B

Dear Data: Feminist Information Design's Resistance to Self-Quantification Author(s): Miriam KienleSource: *Feminist Studies*, Vol. 45, No. 1 (2019), pp. 129–158 Published by: Feminist Studies, Inc.

Stable URL: https://www.jstor.org/stable/10.15767/feministstudies.45.1.0129

REFERENCES

Linked references are available on JSTOR for this article: https://www.jstor.org/stable/10.15767/feministstudies.45.1.0129?seq=1&cid=pdfreference#references_tab_contents You may need to log in to JSTOR to access the linked references.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at $\rm https://about.jstor.org/terms$



 $\mathit{Feminist Studies, Inc.}\xspace$ is collaborating with JSTOR to digitize, preserve and extend access to $\mathit{Feminist Studies}\xspace$

Dear Data: Feminist Information Design's Resistance to Self-Quantification

EVERY SUNDAY FOR ONE YEAR, information designers Giorgia Lupi and Stefanie Posavec sent each other a hand-drawn postcard that featured a data visualization of their week as it pertained to a single aspect of their daily lives: doors opened, clocks checks, sounds heard, smells perceived, and so on (figs. 1-4). With this series of postcards exchanged between Brooklyn and London, Lupi and Posavec gained intimate knowledge of one another through their small/slow data, and at the same time, they produced a critical examination of the capture, interpretation, and visualization of their daily data from a uniquely feminist perspective. Although the field of information design prizes clear, efficient, and seamless presentations of quantified activity, Lupi and Posavec's Dear Data (2015) is comprised of visualizations that underscore complexity over clarity, present questions rather simply display information, and expose the instability of data itself.¹ Against the quantification of embodied experience into seemingly objective and all-encompassing datasets, Dear Data instead looks at data from a feminist perspective, as tied to concrete bodies, localities, and temporalities and visualized in a manner

Feminist Studies 45, no. 1. © 2019 by Feminist Studies, Inc.

^{1.} The approach to infographics that prioritizes efficiency, accuracy, and elegance, and thus suppresses the constructed and interpretative nature of both data and its visualization, is perhaps most attributed to Edward Tufte. For Tufte's aims and methods, see Edward R. Tufte, *The Visual Display of Quantitative Information* (Cheshire, CT: Graphics Press, 2001).

that is incomplete, contingent, and constructed.² This paper will analyze Lupi and Posavec's designs as providing a model for a feminist approach to data visualization — a model imperative in an age in which the quantitative information (much like a binary understanding of gender) is too often treated as a self-evident fact rather than what feminist philosopher Donna Haraway famously called "situated knowledges."³

Recently acquired by MoMA's architecture and design collection, the *Dear Data* project not only stands out in the collection as the product of two female designers working in the male-dominated fields of technology and design, but also as a project that stresses feminist knowledge production by underscoring how data voids shape datasets and debunking the myth that the world is data that can be captured and visualized with neutral, distanced, and all-encompassing technologies of vision. As Catherine D'Ignazio and Lauren Klein describe in Data Feminism, data visualization from a feminist perspective understands that "bar charts might seem neutral and objective, but are in fact the result of very human and necessarily imperfect design processes."4 Such a perspective is evident across Dear Data. Take, for example, "Week 42: A week of laughter" (fig. 5). On the key in Posavec's visualization, she notes: "I tried to capture my laughs which was *really hard* + got in the way of the enjoying life, hence the data voids. / For a card about laughter I am sad about how this card turned out."⁵ This willingness to show the gaps in her data, the complexities of her process, and the imperfections of her visualizations contrasts with the seamless and straightforward displays of information

^{2.} For a feminist approach to data visualization, see Catherine D'Ignazio and Lauren Klein, *Data Feminism* (Cambridge, MA: MIT Press, 2019), ebook; Catherine D'Ignazio, "What Would Feminist Data Visualization Look Like?" Center for Civic Media. Massachusetts Institute of Technology (blog), December 20, 2015, https://civic.mit.edu/feminist-data-visualization; and Johanna Drucker, *Graphesis: Visual Forms of Knowledge Production* (Cambridge, MA: Harvard University Press, 2014).

Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (1988): 575-99.

^{4.} D'Ignazio and Klein, introduction to their Data Feminism.

^{5.} Giorgia Lupi and Stefanie Posavec, *Dear Data* (New York: Princeton Architectural Press, 2016), 231.

or what infographic guru Edward Tufte describes as "Designs so good that they are invisible."⁶

Counter to the invisible and seemingly objective visualizations of our personal data to which we have become accustomed (on calorie counters, credit card statements, etc.), Lupi and Posavec's designs document their daily data as intimately tied to embodied experience and constituted by its complex and imperfect visualization. Their data is presented as drawn from life, not simply a reflection of it. As Posavec states on one postcard, "[I] tried to be as honest as possible. Though I've found ways of obscuring some needs/desires.... A data vis is never neutral, right? I like a bit of mystery."⁷ With these infographics, Posavec and Lupi stress, as visual theorist Johanna Drucker has articulated, that "Data are capta, taken not given, constructed as an interpretation of the phenomenal world, not inherent in it."8 In the process of visualization, Lupi and Posavec have therefore foregrounded how data is captured and transformed into information or how quantified experience is gualified and made meaningful. Lupi and Posavec's weekly infographics discuss in their keys the instability of data and the manner in which visualization makes it intelligible, and with divergent designs, they call attention to different aspects of the same phenomenon—emphasizing the role that the graphics themselves play in the production of knowledge. For example, in "Week 42: A week of laughter," Lupi chose a network visualization that describes who made whom laugh and how many times, whereas Posavec utilized a hybrid timeline/bar chart to show when, with whom, and at what she laughed, as well as the size of the laugh. In other

^{6.} Edward R. Tufte, *Envisioning Information* (Cheshire, CT: Graphics Press, 1990), 33.

^{7.} Posavec's quote comes from "Week 13: A week of desires" and reads in its entirety, "I tracked whenever I felt I really desired/wanted something. Tried to be as honest as possible. Though I've found ways of obscuring some needs/desires... A data vis is never neutral, right? I like a bit of mystery..." Lupi and Posavec, *Dear Data*, 71.

^{8.} Just as gender is not a stable entity that exists a priori or outside of representation, neither is data. As Johanna Drucker elaborates, "Gendered identity defined in binary terms is not a self-evident fact, no matter how often Olympic committees come up against the need for a single rigid genital criterion on which to determine difference. By recognizing the always interpreted character of data, we have shifted from data to capta, acknowledging the constructedness of the categories according to the uses and expectations for which they are put." See Drucker, *Graphesis*, 128–29 (italics in original).

words, beyond simply quantifying how much they laughed, they situate the experience of laughing differently in order to ask unique questions about social relationships.

In order to select each week's theme, discuss their designs, and compare notes about the impact of data capture on their daily lives. Lupi and Posavec also talked over various forms of electronic communication. In this way, fast and slow modes of communication intersected. Underscoring the behind-the-scenes labor and the levels of mediation involved in the project, some of the postcards reference these conversations by visualizing the amount or tenor of their weekly conversations. In fact, from the very first card onward, Lupi indicated all of her communications with Stefanie in pink text—calling attention to their process by making this activity stand out from all others on the key (for example, see figs. 1, 3 and 6). Similarly, the illustrated book that the designers published after the completion of the project also notes the discussions that took place over email, text, and phone. In the book, as in the postcards, they make tangible their anxieties about sharing their weekly emotions, thoughts, activities, bodily processes, and contact with others, as well as issues with the ways in which they have visualized this data.9

DATA AND ABSTRACTION

Despite their differing concerns and graphical styles, both designers predominately utilize abstract pattern to visualize their data. In many instances, these colorful infographics recall the abstract art of Vasily Kandinsky, Paul Klee, and Hilma af Klint more than graphs and charts. Similar to these artists, Lupi and Posavec are concerned with how abstract visual form can describe emotional or conceptual content. However, unlike these pioneering abstractionists, they are not in search of an absolute, eternal, or universal inventory of visual effects.¹⁰ Their compositions are subjective, imperfect, and relational. The colors and shapes used to signify specific feelings, thoughts, people, objects, and actions frequently shift. And the designs are marked by their relation to

^{9.} Lupi and Posavec, Dear Data.

On the aims of the graphical languages of these abstractionists, see Drucker, Graphesis, 33–40. See also Iris Müller-Westermann, ed., Hilma af Klint: A Pioneer of Abstraction (Stockholm: Hatje Cantz, 2013).



DETAIL Giorgia Lupi. "Week of Doors," *Dear Data*, 2015. Postcard. Collection of the Museum of Modern Art. © Giorgia Lupi.



FIGURE 1 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT).
"Week of Doors," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.



DEAR DATA-WEEK 24 A WEEK OF DOORS/SPACES	FRom' S. PosAVEC y Royal Man
ABOUT THE DATA: I GATHERED DATA ON ALL OF THE SPACES I PASSED THROUGH IN THE WEEK, BOTH INTERNAL + EXTERNAL . A SPACE IS DEFINED BY WHETHER I HAD TO PASS THROUGH A DOOR OF NOT .	₩640 - 2015 animetri
HOW TO READ IT: ENCRAPHICAGE ORGEN AND AND AND AND AND AND AND AND AND AND	To: <u>GIORGIA LUP</u> BROOKLYN, NY 14249 USA BY AIR MAIL par avion Royal Mail

						0
ö	0:	o	0	*	0x	0
• × • • • • •		·ò			40%.	0
	ó · · · ·		+0·W		0	
0.1	0.001	.0.1			· · · · ·	6
·· # · 4	0 ** * 11		.0	60000 .	à	
	X8X A	· w . × . 1.	0.55			·
	www					
	a	10.0.		6.66		
0.		0·x····		6		
	. 6.66.	0		·· x · u · x		0
. 6666		0	0.00	6.66.	×	
· · X· #·			o · · · · · · · · · ·			+++++
	····ò·	****			w	
		0BX				X- W
		0		•• %	p	
		× · ·		0		
					.0	
0						



FIGURE 2 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT).
"Week of Clocks," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.

This content downloaded from 132.174.251.254 on Sun, 08 Nov 2020 21:34:01 UTC All use subject to https://about.jstor.org/terms





GE DEAR DATA FROM GIORGIA TALET WEEK 32: J THE SOUNDS I CAN HEAR NEW WORK NY BROOKLY HOW TO READ IT: Every hour this week I stapped my activities for 30 records and recorded what I could hear. (4 main notion) -NY USA Every little score is the -> color = where I was Erstann 19.07 mixtur of sounds for that moment, every symbol is ! ase home work place street subway SEYD TO: Ase / prevalent Sound 1220 744 a different sound! THE JOUNDS ! shop 2nd 4th STEFANIE POSAVEC L restaniant /cafe/pub o Heater/fan a birds singing E wind moving objects trunds place 3rd 48 fridge water pouring (shower sink.) S.P.A. DATA VOID . my breath my haartbit . steps 1 heels -0 doors open / clore c boyfriend wrice elevator noise 0 & friend /cours ker voice objects on table × LONDON SE24 9JD w cart/stroller I stranger's wrice Coffee machine paper nolse printer/scanner ≥ stranger's wile (non English!) * constructions 0 In people undistinct clamour . · cars - UKn langhters = grandpa's voice 4 210 . truck sneeze (siren CALER Ny / Kitchun Noise 1 ENGLAND 1. onbway a salesman yelling c child aying Incaning · Dubway electr. C iphone Rings music to subway on the bridge C · actor / pod cast host wice digital sound 6 1 boyfniend singing e classon & neighbors flush ... elicopter • data word = be cause at the SPA I was not allowd to bring-my I phone (3) < people typing * undistinct city ambiance

0.00.00 6 c for 0 6 d d c c a CA a) C'cl 9 al C cl. 4 5 c1 C ٩. ç d

FIGURE 3 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT).
"Week of Sounds," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.

This content downloaded from 132.174.251.254 on Sun, 08 Nov 2020 21:34:01 UTC All use subject to https://about.jstor.org/terms







FIGURE 4 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT).
"Week of Smells," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.

This content downloaded from 132.174.251.254 on Sun, 08 Nov 2020 21:34:01 UTC All use subject to https://about.jstor.org/terms









FIGURE 5 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT). "Week of Laughter," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.







HOW TO READ IT:



FIGURE 6 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT).
"Week of Productivity," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.

DEAR DATA-WEEK 14	FRom: S. POSAVEC Royal Mail
A WEEK OF SCHEDULES: How T SPENT MY TIME 2nd Class - 201	Desember 2 11 17:22014
THE DATA: I TRACKED AS MUCH OF MY	
SCHEDULE ASI COULD, DOWN TO THE MINUTE. IT'S AS COMPLETE OF A PICTURE	
AS POSSIBLE (SOME HOURS ARE MISSING , OHEL)	To:
HOW TO READ IT:	GIORGIA LUPI
EACH LINE ON THE 'HEAD' OF THE "REANT' REFRESENTE DA MINUTES (CATA REVALUE OF DAWN ARISONNA (CATA REVALUE OF DAWN ARISONNA WAY E SPEND ANT TIME.	BROOKLAN, NY 11249
WAYS I SPENT MY TIME (RECORDED IN HOURS MINS)	<u>V SA</u>
SLEEPING 50:31 PERMAL MAINTANENCE 8:31	CTV ALD MAIL
WORKING 07:03 THTERMEL (MANLAWER + PERMAN 3:00	BY AIR MAIL par avion
TRAVELLING TO LISTS CHOPPING (GROLERIGS-CLORES) 5:37	Royal Mail
GET SOMEWHERE CLEANING / TIDYING HOUSE 144	
(BUS, trans, walking) ATTENDING LIVE TEXTORMINE	and the state of the second state of the secon
PREMANN/ PATING MEAL SOMEDING GIRAL STATUS (199)	* TRING TO OFFER MY HURAND SEME DATA PRIVALY HERE D





FIGURE 7 Giorgia Lupi (LEFT) and Stefanie Posavec (RIGHT). "Week of Smiling at Strangers," *Dear Data*, 2015. Postcards. Collection of the Museum of Modern Art. © Giorgia Lupi and Stefanie Posavec.



DEAR DATA-WEEK 28 S POSAVEC A WEEK OF SMILES Mount Pleaser LONDON OR: "WHY I'M AN ASSHOLE (PART 2), UK BUT SO IS EVERYONE ELSEI THE DATA: I TRIED TO GO OUT OF MY WAY TO SMILE AT PEOPLE BUT ABSOLUTELY HATED IT. LOCATION, TYPE OF PERSON (MAN/WOMAN/CHILD), + THEIR RESPONSE TO MY SMILE WERE ALL TRACKED TO: OF PROTEST AT THE LND OF THE WEEK GIORGIA LUPI HOW TO READ IT: EACH TRIANGLE REPRESENTS THE RESPONSE I RECEIVED TO THES A SMILE: BROOKLYN, NY 11249 SMILLO BACK 2 USA DIDN'T SMILE BACK PM BLANK DAY: ONLY DIDN'T NOTICE MY SMILE REALISED AFTER BY AIR MAIL TURE - TYPE OF PERCON : TE) THE HOUSE ALL DAVI Royal Ma BAD HABITS OF A FREELANCER ... WOMAN MAN CHILD TON OF SMILE: SPECIAL SYMBOLS: BITALE STRUCT STRUCT CLEAR STRUCT CLEAR STRUCT CLEAR GAFE STRUCT STRUCT CLEAR CAFE STRUCT STRUCT CLEAR SPECIAL SYMBOLS: - the militate of attaining CAFE V MARKET TRANSPORT



DETAIL Giorgia Lupi. "Week of Laughter," *Dear Data*, 2015. Postcard. Collection of the Museum of Modern Art. © Giorgia Lupi.

those around them as well as the knowledge that they are produced for each other.

As Lupi notes in her infographic of "Week 14: (abstract) productivity" (fig. 6) the placement of the elements in her design are "absolutely random" and positioned aesthetically in relation to the other parts. whereas her selection of tasks is intentional, as is the indication of "with whom or to who" a given activity is performed, including work done on their shared project. Lupi's dynamic profusion of symbols expresses the frenetic energy of a busy week, whereas Posavec's design appears more controlled and methodical, with each color representing a type of activity and lines relaying the quantity. And yet, in Posavec's design key, she admits that some hours are missing, which is in part due to her husband's desire for privacy and her own need for moments of inattention. In fact, both artists often note that certain data has gone unaccounted for and/or has been altered by an awareness that the data is being collected. For example, in "Week 24: A week of doors" (fig. 1), Lupi admits to excising certain doors, such as closet and cabinet doors, because one does not pass through them; and in "Week 32: A week of sounds" (fig. 3), Posavec describes that her husband intentionally made lots of "ridiculously stupid sounds" in order to skew her data. In the latter week, both designers note that they only recorded sounds for a brief moment every hour, which even then wasn't always possible, hence the visible data voids.

In this way, they underscore the difference between human and algorithmic memory and present important questions about how algorithms parasitically feed on our personal data. As Elena Esposito writes in her article, "Algorithmic Memory and the Right to Be Forgotten on the Web," search engines such as Google have the ability to store and process vast amounts of data about us that they never forget.¹¹ This form of memory, therefore, cannot be understood in human terms because for people, unlike algorithms, forgetting is essential to remembering, as visualized in the *Dear Data* project where data voids shape data sets. Although memory and omission are often pitted in opposition to one another, Esposito (much like the discussions between Lupi and Posavec) shows how forgetting not only allows people to foreground that which

^{11.} Elena Esposito, "Algorithmic Memory and the Right to Be Forgotten on the Web," *Big Data and Society* 4, no. 1 (2017): 1–11.

is important to remember, but also unbinds the present from the past so that one can imagine open futures. Human memory, thus, turns data into information through the process of abstraction. As Esposito states, "Abstracting is actually remembering and forgetting. Algorithms do not abstract, they merely calculate."¹² And as a result of an algorithm's inability abstract data (i.e., show how differentials or data make a difference to someone in a particular context), attempts to delete links to unfavorable personal information from Google (as has been court ordered in recent cases) is an action that algorithmically only draws more attention to things like old credit scores or employment and prison records. As a result, Esposito argues that rather than attempting to delete unfavorable information (which is impossible), one should bury it in the search engine's page rank with an onslaught of other information, thus deploying what Finn Brunton and Helen Nissenbaum have called "obfuscation tactics."¹³

Although Lupi and Posavec aim to accurately collect and visualize their data—in order to learn something about themselves and each other — they are also ambivalent about its capture and framing, which is reflected not only in their statements about the projects, but also in their abstract representations that often obfuscate their data's immediate apprehension. On the one hand, they aspire to dutifully track their daily data and render it visible, and on the other, they admit necessity of obscuring it. Although Posavec doesn't describe exactly how she has "found ways of obscuring some needs/desires," I would argue that both designers particularize their visualizations of a given experience to the point that gualification obfuscates guantification. For example, in "Week 47: A week of smells/scents," the designers indicated the type, location, and reception (positive or negative) of particular scents (fig. 4). Lupi also notes the smell's duration (as indicated by the number of lines emanating from the color-coded scent) and also marks scents that made her nostalgic (visualized with a halo form). Both designers' graphics reflect the data's instability, with Posavec designating lost smells (the white space outside the bounded area) and Lupi showing scents only perceptible because she intentionally got really close in order suss out new

^{12.} Ibid., 6.

^{13.} Finn Brunton and Helen Nissenbaum, *Obfuscation: A User's Guide for Privacy and Protest* (Cambridge, MA: MIT Press, 2015).

scents (signified by a line that hugs close to a given smell). Visually both of their designs present a preponderance of symbolic content that foregrounds the act of visualization and the overwhelming experience of olfactory sensation.

Dear Data, therefore, participates in our era of self-quantification in ways that confound it. Similar to other artists engaged with the guantified self, such as Laurie Frick and Marc Quinn, Lupi and Posavec use personal data to investigate new technologies of the self, and yet they depart from these artists in the way that they interrogate the presumed objectivity of data and its realistic rendering into graphical form. Frickwho has developed the app FRICKbits that allows users to create the "ultimate data-selfie" by transforming personal data into personalized works of art-asserts, "In all of these patterns, I do think there is an essential idea of who we are."14 She strives to utilize large data sets to make the invisible patterns that shape our lives visible, because she believes that data visualization can empower us to avoid self-delusion and see our true selves. Frick thus implores us to get a "unique glimpse into our hidden personality" through big data algorithms because "data will predict our lives" and so "owning what's collected about you will be more crucial than trying to save your privacy."15 Such an unfettered belief in the positive potential of self-quantification contrasts with Lupi and Posavec's approach, which emphasizes the need for privacy and unpredictability even as it acknowledges certain benefits to tracking one's personal data. Furthermore, on the surface some of Lupi and Posavec's postcards seem to share a certain graphic sensibility with Frick's large-scale wall installations that transform personal data into colorful bar charts. And yet Frick's "digital algorithm that spits out room-sized pattern" presupposes data's uncompromised objectivity.¹⁶ The artists' projects therefore dramatically differ because the diverse and deliberative graphics of Dear Data's hand-drawn postcards express an uncertain and conflicted attitude toward their personal data and its rendering into visual form.

Jacoba Urist, "From Paint to Pixels: The Rise of the Data Artist," *The Atlantic*, May 14, 2015, https://www.theatlantic.com/entertainment/archive/2015/05 /the-rise-of-the-data-artist/392399.

^{15.} See artist's statement on her homepage: http://www.lauriefrick.com (accessed February 25, 2019).

^{16.} Ibid.

Additionally, Lupi and Posavec's visualizations provide keys that not only decode the graphic, but also present questions and concerns about its veracity, whereas Frick's graphics provide minimal captions and no keys, thus suggesting that the visualizations' meanings are self-evident.

Although the data used by Frick is captured in an automated way, countering Lupi and Posavec's acquisition techniques, I would argue that the importance of incomplete, imperfect, and non-neutral data holds regardless of the mode of procurement, even if automation reduces interference. Whether digital or analog, automatic or hand-tallied, personal data can be skewed by one's sense of being observed or rendered incomplete as a result of requirements of embodied experience, and its interpretation is inherently shaped by the categories of experience set out in advance of its capture. *Dear Data* makes data's precarity tangible. By comparing Lupi and Posavec's visualizations for a particular week, we see the arbitrariness of the categories that gualify the guantified data and their distinctly different modes of visualizing it. Countering Frick's positivist belief in our ability to directly reveal our true and hidden self through self-quantification — a commonly held belief today — Lupi and Posavec stress the constructed and highly contingent nature of personal data and its visualization.

The sincere yet skeptical grappling that characterizes Lupi and Posavec's project also contrasts with artist Marc Quinn's ironic take on realist approaches to personal data. In Quinn's famed *A Genomic Portrait: Sir John Sulston* (2002) — comprised of a sample of DNA from a scientist who helped to map the human genome — the genetic material is suspended in agar jelly between two glass plates that are framed by a cool stainless steel frame, thus giving it the appearance of both lab equipment and a minimalist sculpture. As Quinn states of the work, "... even though in artistic terms it seems to be abstract, in fact it is the most realist portrait in the Portrait Gallery since it carries the actual instructions that led to the creation of John....It makes the invisible visible, and brings the inside out."¹⁷ Quinn's comments echo what Ruha Benjamin calls the "genomics' allure of objectivity" or how genomic technologies are perceived as rendering our true selves visible in a pure

^{17.} Marc Quinn, quoted in Cynthia Freeland, *Portraits and Persons* (Oxford: Oxford University Press, 2010), 277.

and essential manner, thus unwittingly overlooking the ways in which social and political forces frame our understanding of DNA's significance in advance of its analysis.¹⁸ Although in Quinn's work we ironically see only an opaque collection of genetic material (unlike the graphic genomic portraits mapped by Sulton or those being visualized today by popular DNA analysis services such as 23andMe), the artist's statements about the work reinforce the idea that one's truest identity can be extracted from this material through expert analysis. And the portrait's opacity adds to that allure of objectivity because the material's hidden truth is accessible only to those with the expertise to analyze it scientifically. For Benjamin, such perceptions of "genomic authority" are highly problematic in a world in which genetic data is used to assert old biological notions of race, ethnicity, and nationality and inform policies of social inclusion and exclusion. She thus suggests foregrounding the partiality of knowledge in advance of data analysis, stressing what Shelia Jasanoff calls "technologies of humility" or technologies that "compel us to reflect on the sources of ambiguity, indeterminacy, and complexity."19

Dear Data, as I have been arguing, exhibits this humility. The conversations mediate on the ambiguities and imperfections of data's capture and the need for visualizations that pose questions about how we perceive the information conveyed therein. Their complex graphics strive to capture the multifaceted nature of a single type of lived experience by giving it many symbolic contours. Such data visualizations are undoubtedly easier to produce in the context of an intimate and small-scale project such as *Dear Data*. However, the designers describe the ways in which the project has taught them about the importance of "adding nuance to numbers," and "reconnect[ing] numbers to what they stand for: stories, people, ideas," which has impacted the work that they now produce for clients who need data visualizations that communicate to broad audiences.²⁰ As engineers and designers increasingly

Ruha Benjamin, "The Emperor's New Genes: Science, Public Policy, and the Allure of Objectivity," *Annals of the American Academy of Political and Social Science* 661, no. 1 (2015): 130–42.

^{19.} Ibid., 140. See also Shelia Jasanoff, "Technologies of Humility," *Nature* 450 (November 2007): 33.

Giorgia Lupi, "How We Can Find Ourselves in Data," тер Talk, May 4, 2017, https://www.ted.com/talks/giorgia_lupi_how_we_can_find_ourselves_ in_data?language=en.

develop new ways to quantify and visualize our personal data via phone apps, fit bits, and social networking sites, such "technologies of humility" become an important means of counteracting the alluringly objective science of self-quantification.

QUANTIFYING THE SELF

In the last decade, there has been an explosion of interest in quantifying the self through both DNA testing and self-tracking technologies.²¹ Two of the pioneers of the quantified-self movement are Gary Wolf and Kevin Kelly of Wired magazine, who in 2007 started the website and think tank called the Quantified Self, which bears the tag line "self-knowledge through numbers."22 Examining this increasingly prevalent activity, Wolf stated in a widely read New York Times article, "Almost imperceptibly, numbers are infiltrating the last redoubts of the personal. Sleep, exercise, sex, food, mood, location, alertness, productivity, even spiritual well-being are being tracked and measured, shared and displayed."23 For Wolf, self-tracking technologies offer the potential of self-revelation through the mining of our personal data. Although there has been an interest in self-tracking in fields of business, medicine, computer, and social science for a long time, the technology was not there for the average person to capture, process, visualize, and analyze it. However, as Wolf states, four things happened: "First, electronic sensors got smaller and better. Second, people started carrying powerful computing devices, typically disguised as mobile phones. Third, social media made it seem normal to share everything. And fourth, we began to get an inkling of the rise of a global superintelligence known as the cloud."24

Wolf largely emphasizes technological advancements as the force behind this new trend, rather than exploring epistemological changes

^{21.} See Susannah Fox, "The Self-Tracking Data Explosion," Pew Research Center, June 4, 2013, http://www.pewinternet.org/2013/06/04/the-self-tracking-data-explosion; and Mark Williams, "The Lucrative Rise of DNA Testing," *The Guardian*, May 25, 2017, https://www.theguardian.com/small-businessnetwork/2017/may/25/dna-testing-we-created-the-market-for-what-we-doliving-dna-dnafit-geneu.

^{22.} See the Quantified Self website, http://quantifiedself.com (accessed February 25, 2019).

^{23.} Gary Wolf, "The Data-Driven Life" *New York Times*, April 28, 2010, http://www.nytimes.com/2010/05/02/magazine/02self-measurement-t.html.

^{24.} Ibid.

regarding the conception of the self. However, examining the latter can help one to better understand the motivations driving such technologies. As philosophers Raymond Martin and John Barresi have explored in their book The Rise and Fall of the Soul and Self, the late twentieth and early twenty-first centuries have been marked by a turn away from the perception of subjectivity as autonomous, unified, continuous, and governed by conscious action and free will; the subject has instead become seen as decentered, fragmented, and formed by hidden psychological and social structures.²⁵ Our need to trace these structures as data, therefore, may paradoxically be seen as providing the promise of control over our lives in an era in which we feel we have lost it. As art historian Eve Meltzer has similarly described in her book on conceptual art circa 1970, artists on the precipice of our present era of quantification turned away from autonomy and self-mastery, by turning toward structuralist approaches to art that stressed "dis-affective mastery and anti-illusionistic illusionism" in what she calls "the dream of the information world."26

Countering the techno-positivism of the quantified-self movement, Lupi and Posavec — much like feminist conceptual artists Adrian Piper, Mary Kelly, Eleanor Antin, Sandra Llano Mejía, and Teresa Burga before them — see the tracking of personal data not only as a tool for self-realization, empowerment, and interpersonal connection, but also one of self-torment, control, and coercion in the name of self-knowledge. For example, during "Week 28: A week of smiling at strangers"

^{25.} Raymond Martin and John Barresi, *The Rise and Fall of Soul and Self: An Intellectual History of Personal Identity* (New York: Columbia University Press, 2006). The decentering of the self is described through semiotics and psychoanalytic theory by writers such as Ferdinand de Saussure, Jacques Lacan, Michel Foucault, and Jacques Derrida, as well as by postcolonial and feminist theorists such as Frantz Fanon and Judith Butler.

^{26.} Eve Meltzer, *Systems We Have Loved: Conceptual Art, Affect, and the Antihumanist Turn* (Chicago: University of Chicago Press, 2013), 171. Meltzer articulates the paradoxes and affective consequences of what she terms this "antihumanist turn" in the conceptual art of the late 1960s and early 1970s. She describes "the dream of the information world," which she defines as a "particular positionality of at once turning away (from autonomy and mastery of the subject defined as a conscience and will, author of his acts and ideas) and at the same time surreptitiously turning back (toward a new affective investment in another kind of dis-affective mastery and anti-illusionistic illusionism)."

(fig. 7), Posavec had a "massive data void of protest" at the end of the week because she "absolutely *hated*" forcing herself to smile. Her protest is made tangible through an entirely empty column that is framed on either side by tight rows of roughly textured smiling triangles. Lupi too struggled with the week of smiles, which perhaps lay in their mutual irritation with the gendered expectation that women should smile and do more of society's emotional labor.²⁷ A sense of tension and confinement characterizes both visualizations.

In numerous instances in *Dear Data*, Lupi and Posavec resist being docile participants in the data-driven life — particularly in phenomena marked by gender, such as offering compliments, complaining, or expressing one's desires. By slowing down and meditating on the process of data capture and analysis, their project diverges from the larger quantified-self trend. As they state on the project's website,

We prefer to approach data in a slower, more analogue way. We've always conceived Dear Data as a "personal documentary" rather than a quantified-self project, which is a subtle—but important distinction. Instead of using data just to become more efficient, we argue we can use data to become more humane and to connect with ourselves and others at a deeper level.²⁸

Although *Dear Data* may not be a quantified-self project, this personal documentary, I would argue, does affectively grapple with the now commonplace act of quantifying the self—and does so in a distinctly feminist manner.

FEMINIST RESISTANCE

In a recent article, Lupi has called for a "paradigm shift in the way we represent information visually."²⁹ Informed by the *Dear Data* project, she describes how her approach to data visualization now aims to: customize graphics to be in dialogue with data; show the approximate and

^{27.} On smiling and gender, see Marianne LaFrance, *Why Smile: The Science Behind Facial Expressions* (New York: Norton, 2013), 167–94.

^{28.} Giorgia Lupi and Stefanie Posavec, "The Project," Dear Data website, http:// www.dear-data.com/theproject (accessed January 20, 2018).

^{29.} Giorgia Lupi, "Data Humanism: The Revolutionary Future of Data Visualization," *Print*, January 30, 2017, https://www.printmag.com/informationdesign/data-humanism-future-of-data-visualization.

imperfect nature of data; and contextualize how the data is captured, structured, and displayed.³⁰ Although Lupi does not characterize this approach as feminist per se, her approach has much in common with the tenants of what D'Ignazio and Klein have called "feminist data visualization," which aims "to show how visualization research can be adapted to emphasize the situated nature of knowledge and its perception."³¹ Building on the feminist studies of science and technology by writers such as Donna Haraway, Evelyn Fox Keller, Karen Barad, Ruha Benjamin, and Wendy Hui Kyong Chun, among others, D'Ignazio and Klein have developed a set of principles that guide their method, which include representing uncertainty, rethinking binaries, considering context, making labor visible, legitimizing affect, and examining power while aspiring to empowerment.³² With these guiding principles, they aim to disrupt the myth that data visualizations offer a neutral, distanced, and complete views of ourselves, or what Haraway called the "god trick" of "seeing everything from nowhere."33

As the self-quantification movement increasingly shapes our conception of our bodies and selves — with expertly designed devices and software whose functionalities and aesthetics play an intimate role in how we understand our personal information — feminist visualizations that explore self-quantification can help us parse how a discourse about individual autonomy and self-empowerment can turn into one of coercion and control.³⁴ In the drive to quantify the self, sociologist Dawn Nafus describes how contextual knowledge is at risk of being made irrelevant through the aggregation of data by experts who don't have an intimate connection to it. Wielding new technologies of data capture, experts believe that isolated aggregation can render an objective reality tangible. Given the dangers of this mode of analysis, she implores

^{30.} Ibid.

^{31.} Catherine D'Ignazio and Laura Klein, "Feminist Data Visualization," (paper for the IEEE VIS 2016 conference, Baltimore, Maryland, October 23–28, 2016), available from https://www.academia.edu/28173807 /Feminist_Data_Visualization.

^{32.} D'Ignazio and Klein, Data Feminism.

^{33.} Haraway, "Situated Knowledges," 581.

^{34.} For an expert analysis of the social, cultural, and political implications of the "quantified self," see Deborah Lupton, *The Quantified Self: A Sociology of Self-Tracking* (Cambridge, UK: Polity Press, 2016).

us to ask: How do we frame data in a manner that helps more people to become the question askers? How can scientists, engineers, and designers who have expert knowledge about data invite those who are perhaps less literate about it to ask questions that frankly may make the experts uncomfortable?³⁵ It is precisely that kind of invitation that I see materialized in the *Dear Data* project.

^{35.} See: Dawn Nafus, "Who Asks the Questions?" 2015 Quantified Self Public Health Symposium, June 18–19, 2015, San Francisco, California, https:// medium.com/quantified-self-public-health/who-asks-the-questions-1700abd42a5e. See also Dawn Nafus, *Quantified: Biosensing Technologies in Everyday Life* (Cambridge, MA: мIT Press, 2016); and Gina Neff and Dawn Nafus, *Self-Tracking* (Cambridge, MA: мIT Press, 2016).