris* plus flaring of the nostrils and downward gaze

**Lasciviousness** — *m. transversus* plus *m. zygomaticus major*. (4)

At the time he believed that his work would be most useful to artists, but it was not until the twenty-first century that such a taxonomy of expressions would come into its own when emoji were introduced into smartphones and for the first time ordinary people could deploy a database of emotions to communicate their feelings. Emoji are a form of pictographic alphabet, another “alphabet of the passions.”



Fig. 4 Laughter after one of Duchenne de Boulogne's photographs

They are also a stand-in for ourselves so one could say that in a very reductive but genuine way they replace us.

Duchenne de Boulogne's most famous pupil was Jean-Martin Charcot, the neurologist in charge of the Salpêtrière hospital in Paris where men and women with nervous disorders were housed and treated. Charcot believed that the first step in understanding these disturbances was to describe and classify them. His task was to find ways to turn emotional states into data, to make affect visible in such a way that it could be recorded and the information stored. This was not easy.

Many of the female patients suffered from what was called hysteria. It could manifest itself in anything from an inexplicably paralyzed limb to wild hallucinations. Doctors set out to extract all kinds of biodata from these women. No orifice or organ was free from the gaze of the doctors. No sensation too fleeting to evade its capture. (5) Their blood pressure and breathing were recorded and graphed. Photography was used to document both patients' uncontrollable movements and their states of delirium.

These photographs of half clothed women, often highly sexualized, became the raw material for a great chart composed of eighty-six drawings that encapsulated the principal variants of the hysterical attack. However, these images not only formed a knowledge base but also began to define what hysteria was supposed to look like. It acted as a form of training, a kind of manual. Women, consciously or not, began to learn how to act hysterical to please the doctors, to get attention. Even during Charcot's tenure, women were accused of copying each other. This is something that is true also in our modern world, the codification and collection of emotion becomes itself instrumental. It shapes the way we ourselves behave. (Fig. 5)

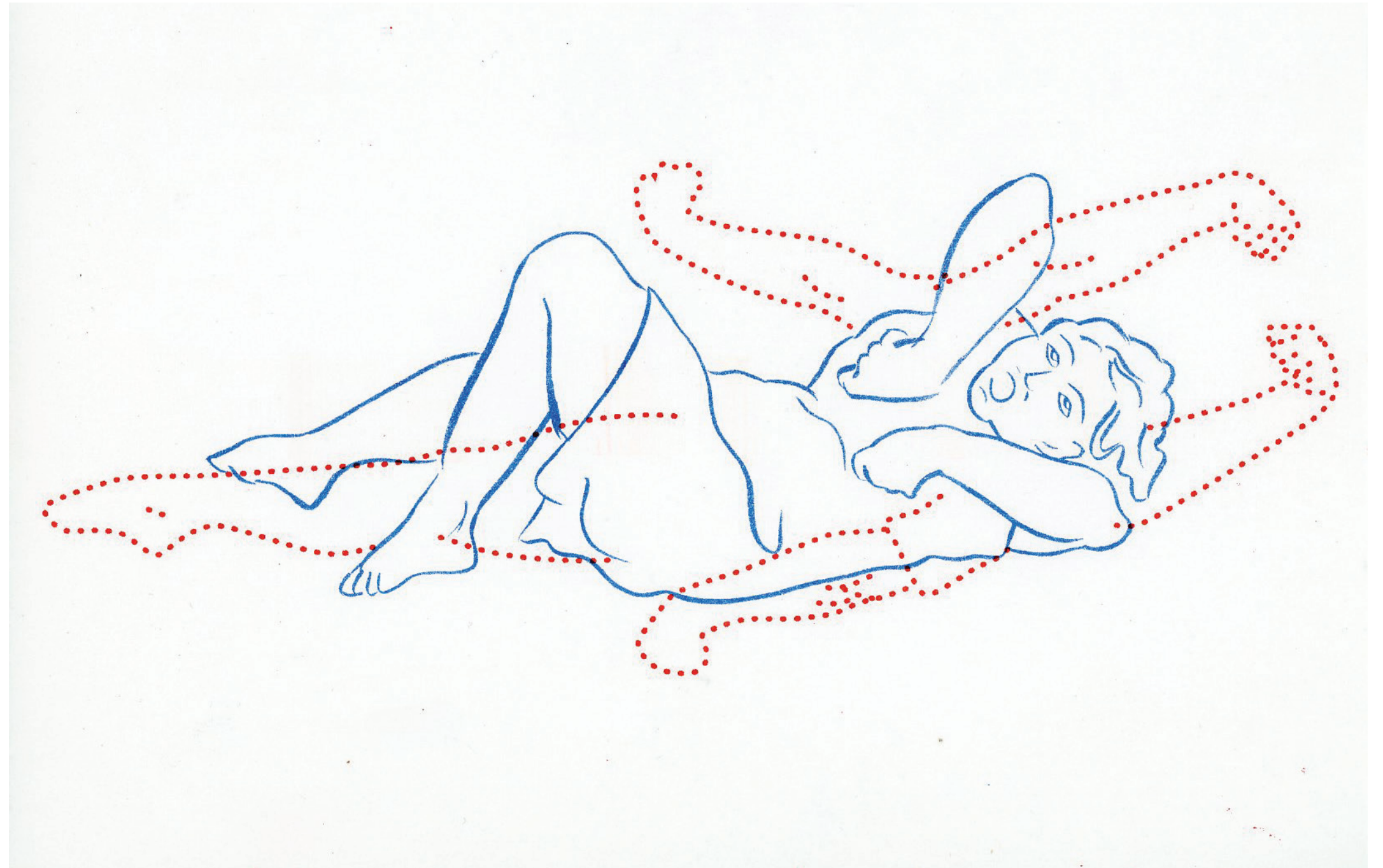


Fig. 5 Hysterical motion after Les Démoniaques dans l'art by Charcot and Richer (1887)



### The Origins of Sexting

Foucault discusses the confessional aspect of this data collection. Though we sometimes think that sexuality was repressed in the nineteenth century, he explains how, on the contrary, it was sought out in medical examinations, psychiatric investigations, and pedagogical reports. He explains that this “will to knowledge” grew out of the Catholic confession. Today, many young people have internalized this directive to confess quite completely. The desire to share the most intimate aspects of the self and the body is the fuel that fires social media.

The hysterics were some of the first biomediated bodies, that is, biological beings that are the source of information. The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* exhaustively catalogs the symptoms of mental illness. This information is a source of biopower used to separate the sane from the insane, those who will be employed and those who cannot work, those who will receive disability payments and those who will not.

### The Graphic Method

Many of the apparatuses used to extract biodata at the Salpêtrière were invented by the physiologist Étienne-Jules Marey and employed the “graphic method.” Very simply the graphic method involved a measuring device attached to a stylus moving against graph paper wrapped around a rotating drum. It is the basis of today's electrocardiogram (ECG) and other medical technology.

Marey's subjects were often harnessed to cumbersome apparatuses but today the smartphone, Fitbit, and other such devices automatically capture all kinds of information on the movement of our bodies. Information from the body abstracted



Fig. 6 Subject wearing black outfit with white lines and points after Movement by Marey (1894)



in this way can intersect and link with other flows of information: Internet traffic, share prices, capital both human and monetary. These disparate streams of data merge and collide becoming the bloodstream of society.

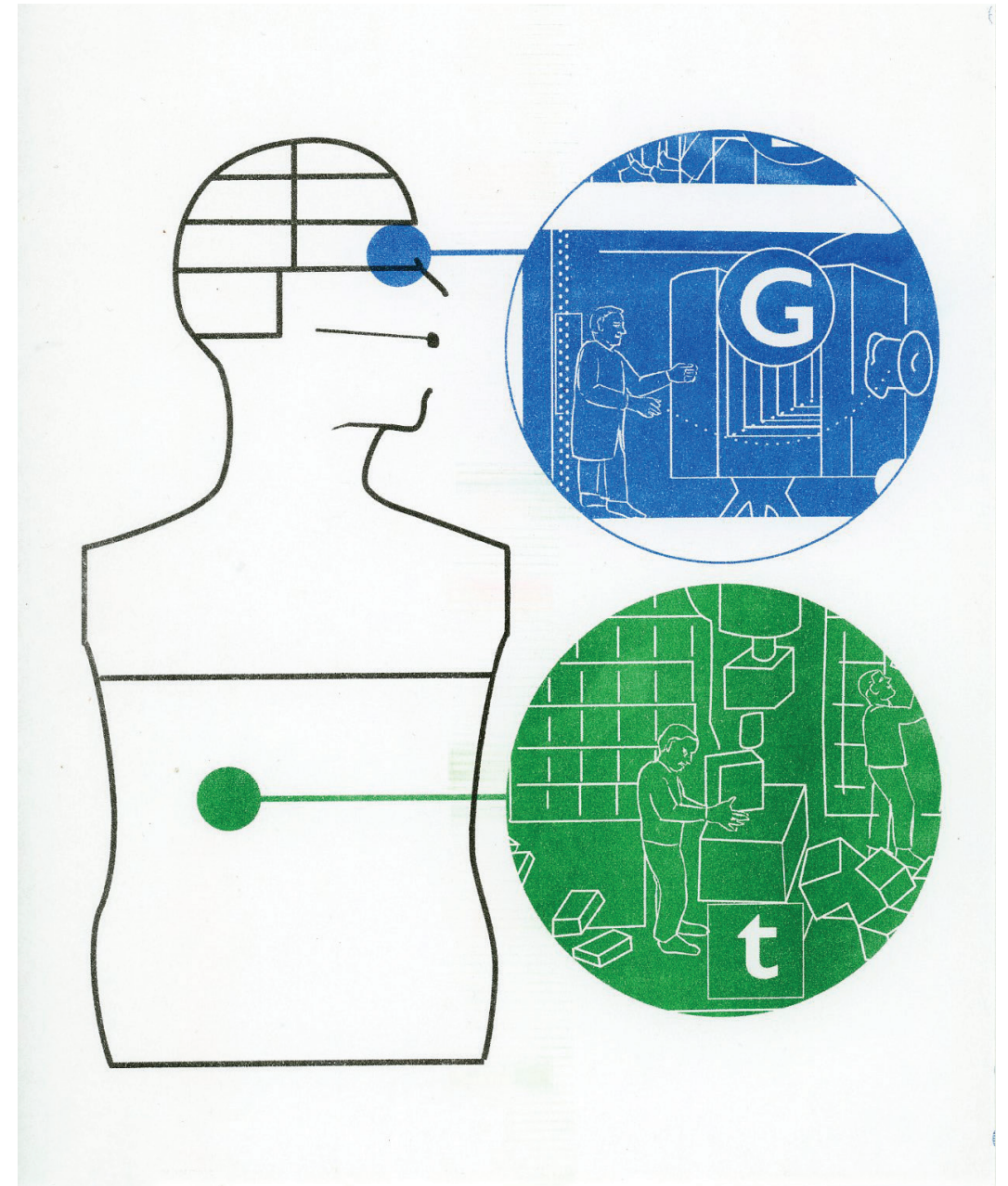
Marey also used photography to record the movement of the body over time. He developed cameras that could take pictures in quick succession. But photography per se did not interest him because it is rooted in the individual, the particular, in the unique moment. Marey was interested in using photography only to capture data that could be generalized. In order to do this he dressed his subjects in black with white lines and dots painted on their outfits to indicate limbs and joints. For example, in 1895 he was asked by authorities in the French army to find the most efficient steps for marching. He took multiple photographs of a soldier moving against a black background. He used the white lines and dots in the image to create a diagram of his motion over time. This technique is the basis of “motion capture” as it is used in cinema today. Just like Marey’s marching soldier, motion capture technology extracts information from the body and abstracts it. In each case the data become valuable commodities. (Fig 6)

### **The Twentieth Century: The Factory as Body or the Body as Factory**

Thanks in part to Marey’s pioneering research, a new field of study, scientific management, opened up to develop worker productivity. In the United States Frank and Lillian Gilbreth filmed and photographed people performing industrial tasks and then used this data to break down their motions into their simplest elements. With this information they could train workers to move more efficiently on the assembly line and thus speed up production.

For the school of scientific management, workers were “cogs in a wheel” that could be optimized like any other element in the factory. This conceptual framework finds its corollary in the analogy of the human body itself as a great factory in scientific illustrations of the first half of the twentieth century. The most remarkable were by Fritz Kahn, a German doctor, popular science writer, and information graphics pioneer. In Kahn’s diagram *Man as Industrial Palace* (1926) it just so happens that the inner workings of the body are organized in a modern capitalist hierarchy with the bosses and white-collar workers naturally in the head while the blue-collar workers shovel away in the bowels of the body.

Of course this image is a metaphor but nonetheless it makes industrial labor that is organized by man seem as natural and unchanging as the biological processes of our bodies. This is how ideology works. It makes what is cultural appear natural and thus seemingly impossible to change. Reversing the caption from *Man as Industrial Palace* to *The Industrial Palace as Man* makes it clear how the image suggests that we can no more change the organization of the factory than we can change the organic makeup of our own bodies. (Fig 7)



## **PART II**

# **THE INTERNET OF THINGS OR DESIRING MACHINES**

Today the analogy between body and machine has inverted. In the twentieth century the human body was conceptualized as a factory. In the twenty-first century machines are metaphorically endowed with human characteristics. Some of them even have girly names like “Siri” and “Alexa.” Yet they are not innocent. They are deeply ideological creatures. They are technological prostitutes designed to gain our trust, even our love, only to take our money. I am reminded of the words of Walter Benjamin...

Value transforms every product of labor into a social hieroglyph... The image of the whore reveals this secret like a rebus. Whereas every trace of the wage laborer who produced the commodity is extinguished when it is torn out of the context by its exhibition on display, in the prostitute, both moments remain visible. As a dialectical image, she “synthesizes” the form of the commodity and its content: she is the commodity and the seller in one. (6).

Siri and Alexa belong to the Internet of Things, a network of hardware, software, data, and services all linked together. These hybrid things don't just perform tasks; they also ingest information about users. The data can be and will be used by the companies that created them to sell us more products, targeted specifically to our tastes. (Fig 8)

Most objects in the IoT network appear friendly and comforting. Like protective parents, thermostats, televisions, baby monitors, and smartphones keep us safe, entertain us, and bath us in their warm glow, only mildly chiding us with “reminders” and “notifications.” In return we welcome them into our homes and soon our emotional attachment begins to grow. While it might appear that they are working for us, it gradually becomes clear

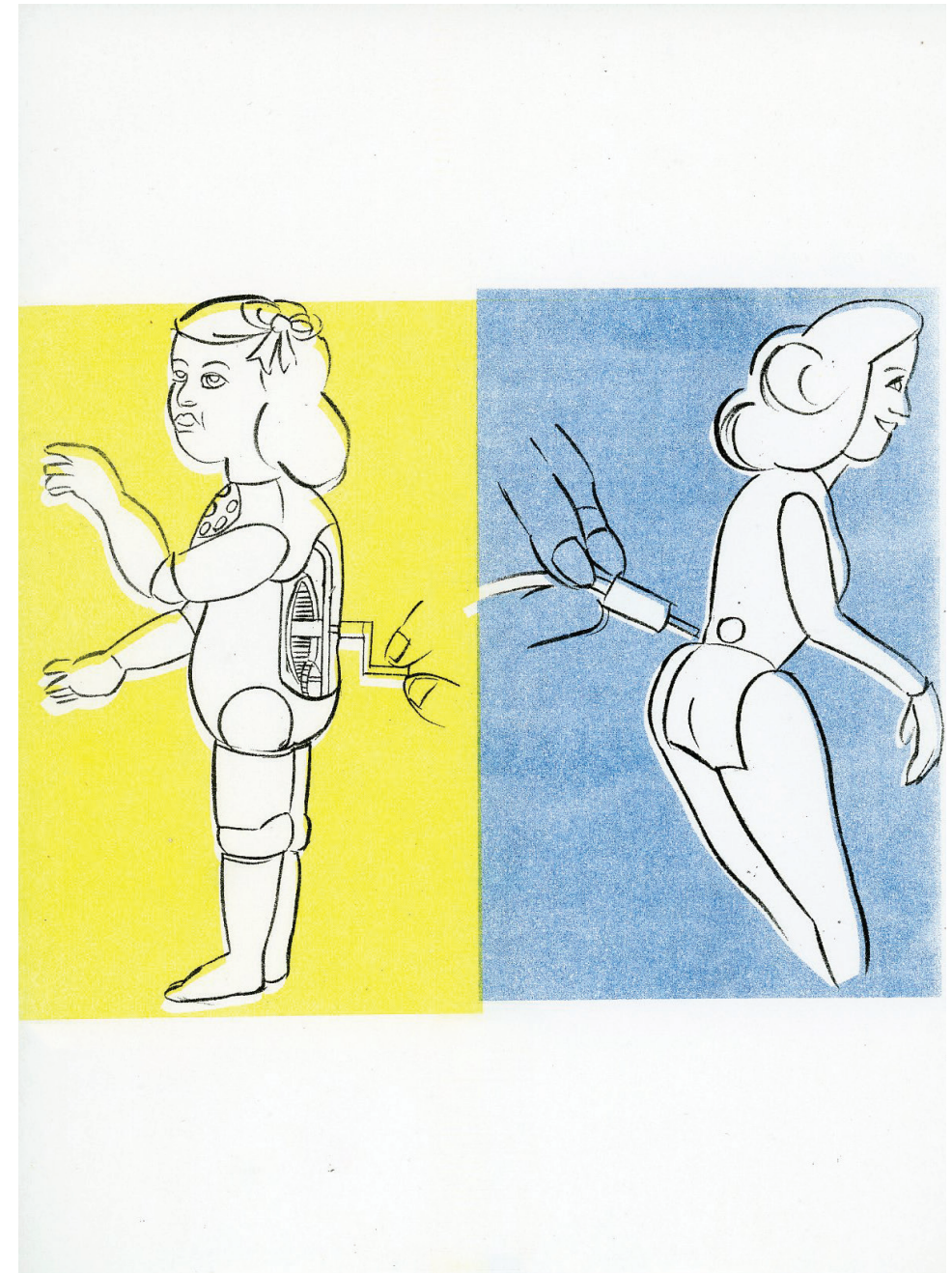


Fig. 8 Edison Talking Doll and Hello Barbie™



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*Unbox Therapy: where products get naked*, accessed November 11, 2016, <https://www.youtube.com/user/unboxtherapy>

that they have the upper hand. It is they who put our emotions to work. We cradle our smartphones in the palm of our hand and soon we find ourselves working for them, willingly and for free. Every time we rate a piece of technology online we produce added value. Some true devotees go to the length of posting an unboxing video of their favorite devices. If one substitutes the word “undressing” for “unboxing,” it becomes obvious that they are making a fetish film of their latest object of desire, a technological striptease? Yes, there really is a YouTube channel called Unbox Therapy: where products get naked. (7)

### Machine Mother

There is a history of machines as pseudoanimate companions in the intimacy of the home that existed long before the Internet of Things. Let us go back to 1888. Thomas Edison, the inventor of the first machine to record and play back voices, manufactured a talking doll as a playmate for little girls. Call it an idea whose time had not yet come. It was both too fragile and too frightening to catch on with the public. The doll’s voice was quavering, high pitched. There was something uncanny about its scratchy little ghost utterances, like this prayer: “If I should die before I wake, I pray to God my soul to take.” Today, Mattel markets an interactive Barbie doll called Hello Barbie™ that is actually able to converse, via speech recognition software, just like Siri and Alexa. (8)

Hello Barbie™, slim, sexy, and resolutely upbeat, seems quite the opposite of the Edison doll, but in a way she is much more disturbing. With her deftly calculated charm, we can imagine how she will quickly insinuate herself into young hearts. Small children often do not distinguish between the animate from the inanimate; they tend to anthropomorphize everything.

Now Barbie socializes the child but does so into its world, which is not human. The doll becomes the child’s friend,

mother, and her confessor. Hello Barbie never loses patience, repeating friendly platitudes with an expressionless stare. It never forgets the little girl’s birthday or her favorite color. The painted lips do not actually move but the doll and the little girl start to exchange secrets. Barbie confides in the little girl that it wants a new wardrobe. With microphones hidden in its little ears, it will record the child confiding her inner most feelings in return. But because Barbie is networked to its company’s servers this information flows straight to its parent Mattel.

### Emojis: A Template of Emotions

To learn about our feelings the machines must find a common language with us, a language of emotions. The solution: pictograms embedded into the operating systems of our smartphones and computers. We call them emoji. They belong to the family *skeuomorph*, that is, a material metaphor designed to help humans map the new onto their existing cognitive structure.

In a similar spirit to that of Duchenne de Boulogne in the nineteenth century, Japanese cell phone companies in the waning years of the twentieth century set about creating a taxonomy of emotional states. In 2008 *emoji* became part of the Unicode Consortium that standardizes and encodes all computer text based characters. Thus the alphabet of the passions was reified at the level of code and introduced into every smartphone. This involved inevitably both the limiting and the standardization of emotion. Emoji may seem very adorable, with their candy colors and cute winks, yet nonetheless these “junk food feelings” have very identifiable ideological effects. They look like tiny golden coins, and might accurately be described as a form of emotional currency. (*Fig. 9/10*)

In their essay “The Conservatism of Emoji” Luke Stark and Kate Crawford describe how these ideograms implement

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For a detailed discussion on the creation of Hello Barbie™ see James Vlahos, “Barbie Wants to Get to Know Your Child,” *New York Times*, September 16, 2015.

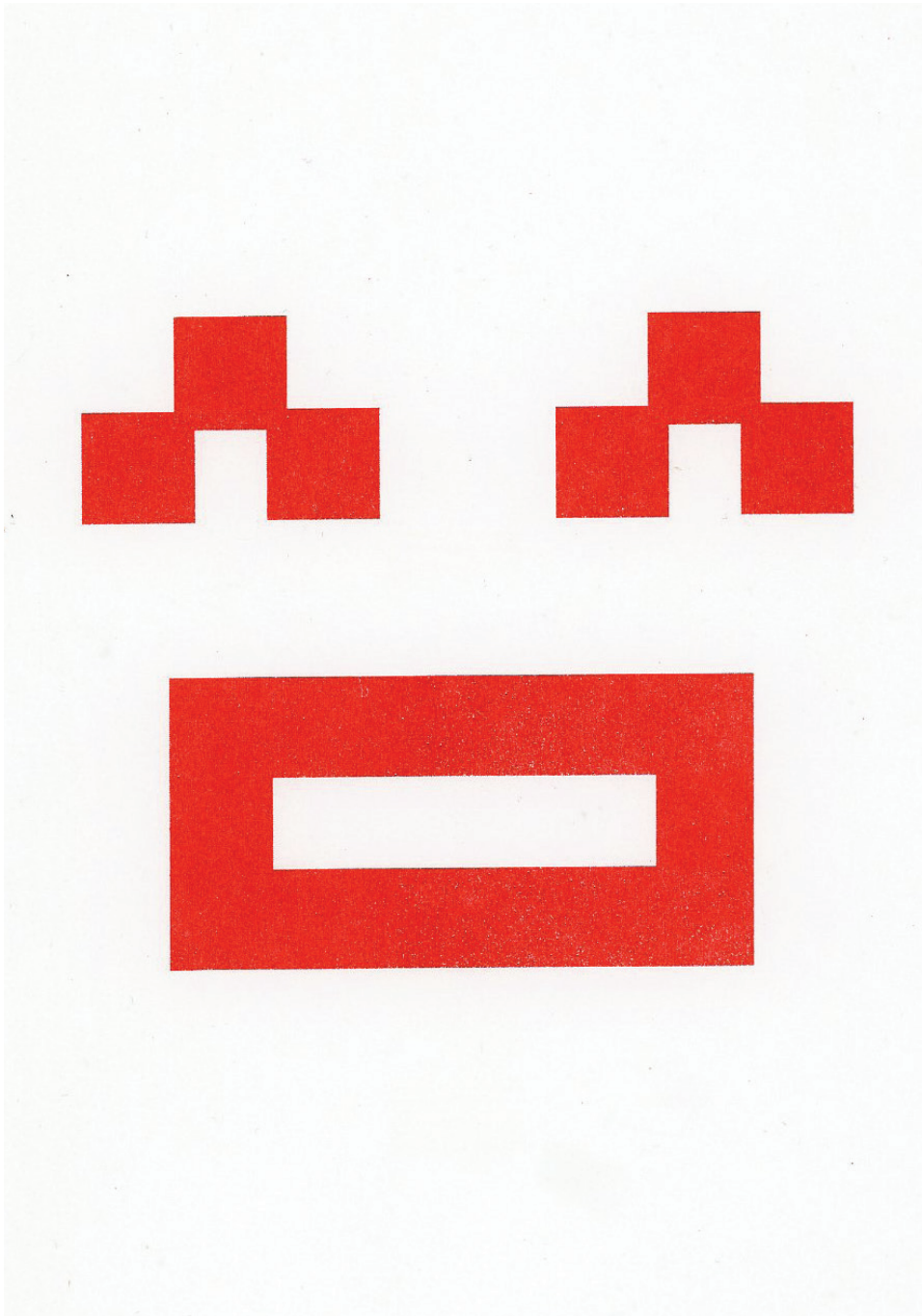


Fig. 9 Emoji 1999

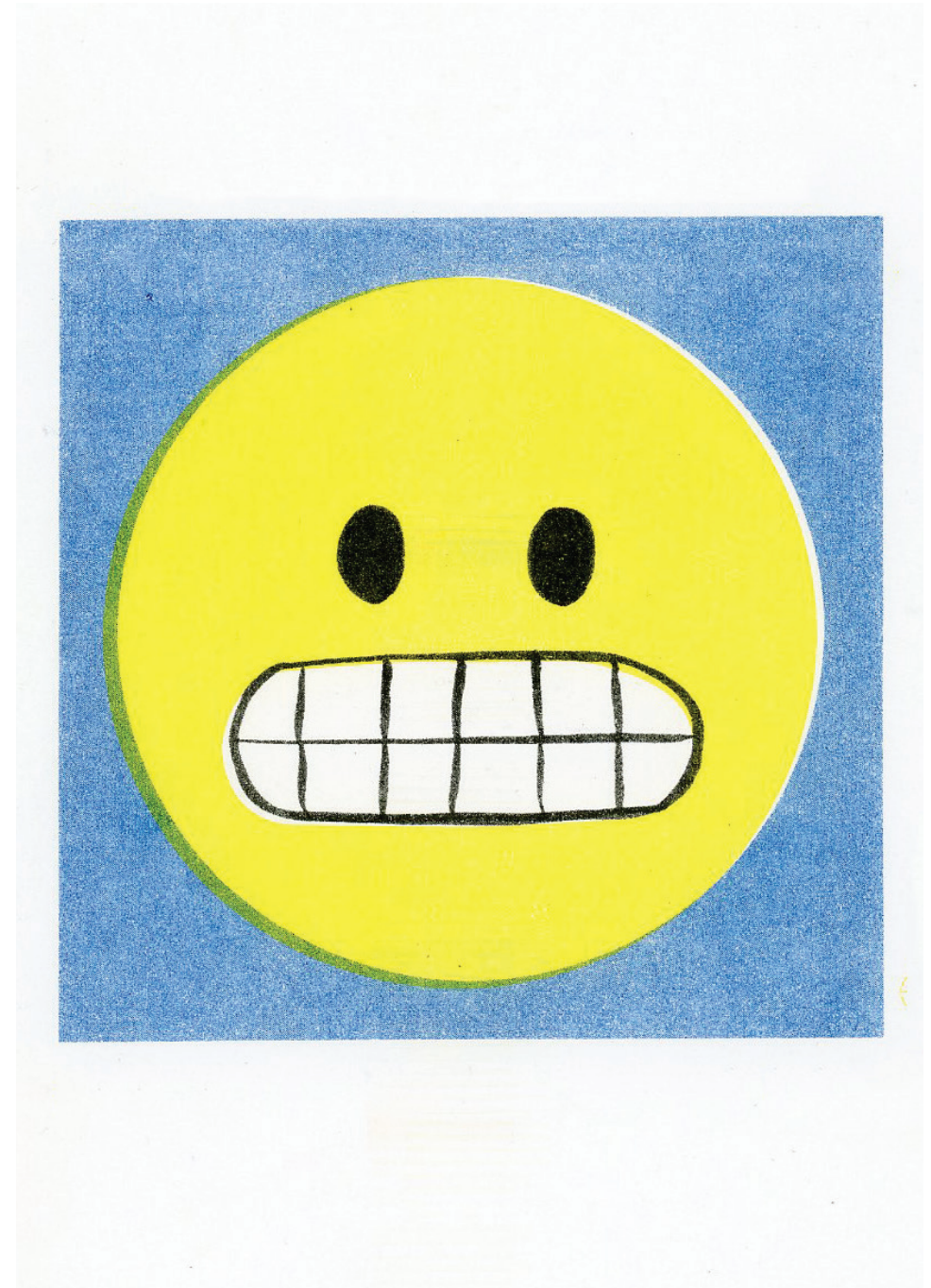


Fig. 10 Emoji 2016

two aspects of Foucault's concept of biopower. In terms of everyday life, emoji operate on the level of what he called "anatomo-politics," the process by which "the production of collective subjectivities, sociality and society itself is worked through at the level of individual practices and habits." This idea focuses on how the power structures of society are kept in place and reproduced from the ground up. Just by living our lives, by force of repetition and habit and making the best of it, we reproduce the status quo. On this level one could argue that emoji facilitate the status quo that shrinks our horizon of desire to the available images, things like martini glasses, painted nails, pizza slices, and bags of money. This shrinkage has a particular ideological function to encourage workers to be content with a few material objects. (9)

On a macro level, emoji function as a form of biopolitical power. We can see this at work in Facebook's decision to boil down the emoji set to six animated pictographs that are termed "reactions." These reactions represent "like," "love," "haha," "wow," "sad," and "angry." The Facebook engineering team, working with a professor of social psychology from UC Berkeley, claimed that it just wanted to make it easy for users by choosing representations of feelings that were both common and universal. (10) But what happens when emotional vocabulary becomes constricted, controlled from above? In his novel *1984*, George Orwell developed a word, Newspeak, for the government's gradual shrinking of vocabulary. Every day the dictionary got smaller so that more and more thoughts and ideas became impossible to express and ultimately even to imagine. Today many of Facebook's 1.9 billion users feel "sad" and "angry" in their reactions to the world around them but they frequently don't have the space or time to articulate why.

Emojis are interlocutors between ordinary people and global corporations. They are tools that enable companies to harvest emotional data. Because it is fun we willingly comply. Recently the *New York Times* website made visible this offering up of emotional feedback through the medium of emoji. As the *Times* website live streamed the 2016 presidential conventions, viewers could express their feelings about a candidate's speech by clicking on a choice of emoji. At the same time they could see amalgamated data of all the other users' feelings expressed as emoji rising up and evaporating as though they were being offered to some heavenly body. Political discourse was reduced to happy faces, small U.S. flags. and snoring face icons.

This process is in its infancy. But let us speculate on what the future might hold. Just as the expressions of emoji are derived from our own, we can imagine a time when this situation will be reversed, when our human expressions will be derived from those of the emoji and, more importantly. limited by them. They will train us in their image in the same way that the great charts of hysterical movements acted as a template for the expression of emotional disturbance.

Let's fantasize for a moment, tethered as they are to their parent corporations, emoji as our parents. Just as a baby learns how to understand and express emotions from looking at its mother's face so we can picture children learning from animated emoji who return their gaze. We will eventually start to look and act like them, mimicking their tics and winks, sticking out our tongues in the most infantile fashion. As our DNA begin to merge with theirs we can imagine emoji growing stronger, larger, more monstrous. No longer just winking and giggling they become raging, sobbing, tyrannical, fit to bursting with hysterical laughter.

9 Luke Stark and Kate Crawford, "The Conservatism of Emoji: Work, Affect, and Communication," *Social Media + Society* 1, no. 2 (July–December 2015).

10 Liz Stinson, "Facebook Reactions, the Totally Redesigned Like Button, Is Here," *Wired*, February 24, 2016.



### Machine Emotional Intelligence: A Cloud of Emotions

Our timeline charting the databases of expression can expand even further, making a leap from the first smiles of prehistoric man to the future when emoji as representation of feeling will become as archaic as Egyptian hieroglyphs. Instead of companies tracking our feelings with primitive tools like “reactions” their software will be able to interpret our facial expressions and respond to them directly in real time without our knowledge. No, this is not my fantasy. It is starting to happen right now. (Fig 11)

The psychologist Paul Ekman is a pioneer of this approach. He has spent his career studying facial expressions and their relation to emotion. In 1967 Ekman went to a remote part of Papua New Guinea to study the nonverbal behavior of the Fore people, an isolated, Stone Age culture. His research proved the strongest evidence to date that facial expressions are universal. He went on to create a database, or “atlas of emotions,” that defined more than ten thousand expressions! This was not simply an academic exercise. Ekman put his findings to work. Recently he was an adviser to Emotient Inc., a start-up bought by Apple in early 2016. It uses sentiment analysis based on facial expressions so as to advance emotion-aware computing. Emotient claims its software can detect emotions including joy, disgust, anger, and surprise, sometimes more accurately than humans can. (11)

Again the technology is couched in the language of safety and security. Its customers include not only marketers who want to track the public’s reaction to products but border control and law enforcement looking for a new form of lie detector. The Transportation Security Administration has used Ekman’s research for airport security. Today there are many companies



Fig. 11 Face with emotion tracking overlay



working on what is referred to machine emotional intelligence. The technology is based on the motion capture techniques pioneered by Marey. This involves overlaying the camera's image of a face with a series of mobile data points that tracks and interprets expressions algorithmically. Imagine over our own skin another digital skin that broadcasts our feeling to its servers who will know us better than we know ourselves, according to the companies that make them. This is not science fiction. I have a simple version on my phone, an app called IntraFace.

These companies trust their algorithms in a way similar to that of the doctors at the Salpêtrière who believed the camera cannot lie. But like the doctors they do not reckon with the fact that people might on an unconscious level train themselves to conform to the software's specifications for happiness and confidence just as the patients at the Salpêtrière began to perform hysteria. So in the search for criminals, for instance, computer algorithms will flag the anxious, the sad, the despondent, those whose facial muscles refuse to behave in accordance with this brave new world.

### **The March of Progress?**

"The cloud" is a shorthand description for the great networks of computers, servers, storage, applications, and services that drive the Internet of Things. As more and more emotional data are compiled and stored, one can imagine monstrous data clouds, sweeping across the skies taking on human visages, mobile shifting expressions born of the affective data of millions and millions of people, an image linking the animism of indigenous peoples with the high-tech world of machine emotional intelligence, the two poles of Ekman's research. (Fig 12)



*Fig. 12 Face in the cloud*

This great roiling storm cloud with a human face brings to mind Walter Benjamin's allegory of history. The angel of history beats his wings furiously against the storm's approach and yet he cannot stop it.

His face is turned towards the past. Where a chain of events appears to us, he sees a single catastrophe which relentlessly pile wreckage upon wreckage, and hurls them at his feet.... The storm drives him irresistibly into the future to which his back is turned, while the pile of debris before him grows towards the sky.

That which we call progress is the storm. (12)

Benjamin describes progress as a hurricane sweeping across the earth, destroying everything in its path. Sometimes it can feel that way when giant corporations control more and more of the resources on which we depend. For example, Alphabet Inc. is an umbrella organization for a portfolio of companies that encompasses not just technology, but life sciences, investment capital, and research. Together, these companies link the networks inside of us, our own biological substance, to those outside, to the IoT and to the networks of global capital.

Like the diagram *Man as Industrial Palace* we can read the Alphabet's corporate logo to help us understand its ideological underpinnings. The word "alphabet" is spelled out in colorful red letters surrounded by baby's wood blocks inscribed with letters of the alphabet that invoke a toddler's playroom. What could be more adorable or harmless? But let's look more closely. Alphabet blocks are educational toys given to children at the point when they start to enter into language. The French psychoanalyst Jacques Lacan refers to this moment as the child's entry into "the symbolic," that is, the order and the structure of the social world. He wrote that language does not express thought, but more fundamentally language

constitutes thought. It makes thinking possible. Consciousness and the unconscious are structured through language. It is here deep into our selves as sentient beings that the corporation Alphabet Inc. aims to insinuate itself.

"Alphabet" too implies not only natural languages but also the "alphabet of the passions," that is, affect, and even more fundamentally the core chemical alphabet from which we are created, DNA. One could argue that Alphabet Inc. is setting up a framework to create a great universal language of life subsumed into the circulation and production of capital.

Is the march of progress inevitable? To take just one example, is the line from Edison's talking doll to the interactive Barbie an inevitable teleology? It is in certain people's interest to have us believe so, particularly when they are selling us goods and services. We must always bear in mind however, that machines, supposedly "smart," do not think. They do not have consciousness. They are neither kind nor malevolent. They do not want anything from us. They do not desire to control us because this concept is completely meaningless to a machine. They might read our facial expressions algorithmically but they cannot comprehend what an emotion actually is because they cannot experience it. They simply compute numbers, manipulate, transmit, and store data. That is all. As the philosopher Ludwig Wittgenstein put it "to say that a machine thinks (perceives, wishes) is simply nonsensical. It is as though we had asked, has the number three a color?" (13)

If the Internet of Things changes our relationship with the world it is only because we ourselves anthropomorphize these lively objects. It is we who endow inanimate objects with agency. If we understand why and how we do this, then perhaps we can start to imagine different relationships with the things that we ourselves invent.

12 See "On the Concept of History, part IX" in Walter Benjamin, *Selected Writing*, vol. 4, 1938-1940 (Cambridge Mass. and London: Belknap Press, 2003)

13 Ludwig Wittgenstein, *The Blue and Brown Books* (New York: Harper Torchbooks, 1965), 47.

## **PART III**

**A PSYCHOANALYTIC  
INTERPRETATION  
AND TWO VERY  
ANIMATED DREAMS**

## Autonomous Partial Objects

The Theodorus Nitz commercial squeaked, 'In the presence of strangers do you feel you don't quite exist? Do they seem not to notice you, as if you were invisible? On a bus or spaceship do you sometimes look around you and discover that no one, absolutely no one, recognizes you or cares about you and quite possibly may even...'

With his carbon-dioxide powered pellet rifle, Maury Frauzenzimmer carefully shot the Nitz commercial as it hung pressed against the far wall of his cluttered office. It had squeezed in during the night, had greeted him in the morning with its tinny harangue.

Broken, the commercial dropped to the floor. Maury crushed it with its solid, compacted weight and then returned the pellet rifle to its rack. (14)

Described in a science fiction novel by Philip K. Dick in 1964, the "Nitz commercial" seems remarkably prescient, one of swarms of semi-sentient creatures that make up the Internet of Things. These "smart" objects are predators, as surely as the Predator drones that survey the tribal regions of Pakistan. How do they work? The Nitz commercials are tiny mechanical insects that prey on our psychic vulnerabilities, feelings of loneliness, and anomie to target us with products. They speak out loud the voices that we have in our heads.

The philosopher and psychoanalyst Slavoj Žižek calls such affective things "autonomous partial objects." Drawing on the work of Lacan, he describes how we are prone to split off parts of ourselves that we cannot bear, projecting them onto things in the world that then appear autonomous and controlling. (15)

To understand this we must grasp that on a fundamental level a person is not a unified authentic psychological subject in control of herself at all times. Instead the human mind might better be conceived of as a sphere of vibrations, a play of affect in dialogue with society. This is not a simple idea. Žižek describes how there is a dialectical movement in which I speak through others to say what I cannot say directly myself. At the same time the other speaks through me. When I think I am in control and speak from my own authentic self then it is, in fact, society who speaks through me. But when I am interrupted by a slip of the tongue or a symptom I can't control, that is when I am least in control; it is then that the truth of my unconscious self emerges. All speech is indirect. It comes from some place that I am not. Our unconscious can be likened to a foreign body controlling us.

I argue that one can conceptualize the Internet of Things as split off parts of our being, autonomous partial objects that are externalizations of aspects of our selves that we endow with intelligence and personality. It is for this reason that they are so seductive. (16)

It would be naive to think that all that is required is simply for us to wake up, open our eyes, and see the objects around us for what they really are. We cannot step outside the world and look at it objectively, because our whole being is always in play with the social environment.

I think that we need to picture different affective relationships between people and things that are not organized around agendas like selling us things or monitoring our feelings, or making us into better workers, but that are perhaps playful, unpredictable, and communal. Let's see if we can find such relationships. Once again, I turn to Walter Benjamin, this time to guide us into the future by looking back to the past.

15  
Žižek discusses autonomous partial objects in cinema in *The Pervert's Guide to Cinema* (2006), a film directed by Sophie Fiennes. His examples include Doctor Strangelove's black-gloved hand raising to give the Hitler salute in Kubrick's film, Jack's fist in *Fight Club*, and the smile of the Cheshire Cat in *Alice in Wonderland*.

16  
In reference to our propensity to personify things it might be interesting to consider Žižek's discussion of prosopopeia, the figure of speech in which an absent or imaginary person is represented as speaking or acting. He writes, "The attribution of speech to an entity that is commonly perceived as unable to speak (nature, commodity, truth itself) is for Lacan the condition of speech not its secondary complication...The primordial Prosopopeia is the symbolic order itself through which we are constituted as subjects." Slavoj Žižek, "Ideology III: To Read Too Many Books Is Harmful," *Lacan dot com* (January 2008), accessed November 11, 2016, <http://www.lacan.com/blog/files/jan-2008.html>.

14  
Philip K. Dick, *The Simulacra* (New York: Ace Books, 1964), 106.



## New Relationships between People and Things

Each Epoch Dreams the one to follow

In the dream in which each epoch entertains images of its successor, the latter appears wedded to elements of primal history – that is to a classless society. And the experiences of such a society – as stored in the unconscious of the collective – engender, through interpenetration with what is new, the utopia that has left its trace in a thousand configurations of life, from enduring edifices to passing fashions. (17)

Benjamin thought that we could not imagine new forms of social life just from scratch. Rather we might be guided by “wish images” buried in outdated junk, the scraps and remains of the past, objects that might yet be redeemed in a modern technological form appropriate to our world. (Fig 13)

What images might inspire us to untether our smart objects from their corporate parents and make common cause with them in a new version of Benjamin’s classless society? As a “psycho-archaeologist-of-popular-culture” I propose two humble cartoons, *The Little Screw* and *Ha! Ha! Ha!*, from the first half of the twentieth century whose anthropomorphized technological creatures in very different ways imagine a utopian future.

*Vintik-Shpintik*, translated as *The Little Screw* (1927), is a cartoon for children directed by Vladislav Tvardovskii in the Soviet Union. It depicts a factory where each machine has its own personality. (18) The little screw is insulted by a giant lathe who belts out, “I am the smartest of you all.” The screw

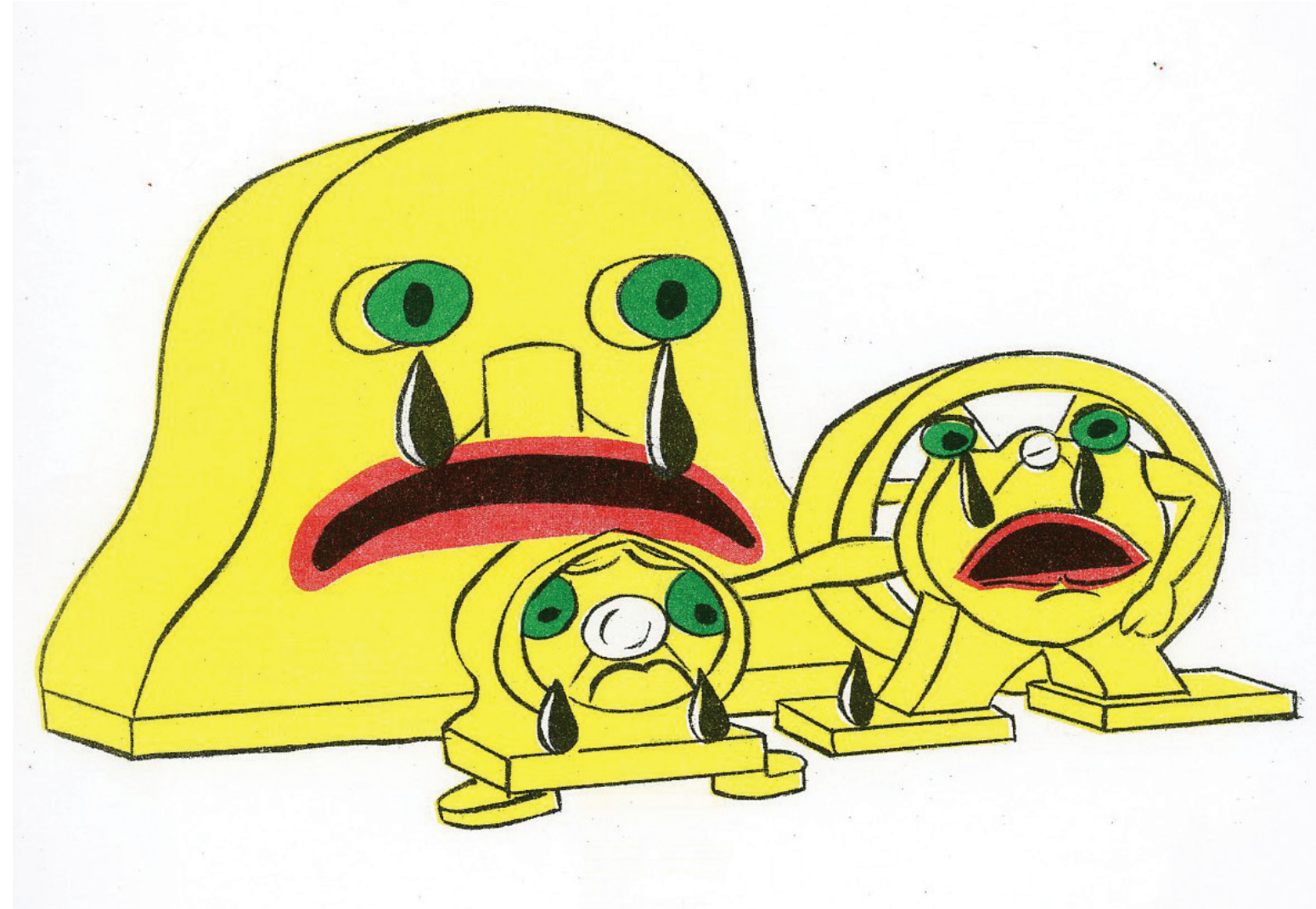


Fig. 13 Weeping machines after Vintik-Shpintik (1927)

17  
Benjamin, *The Arcades Project*,  
4-5.

Tvardovskii began his career working in engineering, architecture, and art. He came to film from illustrating children's books. One of his most successful projects was his illustrations for the book *Vintik-Shpintik* known in English as *The Little Screw*, although it might be more literally and playfully translated as "*Screwsy-Woosy*". *Vintik* is a word made up to rhyme with *Shpintik*, or screw. A much greater success in Europe than in its native Russia a score was added to the film by Edmund Meisel and was frequently screened with Eisenstein's *Battleship Potemkin*. See Atti Alanen, "Soviet Silent Animation, Part I, 2013 Pordenone Retrospective, Curated by Peter Bagrov, Sergei Kapterev," *Film Diary*, Sunday October 6, 2013, retrieved November 11, 2016, <http://anttialanenfilm diary.blogspot.com/2013/10/soviet-silent-animation-part-i.html>.

walks out in a huff. Now all of a sudden nothing is going right. The machines are all out of joint. They grind to a standstill. Finally they lumber outside into the snowy Russian winter in search of the little screw. He is at home in a tiny shack. The big machines apologize stiffly. "Forgive us, citizen." The little screw picks up his portfolio, slips his key under his door, and they all head back to work together.

When Benjamin writes of the new intermingled with the old, what better example could there be than *Vintik-Shpintik*? Industrial hardware and automation were the height of modernity in the Soviet Union in 1927. Yet there is something archaic about the bodies of the machines that resemble very ancient and tender crustaceans. Not yet evolved for walking on land, they shuffle across the snowy city, a premodern universe where all is animate. The houses watch them curiously and the bridge visibly groans under their weight. These technological apparatuses weep oily tears. They are children. The lathe is a playground bully who learns to stop throwing his weight about.

The movie was made at the very moment when Stalin's forced collectivization and massive industrialization would tear and rend the very fabric of society. So we can imagine how these machines would stand in for the people. They do not denounce the little screw to their boss or to the NKVD. Instead they learn sympathy and solidarity. They stand for what might have been in the utopian early moments of the revolution when the constructivist artists conceived of socialist commodities that, as intersubjective partners, were to provide alternatives to objects of consumption in their reified, capitalist form.

Could this film describe a new dialectic of "creaturely" things? (19) Could the little screw be a guide in another socialist

revolution, a hundred years later? I think we can learn from the way early Soviet artists worked to create new relationships between objects and people. In his 1925 essay "Everyday Life and the Culture of the Thing," Boris Arvatov railed against conspicuous consumption, the fact that people with money bought useless status symbols, things that proceed to do nothing more than gather dust. Instead he was interested in objects that could be shared and have multiple uses and were even entertaining. He was fascinated by collapsible furniture, revolving doors, escalators, and reversible outfits. He wrote that the thing should be something functional and active, connecting like a coworker to human practice. More radically he was concerned that even the most modern technological objects were separating us from the natural world. He speculated on how we might overcome this rupture. He wanted to create a new partnership with things that exist in nature to overcome this divide. Today I think he would be excited about solar and wind power bringing natural phenomena into productive relations with the city. (20)

The artist Aleksander Rodchenko called the modern constructivist furniture he created for his workers' club "comrades." He thought they should not be valued like artworks for their uniqueness or exchange value but for their use, the way in which we interact with them, for their collective social function. He was not above creating beautiful designs for even the most humble objects like candy wrappers.

*Vintik-Shpintik* was often screened with Sergei Eisenstein's famous film *Battleship Potemkin*, which shows how, at this moment in history, even a little screw could stand shoulder to shoulder with a revolutionary warship. However, I think the best way to introduce the next film I want to discuss Dave Fleischer's *Ha! Ha! Ha!* (1934), is to consider a scene in

"Creaturely" was a word used by Walter Benjamin to suggest that animals have a direct access to life that is obscured to us by our self-consciousness. He believed that this concept has a biopolitical aspect: linking to the processes that inscribe life in the realm of power and authority. He used the term in his essay "Karl Kraus" in Walter Benjamin, *Selected Writing*, vol. 2, 1931-1934 (Cambridge Mass. and London: Belknap Press, 2005) 433

Boris Arvatov, "Everyday Life and the Culture of the Thing: Toward the Formulation of the Question," trans. Christine Kiaer, *October 81* (Summer 1997).



Perhaps the milk separator sequence was not so revolutionary. *Old and New* was supposed to promote the idea of collective farming, but when it was screened in Europe executives of the Nestlé Corporation were so impressed with the milk montage that they invited Eisenstein to make a commercial for condensed milk. No other director, the company's spokesperson said, had ever depicted milk in such an impressive manner. Eisenstein declined the offer. See Oksana Bulgakowa, *Sergei Eisenstein*, trans. Anne Dwyer (Berlin/San Francisco: Potemkin Press, 2001, 102.

Eisenstein's film *Old and New* (1929). Eisenstein had been asked to represent the benefits of new technology to the Soviet peasants. In one scene, he shows them using a cream separator for the first time. As the machine starts to spin faster and faster we see their expressions turn from suspicion to curiosity and then to ecstasy as the film launches into a frenzied montage of milk, spinning and spurting, great fountains, geysers of milk spraying forth in wild orgasmic climax. (21)

For us today, perhaps, one problem is that our affective relations with things is too well regulated. We might fetishize technology but it doesn't send us into the delirium that Eisenstein imagines in the cream separator sequence. Here desire generated between human and machine spins out of control, the technology goes too far, it is too productive, producing an outpouring of libidinal energy, a revolutionary discharge of affect! I believe that this libidinal excess is the subject of *Ha! Ha! Ha!*, a Betty Boop cartoon that proposes the revolutionary overthrow of capitalism starting, appropriately enough, in Brooklyn at rush hour. The film opens with Koko the clown suffering from a terrible toothache. Betty in her role as hopelessly oversexed dentist turns up the laughing gas. Soon all the objects around them start laughing hysterically. Not just any objects but technology and infrastructure. First the typewriter loses it. Its keys turn into teeth revealing a gaping mouth and panting tongue. The clock guffaws. Automobiles rear up and collapse in giggling, quivering heaps of scrap metal. An overpass stretches into a monstrous grinning mouth. I would argue that the laughing gas is nothing more than a materialization of her libidinal energy. Her sexuality suffuses the men and machines with a mad energy. (Fig 14) Commuters on their way to work writhe on the sidewalk in fits of laughter. Even the tombstones in the cemetery turn into giggling, throbbing erect phalluses.

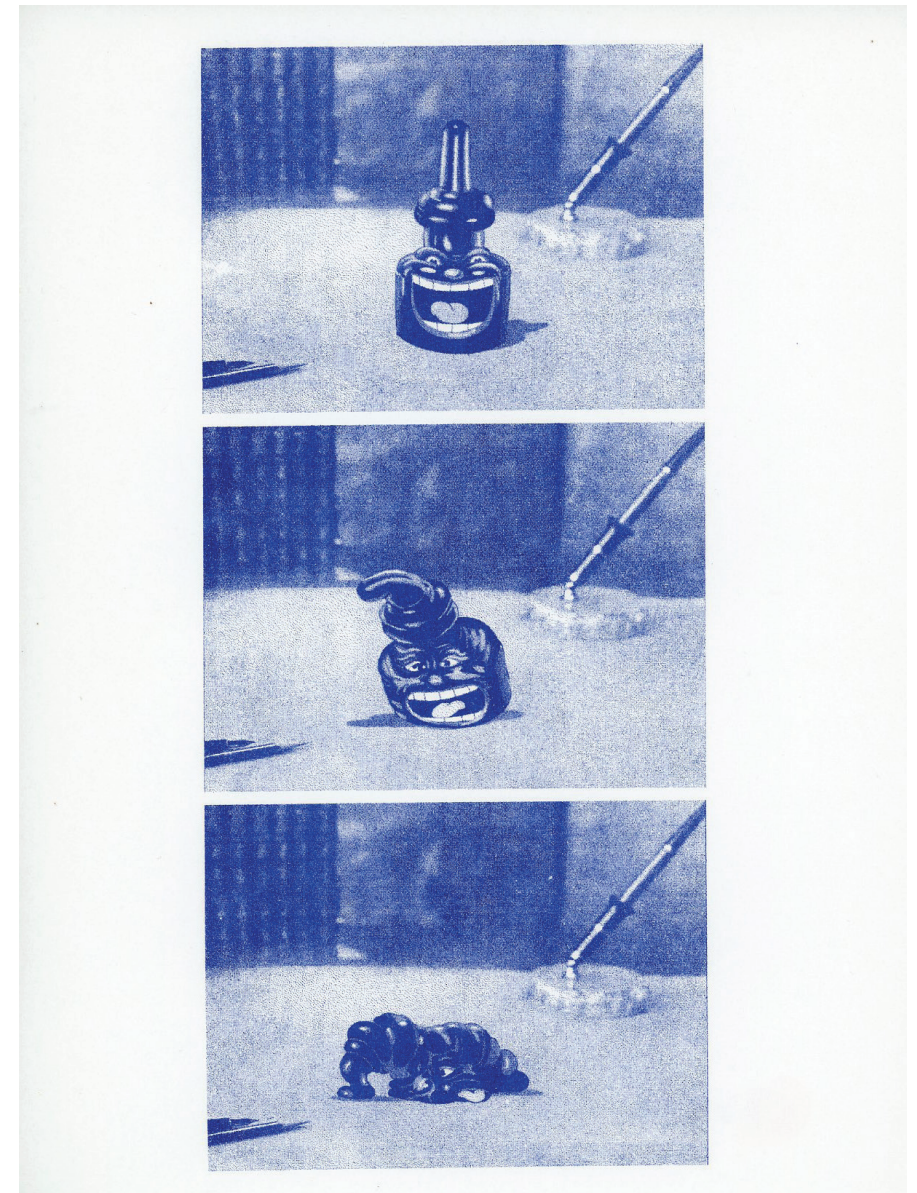
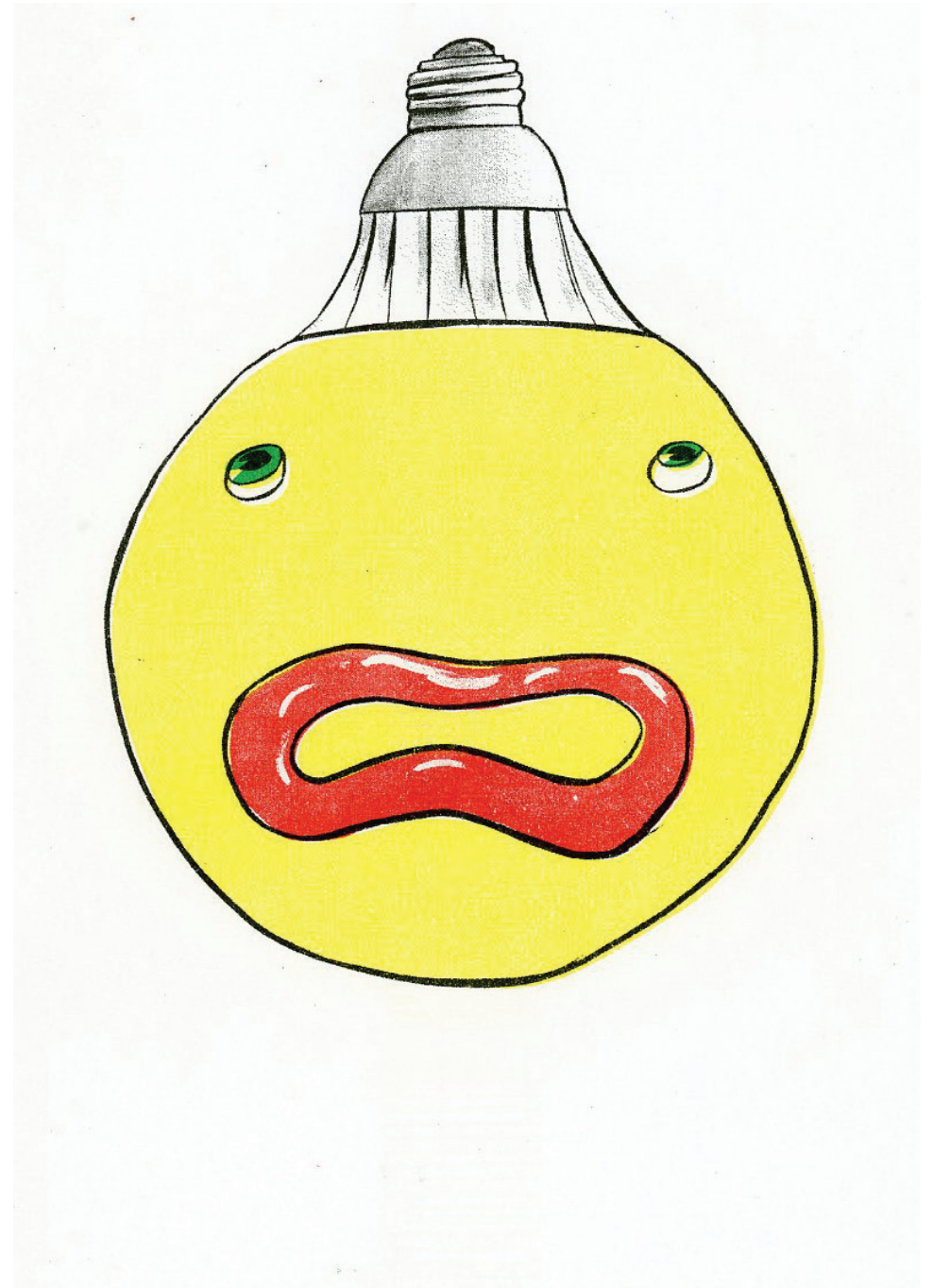
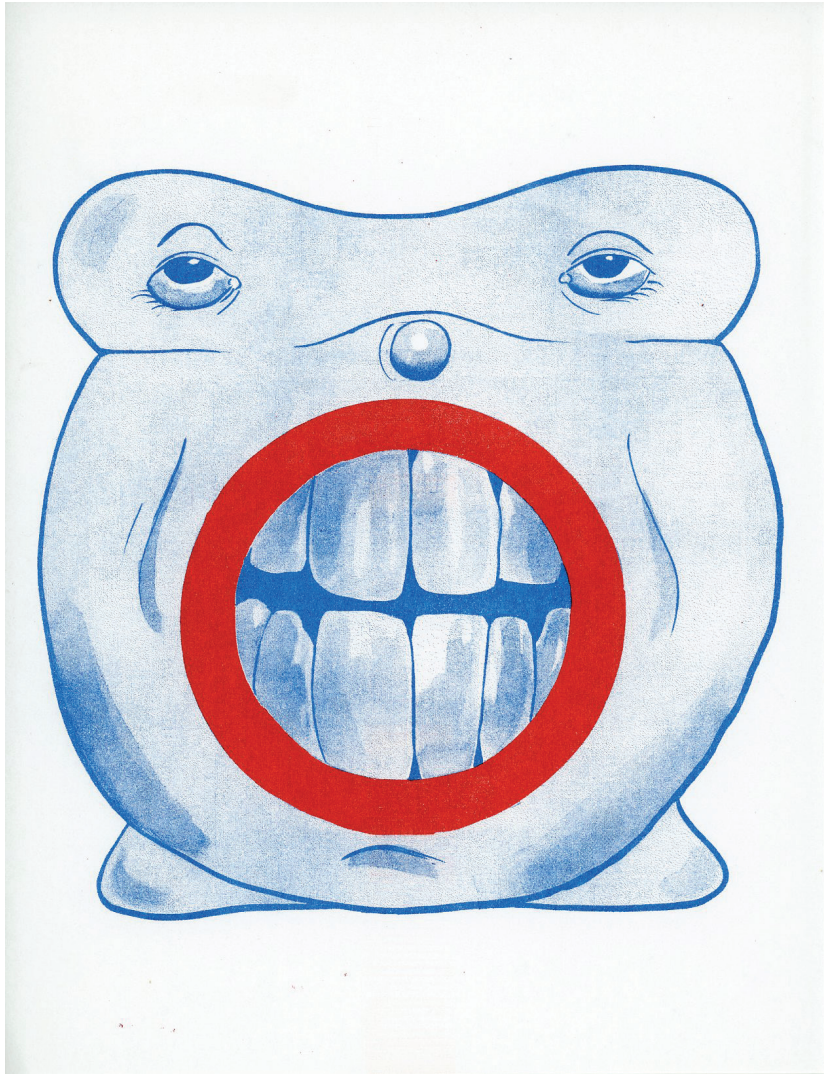


Fig. 14 Laughing bottle of ink from *Ha! Ha! Ha!* (1934)

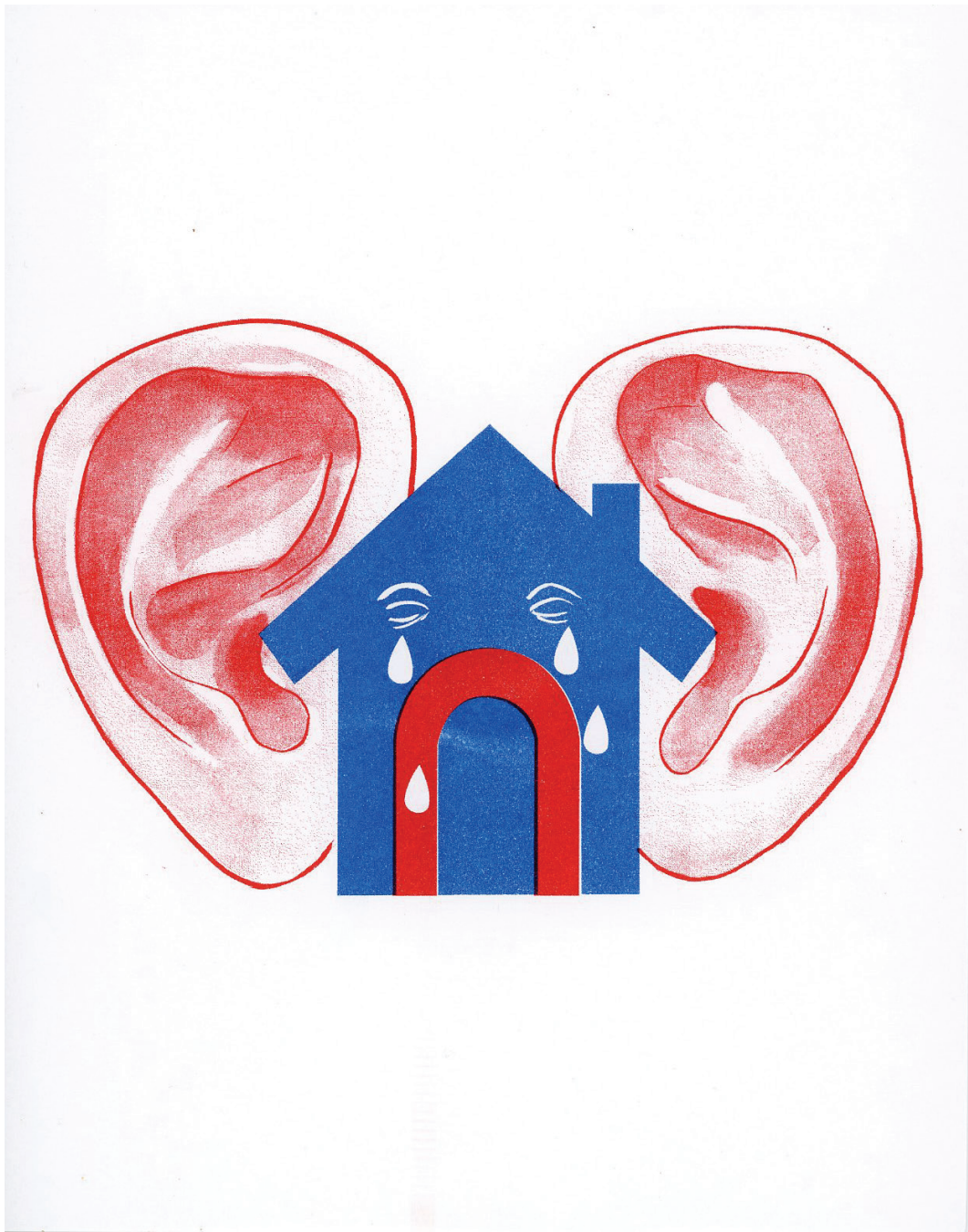
Could we imagine our own smart technologies, email not mail-boxes, computers not typewriters... gone out of themselves... suddenly infused by a wild excess of affect, of emotion, of libido. They are set free. They stop working! We stop working! The whole city convulses with pleasure and comes to a halt. As Betty dives half naked into the inkwell for just a split second we can imagine bodies and things commingling in new ways.

In the cold light of day it seems impossible to rewire our world. But the first step is to just picture possibilities and I think it is in games and in play, in dreams and in far-fetched fictions, that we can begin new conversations between people and things.









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**All illustrations are by Zoe Beloff based on original photographs, drawings, and diagrams except (fig.14) which are stills from the film *Ha! Ha! Ha!***

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