IJoC Selfies

Feminism Reads Big Data:
"Social Physics," Atomism, and *Selfiecity*

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For a few weeks in the summer of 2014, a glimmering LED display on the media façade of the FIESP building in São Paulo, Brazil, cycled through hundreds of selfies, thus presenting a multiplicity of images of solo acts of urban self-fashioning now captured by new practices of closely distant mobile photography. A selfie of a young woman with plucked eyebrows and auburn hair transformed into a white man with a receding hairline; his image was supplanted by one of a girl with Asian features; the almond-eyed girl was then replaced by one with long blond tresses. Sunglasses and eyeglasses appeared and disappeared. Facial hair blossomed and receded. Each frame of the *SelfieSaoPaulo* animation showed an individual citizen's selfie, which was tagged with an approximate age and identified with percentages calibrating gender and degree of smiling affect. The image sequences were aligned with common eye positions, as if to imply that extremely divergent specimens of humanity still shared a common gaze.

SelfieSaoPaulo was part of the larger *Selfiecity* big data initiative, which was intended to publicize how digital humanities resources could be used to visualize and synthesize thousands of separate selfies that had been posted to Instagram from five cities around the world. This project can be seen as representative of a larger trend among managers of image corpora attempting to organize and analyze content from visual culture that may be described variously as "user-generated," "vernacular," or "in the wild." The *Selfiecity* research group collected 656,000 Instagram images shared in Bangkok, Berlin, Moscow, New York, and São Paulo during the week of December 4–12, 2013, and then researchers narrowed the initial data set to 640 images from each city (for 3,200 images in total). At the Selfieexploratory online viewer, visitors to the *Selfiecity* website were encouraged to filter selfie images by region, gender, body pose, and gaze direction as well as to sort by the openness of the mouth or eyes on a given image. For example, selfies in which subjects tilted toward the same diagonal direction or looked directly upward at the same angle would be grouped together by the software. Because computer techniques for photo analysis continued to be unreliable, particularly regarding biological statuses of gender and age, the team also utilized Amazon's Mechanical Turk workers to attempt to perfect the accurate classification of images.

Selfiecity immediately attracted considerable media attention and was featured in stories from journalistic outlets that ranged from *USA Today* to the *Wall Street Journal*. The comparative international approach of the site appealed to the general public, much as *TIME* magazine's map of "The Selfiest Cities in the World" (Wilson, 2014) drew visitors to its news portal with an information visualization created from a database of more than 400,000 Instagram photos with geographical coordinates tagged "selfie." *Selfiecity* project leader Lev Manovich, author *of The Language of New Media* and *Software Takes*

Command (2013), managed coordination between New York, California, and Germany to promote his distinctive brand of polished database aesthetics characterized by a strong signature of professional digital design and a sleek interface with crisp infographics floating in a void of black negative space. Despite the commercial look and feel, Manovich asserted that user-generated content and vernacular creativity still define the experience of actual material on the site. As he pointed out in a blog post, the São Paulo exhibition dramatizes the variety of ways Instagram members can customize self-portraits on its platform with "expressions, poses, colors, filters used, body styles etc." (Manovich, 2014, para. 5).

Figure 1. **SelfieSaoPaulo** *(2014).*

Manovich also uses *Selfiecity* to make a larger argument that science is beginning to shift its analytical approaches away from an exclusive focus on nature and toward greater concern with the facts of culture. According to Manovich, the solutions applied to difficult research problems in "physics, chemistry, astronomy and biology" (Manovich, 2014, para. 7) can be adapted to advanced cutting-edge scholarly inquiry in the humanities. In effecting a translation from one set of disciplines to another, he uses a specific comparison to "social physics" to describe the dynamic interactions between data points of *SelfieSaoPaulo*.

> Today, the social has become the new object of science, with hundreds of thousands of computer scientists, researchers and companies mining and mapping the data about our behaviors. . . . The implications of this monumental shift are only beginning to unfold. Will we become the atoms in the "social physics," first dreamed by the founder of sociology Auguste Comte in the middle of 19th century? (para. 7)

By borrowing from Comte, Manovich may signal his positivism, which appears in his other writings that emphasize quantifiable results. With his analogy to atoms, Manovich also depicts human individuals as discrete elemental particles, which also happens to be a common strategy in visualizing networked relationships to make social graphs more legible. For example, familiar structures of particles and bonds are used to elucidate how fictional characters in *Hamlet* might plot revenge (Moretti, 2011), how serial monogamy functioned among lovers in the artists' colony at Yaddo (McGee, 2012), and how Jewish refugees were sheltered in Nazi Germany (Düring, 2015).

Selfiecity and similar media visualization projects that display image corpora are able to create more elegant and compelling visualizations by eliminating such social ties as a constraining organizational principle. Yet applying an atomistic social physics to selfie culture perpetuates the stereotype of the independent and autonomous self as isolated media creator and media subject in the cultural imaginary of personal consumer electronics and ignores how people are embedded in complex rhetorical situations. Consequently, the data set for *Selfiecity* may be defining the genre of the selfie far too narrowly to be useful to researchers, especially those who might be more interested in how selfie users perform identity and display tacit knowledge practices in time and space.

Obviously the parameters of automated facial recognition and manual Mechanical Turk tagging favor photos framed to emphasize lone individuals. However, many selfies emphasize how group membership might be constituted in composing the shot. In the case of the famous 2014 Oscar photograph snapped by host Ellen DeGeneres, a dozen movie stars appear in the frame. Political figures—including Barack Obama and Vladimir Putin—have become prominent participants in selfie-oriented scenes with multiple actors. The interaction of government officials with heads of states, staffers, and their constituents has moved beyond the traditional handshake or photo op to adopt the norms of seemingly more informal collectives dictated by the conventions of what Henry Jenkins (2006) has called "participatory culture." From princes to popes, even august authority figures with long historical lineages have appeared in selfies that potentially establish their horizontal ties to collocated individuals who would clearly be their political or religious subjects in other contexts.

This is not to say that in popular culture there has not been a plethora of famous solo selfies. Such self-produced images of stardom have been widely discussed in both social media lifeworlds and in more mainstream print and broadcast media venues. Youthful celebrities active on social media—such as Justin Bieber, Taylor Swift, Miley Cyrus, Beyoncé, Rihanna, Kim Kardashian, and James Franco—clearly have shaped many of the conventions of the genre, and the selfies of these high-profile performers have inspired particular forms of microcelebrity, imitation, appropriation, and satire as well.

Although many regard the selfie as proof of the narcissism of contemporary social media norms in which bodies become "the ultimate accessories" to "share and compare in an online marketplace" (Simpson, 2014, para. 13), others familiar with the nuances of the genre argue that selfies can also enable rich pedagogical and activist performances of identity that resist such commodification and depersonalization (Losh, 2014). Moreover, even among participants, the significance of a given selfie meme can be contested. For example, female celebrities shot carefully composed #nomakeupselfies to raise cancer awareness and subsequently faced charges of hypocrisy (Dockterman, 2014). Similarly, the

Dove "campaign for real beauty" featured inspirational clips of mothers and daughters in an affirming selfie "photography workshop" confronting body image issues, although critics noted that the discourse around Dove's selfie production still largely followed the scripts of the beauty industry. There has also been a robust cultural conversation about when shooting seemingly self-aggrandizing selfie images should be taboo, such as at funerals or in the presence of the ill or the homeless, as contemporary rhetoric about purity and danger (Douglas, 2005) broadcasts indignation about violations of decorum and polices the boundaries between public and private life.

Certainly, the selfie's peculiar combination of humanizing self-portraiture dating back to the Renaissance (Greenblatt, 1980; Woods-Marsden, 1998) and the futuristic gaze of the detached digital technical apparatus that senses rather than sees (Bratton, 2014; Losh, 2015) facilitates a complex media ecology of image-making and meaning-making practices. As Edgar Gómez Cruz and Eric T. Meyer insist, it is necessary to understand the product of social mobile photography "not as representation, technology, or object, but as the agency that takes place when a set of technologies, meanings, uses and practices align" to produce "the materialization of a series of assemblages" in which "the photographic object also enables or constrains other assemblages with its use and distribution" (Cruz & Meyer, 2012, p. 2).

Recently feminist critics of digital culture have embraced the selfie in scholarly collaboration and debate. As many of them have pointed out, there is already a much longer history of feminist art devoted to analogous practices of self-documentation in the work of Eleanor Antin, Lynn Hershman Leeson, Cindy Sherman, and others (Rettberg, 2014b). The alienated attachment of the female gaze to everyday autorepresentations made possible by mirrors, lenses, screens, and armatures could conceivably reconfigure the classic dynamic of men-look/women-appear from art history (Berger, 2008) as different kinds of agency in image-making are explored. Although Donna Haraway affirms that the famous 1978 "self reflection" cover of *National Geographic* with the signing gorilla Koko "taking a picture of herself in the mirror with a Japanese camera" demonstrates that "she's in charge of her own image; she represents universal man" ("Donna Haraway Reads," 2010) other feminists are less certain that selfies can be so easily equated with a position of mastery. For example, Natalie Hendry has been collecting examples of selfies from feminist and queer political communities that manifest resistance to dominant norms about gender and sexuality without abandoning sensitivity for those in marginal or peripheral positions.

Hundreds of scholars, most of whom are women and many of whom identify as feminist, have joined a Facebook group called the Selfies Research Network (n.d.), which was founded by Theresa Senft of New York University, to share bibliographies, curate specific selfie images, and disseminate new work. Many in the research network were interested in how new media reproduced existing regimes of labor, embodiment, affect, materiality, and situated practices counter to the liberation narratives of virtuality, rationality, and universality promulgated by cyberutopians. In the Facebook group, many also defended ethnographic methodology and the value of "small data" or "medium data" approaches that provided a granularity of detail that might otherwise be lost in dazzling large-scale data visualizations that value the quantitative over the qualitative. Some openly criticized the *Selfiecity* project for stripping out the context for a given selfie's composition, particularly when highly intentional social fan practices of homage and imitation might be dictating the organization of content in the frame (Morrison, 2014). It was difficult for many not to notice that *Selfiecity* was created by an almost entirely male team that emphasized STEM

(science, technology, engineering, and math) research questions that seemed to propagate a masculinist rhetoric of data mining that has been robustly criticized in feminist digital humanities circles (Nowviskie, 2012).

It is important, however, to give the *Selfiecity* team credit for recognizing potential problems with the extraction model related to personalized use. For example, Manovich observes that his project "also reminds us that our spontaneous online actions become sources of behavioral and cognitive data used for commercial and surveillance purposes—improving results of search engines, customizing recommendations, determining what are the best images to be used in online ads, etc." (Manovich, 2014, para. 6). Certainly the use of facial recognition technology in *Selfiecity* also reinforces the advent of what Kelly Gates (2011) has called "our biometric future" that rationalizes questions of difference and justifies a society of surveillance. Recent revelations that the National Security Agency is intercepting and collecting "millions of images per day" (Risen and Poitras, 2014, para. 3) for processing with facial recognition technologies suggest that this biometric future may not be very far off.
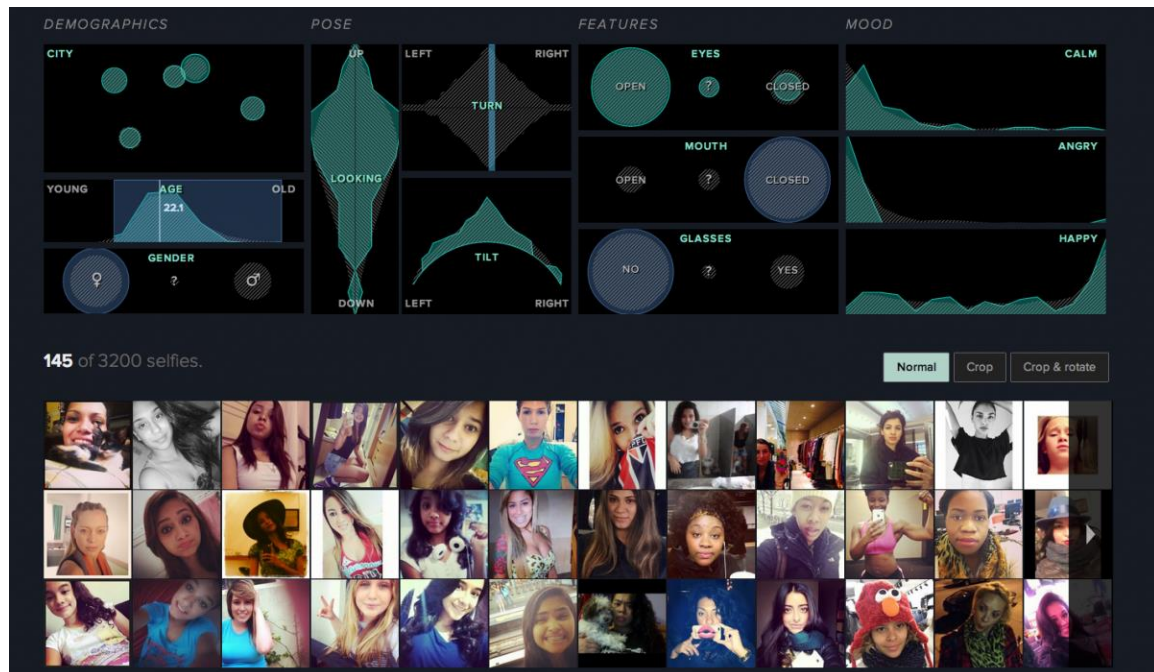

Figure 2. **Selfiecity** *(2013).*

A feminist selfie theory might suggest that individuals do not float free in a loose matrix of voluntary social relations. Instead, the selfie as genre serves as a means for disciplining the body, quantifying the self, marking time, and regulating the value of affective labor. For example, in engaging with fan cultures, Aimée Morrison (2014) argues that it is useful to consider Barthes' opposition between the *punctum* that is tied to the idiosyncratic significance of a purely personal moment and the *studium*, which telegraphs the obvious meaning of a photograph to a general audience. To understand how selfies

represent forms of situated knowledge that may be decipherable only within common interpretive communities and only to a limited degree, much like Barthes' *punctum*, Morrison examines how the rationale of reenactment operates in digital photography that is ostensibly defined by spontaneous invention.

To gain understanding of particular selfie communities of practice, Jill Walker Rettberg has participated in online courses for women using selfies, such as Becky Higgin's Project Real Life or NOW YOU workshops devoted to "self care" and "nurturing ourselves wholeheartedly," and she argues that—like blogging and scrapbooking—these feminizing Internet communities facilitate both expression and repression in instructing subjects to document their lives.

> Foucault talks about technologies of the self, and about ways in which different cultures have seen it as necessary to cultivate (and discipline) the self, and that self-care for the ancient Greeks was seen as a pre-requisite for self-knowledge. . . . These courses are all about empowering women—always women—to see beauty in themselves and their surroundings. They can also be seen as a way in which women are disciplined, much as women's magazines, as Angela McRobbie notes, have been "instrumental in the training of middle class young women." (Rettberg, 2014a, para. 3)

Empowerment and discipline are related modalities that are strongly gendered around the selfie. As the body may be disciplined by particular selfie poses, such as distorting "duck lips," or by the imperative never to block the field of vision or show the body's relationship to the camera, the body also makes itself present in embodied new media practices and occupies awareness in tacit knowledge systems of embodied cognition.

The possibilities both for a liberating performance of gender and sexuality and for victimhood via female objectification have been extensively rehearsed in discussions about responsibility and virtue involving selfies of young women. Lauren Greenfield's (n.d.) short film *Chevy: Selfie*, which depicts a girl in a bathroom self-documenting with her bejeweled smart phone, was shot as part of an advertising campaign with the hashtag #trulyrich and the tag line "You only have one self. Do you really need 29 selfies?" As a documentary photographer, Greenfield's previous projects have included gallery exhibits for her books *Fast Forward* and *Girl Culture*, which similarly moralize against adolescent commodity fetishism and precociousness.

Certainly, it is important to resist overly simple emancipatory narratives that conflate use of a self-documenting technology with self-awareness. Long-standing Internet memes, such as Noah Kalina's *Everyday* (2006) or Ahree Lee's *Me* (2006), present digital self-portraits with faces devoid of affect that steadily age but otherwise change little over the course of years during their reflexively archival projects, unlike Elle Mehrmand's *w3eks* (2006), in which the artist documents herself every 15 minutes and includes moments of extreme emotion and personality change. The interpellation of the subject as artist in all three cases when hailed by the technology is an important part of their performance of affective engagement (or disengagement).

As large-scale media visualizations from the *Selfiecity* database of images shot in five cities on four continents indicate, the selfie has become a truly transnational genre that is as much about place-making and establishing the situated conditions of social membership as it is about the narrowcasting of particular faces and bodies. Unfortunately, *Selfiecity* may not give a complete picture of the selfie as genre, because the specific affordances and constraints of a particular social media platform shape the possibilities of discourse. For example, a selfie on Instagram that is understood to be a persistent record of self-presentation may be very different from an ephemeral selfie on Snapchat that registers momentary affect or a lack of composure before deletion (Morrison, 2014). By narrowing the field of objects of study to Instagram selfies, as the *Selfiecity* team does, we do not see how selfies on Snapchat, Flickr, Tumblr, Pinterest, Grindr, or other sites are composed. Nonetheless, this focused database of images obviously could serve as a kind of common anthology from which scholarly critics could perform analysis or assign viewing sets of images in teaching courses.

Beyond its Instagram-centric site specificity, *Selfiecity* also may manifest a tendency to abstract individuals and strip out the rich and messy information about social history and personal context that accompanied the original upload. A search of the term "selfie" on Instagram shows that selfies may document weight loss, progress through chemotherapy, and many other life changes to audiences who are either experiencing similar alterations in body morphology or are at least sympathetic to those who are documenting their own conditions of triumph or tragedy over time. By using a week-long temporal sample, *Selfiecity* may not give us enough information to read the individual images. For example, does the image of a woman wearing an eye patch in the *Selfiecity* database indicate that the eye patch is a signifier of a permanent or temporary disability? Her work of meaning making in framing her self-portrait could be very different as a result.

Feminist critics in the Selfies Research Network would likely point out three other potential problems with relying on the *Selfiecity* site for research. First, gender is presented in strongly binary terms, with "female" and "male" as the main categories separated by a territory demarcated by a question mark. Although measurements could treat gender as being represented by continuum of variable expressions, default tags used by Mechanical Turk still emphasize an either/or logic. Looking through the archive of images, it becomes clear that the subjects who self-represent as femme or butch might choose to identify themselves differently and to resist anatomical determinism that is strongly heteronormative. Categories for transgender, cisgender, and gender queer now being adopted even by commercial social network sites were nowhere to be seen on the *Selfiecity* website. Systems that accommodate more ways to tag images would seem to be essential tools for those studying how gender and sexuality are performed online.

Second, many scholars see the work arrangements for labor in Amazon's Mechanical Turk system as exploitative, and find their contracts difficult to reconcile with academic values, particularly when even master workers can have little influence on their employers (Aytes, 2013; Irani & Silberman, 2013). Using such an alienated labor pool as a matter of policy in an academic enterprise seems undesirable. Furthermore, scholars could be actively encouraged to resist the tendency to trivialize tagging and data entry work if they tag their own selfies. By valuing the intellectual contributions of digital labor done inside

the academy, we strengthen our methodological training in metadata standards and the scholarly character of the database as a form of academic publication.

Third, harvesting data from near the geographical centers of metropolitan hubs frequently excludes user-generated image content from more marginalized residents in peripheral slums, former townships, or state-sponsored housing projects farther away from the central sites of power and privilege. In reflecting on mobile photography generated by Ikamva Youth in Makhaza, Khayelitsha, an apartheid-era settlement beyond the outskirts of much more affluent Cape Town, Marion Walton (2014) has argued that "location" does not express the many nuances of "place," which, according to Edward Casey's definition, describes "the immediate ambiance of my lived body and its history, including the whole sedimented history of cultural and social influences and personal interests that comprise my life history" (Casey, 2001, p. 404). After using the same ImagePlot software developed by Manovich to visualize a data set of images created by Ikamva Youth members with Nokia phones donated by the company, Walton (2014) "balked at a relying exclusively on a method which scraped rather than touched people's lives, and which allowed our work to be too easily framed as an extension of rather than a challenge to Northern panopticism" (p. 175).

This is not to say that *Selfiecity* does not provide a valuable assay of images for potential scholarly reuse. In browsing the image sets, *Selfiecity* provides evidence to support two seemingly oxymoronic concepts that I have called *close distance* and *transparent mediation*. This database also demonstrates how new types of media activities around authoring and sensing are reshaping media creation.

Close distance refers to the orientation of the selfie subject to an implied audience that is expected to be able to recognize the most significant features of foreground/background relationships quickly in the frame. Of course, because of the way that the data were selected, the human head dominates the real estate of *Selfiecity*, although "belfie" photography of below-the-waist selfies might also attract significant numbers of followers in other contexts. In the peripheral space around each subject's head in *Selfiecity* we might see a display wall of cosmetics, a bookshelf, an unmade bed, a luxury car, a sign indicating a specific geographical location, Starbucks branding, generic miniblinds, a well-known landmark, or a bathroom stall. All these myriad possibilities indicate place-making activities in which an individual face can be correlated with a background that can communicate co-presence by transmitting elements of the rhetorical scene to others in an imagined social network. Although the activity of recording for purposes of dissemination implies distance, the constraints and conventions of selfie photography also require closeness. The camera can be held only so far away from the face by the human arm, although so-called selfie sticks have begun to alter proximity relations. Nonetheless, even when a selfie stick or a mirror is used, spatial proximity is still needed to make sense of the subject's identity. Despite the fact that careful scrutiny reveals that some of the selfie images in *Selfiecity* were likely taken using third parties or timers, these images still observe the conventions of framing associated with the intimacy and alienation of the genre.

Transparent mediation describes a significant subset of images on *Selfiecity* in which the apparatus shooting the photo is present within the frame. Of course, this practice of sometimes revealing

the image-making technology of the camera goes back over a century and a half in the history of self-portraiture in photography, and in oil painting before that the mirrors that made likeness-making possible might also be made manifest, as in the case of Parmigianino's *Self-portrait in a Convex Mirror*. Ironically, showing the hypermediated character of one's lived experience is actually a strategy to establish credibility, and demonstrating how authentic presence is mediated through a viewer or screen explicitly is a way to communicate trustworthiness (Losh, 2012). When the equipment that captures the digital file is shown simultaneously to the viewer, the reveal draws attention to an ethics of disclosure, which exposes the fact that the moment is staged. For example, the come-hither look of a long-haired woman in Bangkok imitates the gaze of manufactured desire on the face of a commodified cover girl, but we also see her camera phone case covering the edge of her chin, and we can look into the glinting aperture of the lens of her device just as easily as we look into her eyes. A T-shirt-wearing young man from São Paulo in a black-and-white photo studies the smart phone that renders the text on his chest in reverse, and his act of reading replicates our own act of reading and its barriers to fluent comprehension. These disruptions to familiar scripts of immediacy constitute the new scripts of hypermediacy that establish online ethos by including the means of mechanical reproduction in rhetorical scenes, although the physical topographies of the local memory chips and remote servers in which images are stored remain black-boxed.

Scholarship of the selfie also can be a way to acknowledge the fact that world-making is increasingly driven by the design capacities of the distributed development teams that shape visual aesthetics (Losh, 2013b) and therefore increasingly procedural and collective in character. Although we do not see the original context of the Instagram site from which the data are scraped, we can see evidence of various filters on another significant subset of *Selfiecity* images in which choices about the lighting, sharpness, hue, or color saturation of the images draw attention to the use of software rather than to the activity of aiming and focusing a camera as a tool for recording an instant in time. One's agency in controlling postproduction is limited on mobile devices, however. The star of the selfie can choose atmospheric effects from menus but probably cannot manipulate specific variables with precision on a touch screen, much less write lines of the collective code in programming environments for authoring tools, authoring systems, and authoring languages. Traditional modes of authorial control associated with older forms of self-publishing, desktop composition, and image alteration software have taken a haptic turn in which information can no longer be accessed. Given the limited affordances of the portable screen in comparison to desktop and laptop devices that can run Photoshop, users are not able to manipulate distinct image layers or even alter opacity and transparency values. Furthermore, as Jill Walker Rettberg points out, "filters are both technological and cultural, and often we are not aware of these filters" (2014c, p. 28). Just as Kodak film manifested a bias toward representing white skin, she claims that applications like SkinneePix reinscribe other cultural norms, although autodepiction opens up possibilities for more user-generated content that is less dependent upon the professional selectivity of third parties.

We can also observe how the human–computer interaction modeled in *Selfiecity* depicts users wielding their smart phones. Such phones function as collections of semiautonomous sensors rather than as instruments that extend the vision of their users or tools to give them mastery in subject–object relationships. A new wave of scholarship in media studies sometimes associated with "the material turn" is breaking with cinema studies to question the priority of the graphical user interface and the disembodied gaze. Theorists such as Wendy Chun, Matthew Kirschenbaum, and Ian Bogost insist that the complexity of

the material cultures of computation beyond the screen in black-boxed devices cannot be ignored. Furthermore, the path dependencies created by unseen choices about particular chip designs or technical protocols create constraints and affordances that are difficult to apprehend. If the emphasis of critical inquiry shifts to embodied activation of multiple parties in a network and away from subject–object viewership, what opportunities exist for rethinking media? If the phone is both a part of the body and not part of the body, capable of giving us feedback with vibrations from its accelerometers, much like the walking stick of Gregory Bateson's (1972) blind man, how do we experience it as an actor in our networked social relations?

When Barack Obama posed for a selfie with other heads of state at the funeral of former South African president Nelson Mandela, conservative pundits pounced on the image captured by Agence France photographer Roberto Schmidt as evidence of the telegenic president's supposed tendencies toward cults of personality and the narcissistic distractions of social media. It is notable that Santiago Lyon, the vice president and director of photography for the Associated Press, cited Obama's Johannesburg selfie in introducing his *New York Times* op-ed protesting what he called "draconian" restrictions governing the access of photographers to the president. As Lyon (2013) observed of the funeral selfie image of Obama with prime ministers David Cameron and Helle Thorning-Schmidt, "the moment captured the democratization of image making that is a hallmark of our gadget-filled, technologically rich era" (para. 2). According to Lyon, the meritocratic leveling effect of vernacular mobile photography—which can also produce citizen journalism with more gravitas—exists in sharp contrast to the "manifestly undemocratic" policies of the administration's image control enforced in "hypocritical defiance of the principles of openness and transparency" (para. 3) that Obama campaigned upon.

As a feminist and a rhetorician, I would argue that selfies do much more than merely promote democratization, openness, and transparency, and to theorize selfies with *Selfiecity* points to more complicated networked subjectivities, partial literacies, and cyborg identities than the leveling narrative would suggest. Showing the purportedly average citizens of São Paulo on a building that serves as a monument to trade unionism certainly makes faces in the crowd much more visible as iconic individuals. But these images are obviously choreographed to promote a particular aesthetic of political spectacle that may be very different from the original context of image making. Understanding that initial context—and the context of selfie images as they circulate in new interpretive communities—should not be taken as the necessary domain of any one field. Selfie research groups include specialists in anthropology, sociology, history, visual culture, rhetoric, political science, gender and sexuality studies, and many other fields. Hopefully new iterations of *Selfiecity* will display more of the original data associated with lone images. However, this also might compromise the privacy of their subjects. Understandably, many people might not wish their specific locations be revealed, images shot at other times be displayed, or network of social relations be mapped. Even as seemingly vainglorious selfie-takers, some of the São Paulo subjects might not have wanted their faces displayed on the giant urban media screen. Thus, much information about how selfies might function as *punctum* as well as *studium* may continue to be inaccessible, but the quest for that information could spur new kinds of research ethics that might be far more productive.

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