REPARATIVE SOCIAL MEDIA: RESONANCE AND CRITICAL COSMOPOLITANISM IN DIGITAL ART

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A young woman wearing a hijab while sitting on a bench in front of downtown Minneapolis glances up from her open book and turns to face the camera. Born in Somalia, sixteen-year-old Maryan Mohamed Ali arrived in the Twin Cities just five years before the photograph was taken. Her facial expression is difficult to discern because of the small size of the image, which takes up only a fraction of the interface, but this moment of interrupted reading amidst a cluster of urban high-rise buildings conveys a sense of local belonging. The photograph appears surrounded by a web of sinuous, colorful lines on Minneapolis and St. Paul Are East African Cities,¹ a 2003 experimental hypermedia project documenting the everyday lives of East African teenagers living in the Twin Cities.² Minneapolis and St. Paul contains images, audio and text contributed by Maryan and eighteen other Twin Cities-based East African young adults, ages 17–21. Browsing through this digital archive, the user explores a maplike interface in order to uncover the individual and communal stories of the teenage contributors. As the user interacts with the project and discovers more about the varied habits, memories, and histories of the contributors, colorful trails tracing the user's reading path proliferate and accumulate in a dense network. These visual traces of the user's reading history add yet another layer to the rich social networks and lived histories mapped throughout the project. Through its innovative deployment of social media composition as a compilation of historical and reading networks, Minneapolis and St. Paul raises complex questions about digital literacy, urban mobility, and social belonging in the twenty-first century.

Minneapolis and St. Paul was commissioned as part of the online portion of a 2003 Walker Art Center exhibit on art in a global age. Artist-in-residence Julie Mehretu gave the teen participants cameras, audio recorders, and notebooks to chronicle their everyday lives over a two-week period, and design team Entropy8Zuper! then created Minneapolis and St. Paul by using the self-ethnographic images, audio, and text provided by the participating teenagers. As the contributors grant us fleeting glimpses into their everyday lives, from a shopping mall to ceramics class and everywhere in between, the project highlights the heterogeneity both of the Twin Cities population in general and, more specifically, of the large, diverse population of East African immigrants who reside there. Although the initial audience for this work was a relatively small, digitally aware, museumgoing public, the reception of this work by art blogs and academics informs my argument that, despite its limits, Minneapolis and St. Paul makes a key contribution to how we conceptualize digital sociality in the twenty-first century.³ The project subtly interrogates post-9/11 popular discourse on immigrant youth in the United States and offers an alternative vision of digital social networking that differs in important ways from the data-mining strategies that tend to dominate both corporations and states' digital agendas. Falling in the historical period between 9/11 and the rise of ubiquitous social media, characterized most familiarly by sites like Facebook and Twitter, Minneapolis and St. Paul provides, at this remove, a critical cosmopolitan vision of both local belonging and transnational mobility.



Figure 1. Minneapolis and St. Paul, screenshot, Twin Cities Are East African Cities, designed by Entropy8zuper! and Julie Mehretu, commissioned by Walker Art Center, 2002–3.



Minneapolis and St. Paul thus exemplifies a genre of new media art that I call reparative social media because it uses the tools of social media in order to make a complex political intervention. I borrow the term reparative from Eve Kosofsky Sedgwick's work on queer reading.⁴ In her germinal chapter, Sedgwick argues that most politically progressive academic scholarship embraces a *paranoid* hermeneutic in the sense that the main aim is to expose the workings of power. While paranoid reading has been crucial in bringing injustices to light, Sedgwick points out that it has problematically become the dominant credible framework for engaging with power because any other approach "has come to seem naïve, pious, or complaisant."⁵ The limitation of paranoid reading, then, is that it can offer us only a kind of knowing hopelessness because the paranoid reader, even before beginning to read, already knows that he or she will find the oppressive workings of power in any given text. In this way, paranoid reading can interfere with the opportunity to experience a range of affects, particularly any positive affect, as paranoia comes to dominate our experience of reading. Later in this essay I discuss two clever political new media art projects, September 12: A Toy World and They Rule, which both exemplify the *paranoid* perspective as they deliver a clear, concise political message at the expense of circumscribing meaning and forestalling the potential for any long-term engagement.

Moving away from the "tracing-and-exposure project" of paranoid reading,⁶ Sedgwick ultimately advocates for "reparative reading," which might include a wide range of affective modes of reading beyond the pervasive paranoid one. In particular, Sedgwick notes that reparative reading might offer surprise, both "terrible" and "good,"7 and hope, which, although "often a fracturing, even a traumatic thing to experience, is among the energies by which the reparatively positioned reader tries to organize the fragments and part-objects she encounters or creates."8 A key question for my purposes thus becomes this: Can a reparative hermeneutic, which contains potentially contradictory affects and discourses, have any political relevance as a means for rethinking our relationship to the forces of hyperindustrial neoliberal globalization or is it simply a naïve excuse for opting out of engaging in a substantive critical art practice? Through a close reading of Minneapolis and St. Paul, I argue that politically oriented new media art modeling a reparative approach through its openness to surprise and to positive affect offers the user a more complex, ambiguous, and long-term engagement. Reparative reading then shifts our notion of political art by foregrounding multiplicity, surprise, and positive affect, and by proliferating uncertainty and contradiction rather than by narrowly delimiting meaning.



I suggest that new media art becomes reparative through its use of self-reflexive and historically situated social media composition. Whereas user-generated content is most frequently associated with Web 2.0, and particularly with popular commercial social networking sites like Facebook and YouTube, rather than with digital art, reparative social media combines the two so that the relatively obscure genre of experimental hypermedia and the relatively ubiquitous everyday practices of social media composition comingle to create new digital forms. In this way, reparative social media differs substantially from many popular social media practices because it places user-generated content into a critical context. Unlike the Web 2.0 version of social media that frequently presents user-generated content out of context and for commercial gain, all of the reparative social media discussed in this essay point toward the powerful, and often unrealized, political potential of user-generated content when it is critically archived and publically presented as historically situated knowledge.

Reparative social media, as exemplified by Minneapolis and St. Paul, is able to do this through its self-reflexive and historically engaged display of user-generated content documenting teenagers and their everyday movements through urban and digital networks. Furthermore, Minneapolis and St. Paul asks us to reflect on our own digital reading strategies as we read, offering the user a limited but meaningful opportunity for digital interactivity that further opens the way for resonance and unexpected affinities. Through its critical display of multimedia user-generated content from immigrant youth, Minneapolis and St. Paul demands that we rethink the very nature of literacy, mobility, and sociality in the early twenty-first century as the overly utopian false promises of cyberspace give way to a messy assemblage of everyday life lived at once both on and off the Web. In the case of Minneapolis and St. Paul, the self-reflexive, reading and data-generating subject represents herself or himself in relation to a networked community with local and transnational ties; the historically situated knowledge of the East African teen participants manifests itself as a critical cosmopolitanism, which remains open to inclusive social relations even as it embraces difference, and, finally, the multiplicity of identities, desires, habits, and memories depicted in the project might move and surprise the user, ultimately offering the potential for a sustained engagement.

Political Digital Art

Minneapolis and St. Paul should be read within the larger context of politically oriented Net art beginning in the early 2000s and continuing into the present day. During this time, a number of artists and writers have used

Web-based art to critique and disrupt oppressive, hegemonic political and cultural narratives, particularly those coming from the United States after 9/11. Among a number of treatments of these new media projects,⁹ which are commonly known as *tactical media*, Rita Raley offers the most comprehensive account.¹⁰ According to Raley, tactical media relies on a "micropolitics of disruption, intervention, and education" in order to reveal or temporarily disable systems of hyperindustrial, neoliberal oppression.¹¹ With a strong focus on visualizing and critiquing power, tactical media tends to enact what would be a paranoid reading in Sedgwick's terms.

September 12: A Toy World (2003),¹² a short game simulation that critiques global US military intervention, is perhaps the most well-known example of tactical media. In this self-consciously unwinnable simulation, which borrows from the visual language of video games, the user has a bird's-eye view of a Middle Eastern city populated by moving figures identified as either terrorists or civilians. The user can try to kill terrorists by pointing and clicking the cursor; however, the subsequent explosion is always delayed, causing the user to miss his or her target and, frequently, to kill civilians. As the user drops more bombs and increases the collateral damage, more terrorist figures begin to emerge out of the rubble to populate the city. Aside from bombing the city, there are no other options to explore; the highly constrained, repetitive interactivity of the interface therefore leaves no opportunity for the user to make meaningful navigational choices, which, of course, is by design. The message of September 12 is clear: the only rational action is military inaction. While it effectively makes its point about the futility of war, as bombing campaigns within the logic of the game only breed more terrorists, September 12 does not allow for a more sustained, long-term engagement with its ideas because the user figures it out relatively quickly. September 12, like a number of other tactical media interventions, offers a clever and succinct political message but ultimately tells the reader what he or she already knows.

Likewise, Josh On's data visualization *They Rule* (2004) embraces a paranoid approach in order to stage a political intervention.¹³ *They Rule* maps the social networks of the boards of directors for major transnational corporations in order to offer a visual critique of the consolidation of wealth in the United States in the hands of a miniscule portion of the overall population. Although the user can choose to create maps by using data from a range of different companies, including Wal-Mart, Bank of America, and Verizon, all of the different maps ultimately tell the same story about the closed social networks of the powerful: "they rule." Like other examples of tactical media, *They Rule* encourages users to interactively *make* by building a social network; however, the results of the user's efforts are always the same even if the details are different. In this way,

both *September 12* and *They Rule* use repetitive interactivity in order to emphasize the powerlessness of the user in the face of violence and transnational capitalism, respectively. The link between ostensible interactivity and political impotence problematizes some recent scholarship in digital media studies and the digital humanities that valorizes building, making, and interaction as the key to digital literacy.¹⁴ The limited scope of the paranoid reading offered by tactical media suggests that hypermedia interactivity must be linked to a range of ways of seeing and knowing, particularly historically and culturally embodied ways of knowing that Donna Haraway has referred to as "situated knowledges,"¹⁵ in order to allow for a more complex approach to socially engaged literacy.

Defining Reparative Social Media

Reparative social media potentially offers us a historically situated and socially engaged literacy that resonates with, but ultimately has different priorities than, tactical media. By borrowing from everyday digital practices, particularly social media composition, reparative social media goes beyond the worthwhile, yet limited, aims and representational strategies of tactical media in order to offer a more inclusive vision of digital art. The increasing importance of user-generated content in new media art in the early part of the twenty-first century has been noted by Marjorie Lovejoy, Christiane Paul, and Victoria Vesna, who contend that user-generated content is now central to new media art because artists are transforming themselves from *content* providers to *context* providers who use their art to critically frame user-generated content.¹⁶ Some scholars might debate the extent to which user-generated content needs critical framing. For example, many media theorists have been generally enthusiastic about the potential of everyday practices of social media composition to create positive social change. For instance, Henry Jenkins highlights inventive content created by fans of Harry Potter, Star Wars, and The Matrix in order to demonstrate how everyday social media use enables sophisticated and potentially subversive engagement with popular culture.¹⁷ Jenkins thus proposes that critical fan engagement "may be preparing the way for a more meaningful public culture."18 Similarly, Yochai Benkler advocates for the value of "peer-production" as a means to "improve the practiced experience of democracy, justice and development, a critical culture, and community."19

On the other hand, based on her experiments researching and teaching through YouTube, Alexandra Juhasz contends that critics have



overemphasized the critical and creative potential of user-generated content and that opportunities for self-reflexive social media composition are highly limited on commercial social networking sites. In her innovative digital book Learning from YouTube (2011),20 Juhasz suggests that social media is most often characterized by trivial, uninteresting, and unimaginative content instead of the more innovative and critically engaged contributions identified by critics like Jenkins. For instance, Juhasz gives her students an assignment to create a viral video, offering an automatic "A" in the class for the creator of the video with the most views, which she hopes might lead to creative appropriation of the capabilities of YouTube. Instead, Juhasz describes the resulting videos as mostly "godawful rehashes of paltry popular culture. A few-the highest rated among them—are stolen music videos that were reuploaded."21 From this assignment and others, Juhasz shows that YouTube, on its own, is not especially conducive for learning, community building, or knowledge production. Nevertheless, through her digital book Learning from YouTube, Juhasz ultimately concludes that, under the right circumstances, YouTube can become a site for self-reflexive, critical media interventions. She writes, "Information cannot become knowledge without a map, a structure, and an ethics."22 The form of the digital book then does what the architecture of YouTube itself cannot easily do: it offers a critical map for reading. In this way, Learning from YouTube underscores the need to modify overly optimistic claims about the value of everyday social media use, as the project points to the difficulty of producing critical knowledge within commercial platforms. At the same time, by modeling how YouTube might be remixed for educational purposes, Learning from YouTube resonates with Benkler and Jenkins's claims for valuing potential opportunities for agency on the part of users within Web 2.0 social networks, in spite of the limitations.

Moreover, Marxist media scholars have also problematized the positive rhetoric around social media by showing that user-generated content and labor exploitation are often closely linked. For instance, Tiziana Terranova argues that user-generated content is a problematic euphemism for "free labor."²³ Playing with this idea, Aaron Koblin's browser art project *The Sheep Market* (2006) self-reflexively takes advantage of free labor to critique the assumptions of neoliberalism.²⁴ Using a Web 2.0 program geared toward employers trying to access cheap, flexible workers, Koblin solicited over 10,000 images of "a sheep facing left" for \$.02 each and then sold the images for a substantial profit. Thus, *The Sheep Market* reveals how contributors of user-generated content are also an exploited labor force. At the same time, the images, which range from



mundane to subversive, reflect Terranova's succinct characterization of the contradictory nature of user-generated content where the user's "productive activities" are "pleasurably embraced and at the same time often shamelessly exploited."²⁵ In this way, the commissioned sheep aptly symbolize both the unthinking user being herded along in the information economy and the capitalist takeover of the web while simultaneously reflecting the creative potential of user-generated content, with some of the sheep facing the wrong direction, having sex, or riding in rocket ships. Moreover, the unique interactivity of the project, where users can view a flash animation of any of the sheep drawings in process from start to finish, at times points to the pleasure of imaginative labor even within exploitative regimes.

The Sheep Market then complicates the dichotomy I have established between tactical media and reparative social media because it provides both a paranoid critique of neoliberal capitalism and a glimpse at the heterogeneous workings of affect within networked culture. As a result, The Sheep Market contains elements of both tactical media and reparative social media; however, whereas a tactical media reading would emphasize the role of artist Aaron Koblin as an active social agent intervening in digital labor exploitation, the reparative social media reading that I propose here prioritizes the experience of the reader encountering the selfreflexive and imaginative user-generated assemblage of sheep. This is the key distinction between these two models for understanding new media art: tactical media emphasizes the role of the artist, while reparative social media prioritizes the experience of the user. Both Learning from YouTube and The Sheep Market point to the value of bringing everyday social media practices in contact with experimental hypermedia in order to transform the potential for social media composition to offer meaningful critical agency. This does not necessarily devalue the potential for some everyday social media practices to become critical acts as Henry Jenkins has suggested; rather, it demonstrates the concerns shared between new media art and critical social media use.

Other browser art projects, which I refer to as reparative social media, also employ user-generated content in a similarly reflexive manner, but they do so with the specific aim of giving voice to politically marginalized communities that do not historically have access to new media and to embracing the messy, unpredictable assemblages of user-generated content without trying to flatten out difference, contradiction, or uncertainty. In addition to *Minneapolis and St. Paul*, which displays self-ethnographic content from the everyday lives of East African immigrants in the Twin

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Cities, the following are examples of reparative social media: Public Secrets (2007), which documents the experiences of women in a prison in California;²⁶ Ka Fitfitu Feetu (2003), which contains images and firstperson accounts of Ethiopian people living with HIV and AIDS;²⁷ Border Film Project (2005), which juxtaposes images taken both by migrants and law enforcement around the US-Mexico border;²⁸ and Flight Paths (2007-), which tells the story of a migrant from Pakistan falling out of a plane bound for England.²⁹ These new media art projects show the everyday survival strategies of people living under difficult conditions, particularly those who are unable to move and those who are compelled to do so. The projects that I have mentioned here generally diverge from the short-term interventionist approach of tactical media, which tends to focus on revealing the wide-reaching networks of economic, political, and social power; instead, reparative social media projects turn to imaginative archiving as a response to injustice. Digital media, then, primarily functions as a self-reflexive technology of memory and self-composition. By combining art practice with digital archiving functionality, these projects suggest that remembering and building social affinities are meaningful political acts.

All of these projects harness user-generated content in hypermedia formats for political critique in a way that would not be possible by using only the tools of commercial social media. The posed, smiling pictures of the contributors with their friends appearing again and again throughout Minneapolis and St. Paul could easily appear on popular social media sites like Friendster, MySpace, and Facebook, which were all launched between 2002 and 2004, just around the time that Minneapolis and St. Paul was completed. However, Minneapolis and St. Paul depicts a social network that bears only a small resemblance to the aforementioned commercial social networking sites for several reasons. First, as a small-scale, collaborative project, it offers an alternative to the opaque, undemocratic governance of large-scale commercial social networking sites. Rebecca MacKinnon argues, "[C]orporations and governments that build, operate and govern cyberspace are not being held sufficiently accountable for their exercise of power over the lives and identities of those who use digital networks. They are sovereigns operating without the consent of the networked."30 Although individuals willingly sign up for social media accounts, MacKinnon points out that they are guaranteed no voice in how these sites are governed and that the governance can have serious consequences for privacy, free speech, and human rights.



Collaborative small-scale reparative social media like *Minneapolis and St. Paul* that bring designers, contributors, and artists together potentially allow contributors to have more of a voice in how and to what ends their data are accessed, presented, and archived than can be found on largescale social networking sites. Reparative social media thus provides an alternative to Web 2.0 as it attempts to deploy user-generated content ethically rather than for commercial or political gain. However, the not insignificant downside of collaborative, experimental hypermedia is that it circulates among only a very small set of individuals unlike the widely circulated, so-called spreadable contents of commercial social networking sites.³¹ In this way, reparative social media resolves some issues around governance at the expense of scale and circulation.

A second key distinction between reparative social media and commercial social media is the level of interactivity that each affords. Minneapolis and St. Paul is interactive in a minimal way as compared to commercial social media. The project displays only content contributed by the nineteen participants over a two-week period without allowing users to upload their own content or to comment on the site; as a result, users are invited to become readers rather than contributors. On the other hand, commercial social media sites encourage users to be as active as possible in the production of content, and they constantly prompt users to "write a comment" or to "share your thoughts." The core mechanic on popular social networking sites often involves collecting as many friends or followers as possible, and the interface is frequently organized based on an easily digestible, linear chronology. José van Dijck emphasizes that these functionalities are not technologically inevitable, but rather that "they are firmly rooted in an ideology that values hierarchy, competition, and a winner-takes-all mind-set."32 On the other hand, when we read through Minneapolis and St. Paul, the rhizomatic structure of the project asks us to consider social ties not in terms of quantity of friends but rather in terms of connections between individuals and asks us to look at the ways that the present and the past are inextricably entangled with each other, thereby opening up the possibility for an alternative, potentially more community-based and socially engaged sense of social media.

Interactivity and the Production of Resonance

The complex interactivity of *Minneapolis and St. Paul*, then, is a crucial element for fostering reparative reading and creating a new vision of social media. To access the project's content, users must experimentally



manipulate nineteen small circles that each represent one of the nineteen East African contributors. The user is likely to be disoriented immediately because there is no map of the site as a whole, no clear sequence to follow, and no beginning or end. In addition, by design, Minneapolis and St. Paul reconfigures differently each time it is opened, making it likely that each user will experience the content in different sequences based on the reconfiguration of the interface and on his or her navigational choices. User disorientation is common among experimental hypermedia compositions, and, although some critics like George Landow have suggested that disorientation can become "a source of pleasure,"33 others like Kathleen Fitzpatrick point out that disorientation is often a source of frustration. Fitzpatrick describes her students' process of reading experimental hypermedia in this way: "[T] hey stab randomly at it, trying to find their way somewhere; they wander aimlessly, trying to make sense of their paths; they finally give up, not at all sure how much of the text they've actually read, or what they should have taken from it."34

Minneapolis and St. Paul self-reflexively plays around with the recurring issue of disorientation, thereby transforming the potential difficulty, ambiguity, and uncertainty associated with hypermedia into an opportunity to read digital self-ethnography reparatively. The interface itself, an abstract map representing the Twin Cities with blocks of color rather than with highways, neighborhoods, or major buildings, serves as an apt metaphor for the move from disorientation to reparative reorientation that the project demands of the user. By not mapping directly onto an aerial photographic map like Google Maps or MapQuest, Minneapolis and St. Paul underscores the constructedness of all apparently objective representations of space and offers a map that stresses what Donna Haraway has referred to as the "historical contingency of all knowledge claims."35 Other feminist critics of science and technology like Johanna Drucker argue that "the ideology of almost all information visualization is anathema to humanistic thought" because of its fundamental reliance on the assumptions of scientific discourse about temporality and spatiality.³⁶ By not mapping the contributors' lives onto an easily legible Cartesian map, Minneapolis and St. Paul posits a relationship to space that defies the boundedness of a photorealistic map. At the same time, since the imaginative geography represented on the interface cannot be used to pinpoint the precise routes and whereabouts of the contributors, the user's viewing and reading practices are not oriented toward surveilling or tracking the contributors.



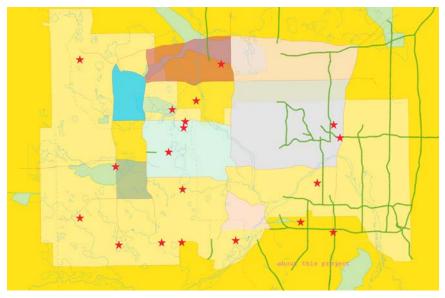


Figure 2. Minneapolis and St. Paul, screenshot, Twin Cities Are East African Cities, designed by Entropy8zuper! and Julie Mehretu, commissioned by Walker Art Center, 2002–3.

Because of the initial disorientation, the core mechanic of Minneapolis and St. Paul becomes exploratory navigation: the user must experimentally click and drag icons to gain a sense of the content and to try to discover a strategy for reading. Disorientation, then, is an important characteristic of Minneapolis and St. Paul because it gives the user the opportunity to remain open to surprise and positive affect through the open-ended interactive process of exploration. While Kathleen Fitzpatrick's aforementioned students perhaps find frustration in this process because many examples of literary or artistic hypermedia are slow to offer a payoff for the disorientation they cause, the users of Minneapolis and St. Paul can still access substantive content even as they work to understand the interactivity. The concept of interactivity itself is highly contested, and, as Espen Aarseth has argued, claims for user empowerment through digital interactivity tend to be vastly overstated.³⁷ In this case, Minneapolis and St. Paul is interactive in the sense that users can make some meaningful choices about how to read the text even as other choices are highly constrained. For instance, there is no way to pause or to end an audio clip before it is finished, so the user is sometimes compelled to listen to over a minute of white noise from a school hallway or to a full conversation in an East African language before being able to continue exploring. In comparison to new media projects like September 12 and They Rule, which each allow users to either make or destroy, the user of Minneapolis and St. Paul,



who interacts by exploring, might appear to be in a more passive position. However, while the aforementioned tactical media projects use their interactivity to produce a specific response in the user, the open-ended exploratory navigation of *Minneapolis and St. Paul* ultimately offers a more significant interactivity because it is not intended to create any single response on the part of the user. Instead, exploratory navigation of the rich, complex user-generated content has a reparative potential because it might have a range of effects on the user.

The apparent limitations on the level of interactivity of the site effectively position the user as an outsider to the social network of the nineteen contributors, even as the user's navigation of the site resonates with the fraught mobility portrayed in the content of the project. James Tobias contends that the divide between the interactivity of the site, which is experienced by the user, and the user-generated content, which was contributed in 2002 by the East African participants, enables an "ethical address of the interfacial subject."38 This ethical address thus occurs because of the resonance between the user's interactivity and the teen contributors' content. How does the project establish this resonance? In order to access the images, audio, and text associated with each teenager, the user needs to manipulate the placement of the circles, which each represent one of the teenagers. The haptic engagement exerted by the user to access content mirrors the numerous local and transnational circuits of mobility displayed within the user-generated content. For example, contributor Ifrah Jimale relates that within 1989–2002, she has astoundingly "lived in 38 houses, 7 countries, and traveled in 3 continents."39 Images of Ifrah's voluntary, everyday mobility in the local setting of the Twin Cities is juxtaposed with the nonvoluntary hypermobility of Ifrah's experience as a refugee. If rah depicts herself in the present day as extremely mobile, knowledgeable, and capable of navigating the space of the Twin Cities downtown. At the same time, her fragmentary memories tell a story of repeated displacement, separation from loved ones, detention, despair, and adoption. The user's exploratory navigation of the interface, as well as the haptic motion required to call up each piece of Ifrah's user-generated content, resonate with Ifrah's complicated relationship to mobility.

Although the contributors frequently include photographs of themselves and others walking through crowded school hallways, traversing city streets, and riding in cars or on buses, images of Ifrah and other young women in hijabs moving through the city are particularly striking. These images push back on post-9/11 discourse about Muslim women in the public sphere that paradoxically problematized Muslim women's garb for being hypervisible while at the same time apparently making the wearer

invisible. Not only do the young women who appear in *Minneapolis and St. Paul* wearing clothing that identifies them as Muslim demonstrate their everyday belonging in urban US public space, but the interactivity of the project and the urban mobility portrayed in the content might create a feeling of affinity between the user and contributors like Ifrah. In her work on race in digital art, Jennifer González argues that, rather than striving for an ill-conceived digital race-neutral utopia, digital art might become a space to work out how to ethically encounter difference by embracing conflict and difficulty.⁴⁰ Although *Minneapolis and St. Paul* does not seek to create conflict, it does resist a tendency critiqued by González where the user of digital art tries on the visual appearance of the racial other. González asks, "[W]hat are the conditions for ethical relations that entail encounters with racial difference?"⁴¹ and, in this case, the interactivity of *Minneapolis and St. Paul* paired with the usergenerated content offers resonance as one possible mode for doing so.

As the user moves the dots and accesses the user-generated content, colored lines tracing the user's path through the material begin to crisscross the interface.⁴² The user's experience of reading thus becomes visually intermingled with the content of the project, and apparently passive digital reading is recoded as active since reading is visualized as a process of writing oneself onto a text. The interface then offers multiple perspectives

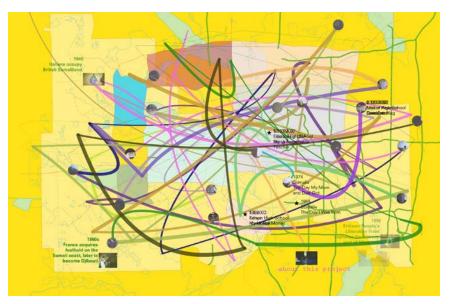


Figure 3. Minneapolis and St. Paul, screenshot, Twin Cities Are East African Cities, designed by Entropy8zuper! and Julie Mehretu, commissioned by Walker Art Center, 2002–3.



and temporalities: the present of the user whose reading choices generate colorful lines, the present of the individual contributor represented by the small circles, the past of the individual contributor represented by black stars, and the past of East African political history, extending as far back as the Middle Ages, represented by dates and descriptions appearing at the margins of the interface. Through the process of reading, these layers interpenetrate one another as the history and culture of East Africa and the experiences of the contributors emerge inextricably intertwined. This strong link between the present and the past is vital for the reparative effect of the project because it belies any attempt on the part of the user to look for a straightforward historical narrative. Whereas paranoid reading demands a narrative with a sense of cause and effect, reparative reading allows for openness to multiplicity and uncertainty in relation to the past, present, and, perhaps most significantly, the future.

Networked Critical Cosmopolitanism

The complex relationship not only to temporality but also to local and transnational spaces surfaces throughout the content of Minneapolis and St. Paul. One instance of this is contributor Gada Beshir's interview with his classmate Iveplag about his background and future plans. The lengthy audio recording is accompanied by descriptive text that reads "Friend from Togo (West Africa)"43 and a photograph of the two young men sitting in a classroom facing a desktop computer, with a world map and a US map mounted on the wall behind them. Iveplag relates his story of growing up in France, where his mother and sisters still reside, before moving with his father to the Twin Cities. Gada seems taken aback at several points in the interview that Iveplag's life experience does not necessarily conform to his expectations for West African identity. For instance, Gada prompts Iveplag, "Wow, you're lucky, you speak more than how many languages?"44 and seems startled to learn the answer: French and English. Iveplag speaks European languages rather than a language specifically originating from West Africa, and, in doing so, he potentially unsettles Gada's and the user's expectations about West African social identity. Gada also seems surprised upon learning that his friend from Togo has visited West Africa only a handful of times and that he claims, presumably hyperbolically, to "know nothing about Togo."45 In this way, Gada discovers that Iveplag has ties to three continents and that his identity includes but also exceeds the West African label. This moment of Gada's surprise and learning potentially resonates with the reader's surprise at experiencing the content.



This small exchange between Gada and Iveplag further sheds light on *Minneapolis and St. Paul* as a whole, as the user-generated content often exceeds the tongue-in-cheek limits set by the title, *Minneapolis and St. Paul Are East African Cities*. Throughout, the user-generated content signals that the Twin Cities might be East African cities, but that they are also more than that, as well, especially as evidenced by the appearance of West African, Hmong, Latino, and white individuals, among others. The declarative statement in the title, then, highlights East Africans in the Twin Cities even as it ironically points to the mutability and contingency of the American urban landscape.

Transnational movement characterizes Iveplag's life, and while on the one hand, Gada exclaims, "[Y]ou get to go to France whenever you want?"⁴⁶ on the other hand this kind of mobility is typical of the experiences of many of their friends and classmates. In fact, both young men are invested in a cosmopolitan vision of their lives in the Twin Cities; Gada proposes the idea of their high school being full of "brothers from all parts of Africa,"⁴⁷ and Iveplag responds that he has friends from "all countries: Somalia, Ethiopia, Sudan, Egypt, Morocco."⁴⁸ The young men rewrite the presumably white, homogeneous space of the Midwestern city as a cosmopolitan gathering of diasporic African communities where East Africans like Gada and West Africans like Iveplag tie their identities to various transnational sites outside the bounds of the nation-state and imagine a social network based on affinity rather than on shared ethnic or national identity.

A critical cosmopolitan sensibility then becomes visible as the East African young adults self-reflexively represent both their experiences of diaspora and their connections with groups and individuals spanning multiple transnational sites. A number of scholars have critiqued the connotations around the term cosmopolitanism. Timothy Brennan has argued that the discourse of cosmopolitanism tends to be Eurocentric and apolitical,⁴⁹ and Lisa Nakamura has characterized some strands of cosmopolitanism as "cosmetic" because they commodify so-called exotic bodies and places primarily to offer the American consumer a digital, colonialist gaze.⁵⁰ However, Rebecca Walkowitz convincingly contends that the adjective "critical" can subvert the potentially negative or superficial connotations around "cosmopolitan," as the former "tends to imply double consciousness, comparison, negation, and persistent self-reflection."⁵¹ The cosmopolitanism emerging in Minneapolis and St. Paul enacts Walkowitz's notion of *critical cosmopolitanism* through its representation of the heterogeneous social networks, multiple literacies, and complex identities and social interactions of the participants whose everyday lives it documents. Minneapolis and St. Paul thus functions reparatively as Gada and Iveplag look for affinity with each other without obscuring their differences.

As all nineteen contributors position themselves in relation to the user, to one another, to a set of overlapping and fragmentary histories, and to the urban space of the Twin Cities, they collectively demonstrate a critical cosmopolitan sensibility where belonging is hopefully imagined as partial, contingent, and ultimately possible, if always fraught.

This critical cosmopolitanism takes on new meaning in light of the events of 9/11, which occurred not long before the collection of usergenerated content for Minneapolis and St. Paul. 9/11 visibly intensified xenophobia and militarism directed against Muslims, immigrants, and people of color within the United States, who became subject to increased profiling, surveillance and detention. In this way, 9/11 might affect contributors to Minneapolis and St. Paul doubly, as individuals with ties both to the United States and to apparently newly suspicious foreign regions. The contributors to Minneapolis and St. Paul negotiate this potential binary by expressing grief, surprise, and fear even as they also implicitly and explicitly place the events of 9/11 in a broader context of global conflict and displacement. For instance, Farhiyo Ahmed and Maryan Mohamed Ali both include images of student art and writing displayed in their schools that respond to 9/11. Farhiyo's photograph includes an image of an American flag with the words "God Bless America" on top, and Maryan's contribution shows an image of the World Trade Center. In both photographs, the iconic images of the American flag and the World Trade Center are each respectively framed by student writing. As a result, the visual rhetoric of American nationalism implicit in each image appears but is also subverted because it is located in a broader context of what Farhiyo describes as students' "thoughts and feelings."52

The words of another contributor, Abdulahi Hussein, resonate with these images as he reflects that 9/11 "affected me because I am American and I feared a second attack since."⁵³ Abdulahi then firmly identifies himself as American in the same way that the image of the American flag and the words "God Bless America" taken by Farhiyo articulate a sense of both national belonging and national mourning. Nevertheless, these images and identifications are complicated by other non-US nationalist discourse throughout *Minneapolis and St. Paul*, including an image contributed by Shamso Ahmed of a Somali flag surrounded by the words "Whatever happens Somalia is my country" and glossed by a caption stating, in reference to Somalia, "I cannot imagine what to say except I love you forever."⁵⁴ US and East African nationalist discourses, then, coexist throughout the project, thereby complicating the notion that the contributors might have a unitary sense of national or transnational identification.

Another contributor, Edao Dawano, proudly expresses Oromo nationalist sentiment throughout his contributions to *Minneapolis and St. Paul*. Nonetheless, his response to 9/11 extends beyond Oromo nationalism as it gestures toward resonance with US nationalism. Edao reflects on 9/11 in some detail, recalling feeling "seriously disturbed" as he witnessed the collapse of the World Trade Center on TV. He explains, "I used to think that America is the safest place to live. However, what happened on September 11, 2001[,] reminds me of the life of fear of the refugee,"55 thereby expressing sorrow without resorting to rhetoric of American exceptionalism. Rather than echoing a "with us or against us" rhetoric, Edao finds resonance between his experience as a refugee and his experience of 9/11 from within the United States. Through a critical cosmopolitan lens, he thus rewrites the experience of 9/11 as part of his own history of displacement, and 9/11 becomes a site for empathy rather than for paranoia. In this way, the complex and competing discourses of local, national, and transnational belonging emerging in response to 9/11 and the ambiguity they create provide the potential for reparative reading, where surprise, resonance, and affinity are possible, as opposed to a paranoid reading practice that tends to be more clear, predictable, and easily digestible. The reparative hermeneutic in Minneapolis and St. Paul allows critical cosmopolitan belonging to emerge, both from the individual contributors and, perhaps most importantly, from the way that they collectively articulate overlapping, but contradictory, discourses of social belonging.

The content of Minneapolis and St. Paul, then, demonstrates how social media composition in the context of new media art can lead to meaningful knowledge production. The fact that Minneapolis and St. Paul does not focus on teaching the East African contributors how to write code but instead allows them to critically annotate their surroundings points to the need to prioritize critical knowledge production over technical literacy. For Christopher Kelty, the former and the latter tend to be closely intertwined. Based on his ethnographic research, Kelty suggests that knowledge of code enables individuals to create "recursive publics" where the individuals who comprise a public sphere are "vitally concerned with the material and practical maintenance and modification of the technical, legal, practical, and conceptual means of its own existence as a public."⁵⁶ In this way, Kelty's solution to issues around Internet governance raised by critics like Rebecca MacKinnon is to encourage individuals to develop the technical skills necessary to create and maintain digital tools and spaces operated through consensus rather than through a corporate top-down approach. As promising as this model of the technically savvy recursive public may be, it threatens to establish technical literacy as a prerequisite for developing critical communities through digital networks.



Other scholars emphasize critical knowledge production over code as a way for a wider range of communities to access meaningful forms of literacy in the twenty-first century. Adam Banks argues that narrow conceptions of literacy and composition are insufficient in the twenty-first century because they tend to exclude an array of formal and informal, imaginative and historically situated, African American practices that produce valuable forms of knowledge. In particular, Banks suggests that the African American figure of the DJ, who has a deep familiarity with historical music genres and expertly composes by creatively combining sound to produce new musical formations, offers a model of multimodal literacy that encompasses a "wide range of cultural practices, multiple literacies, rhetorical mastery, and knowledge of traditions."57 Like Kelty, Banks argues for the importance of networked sociality as a key to digital literacy; however, unlike Kelty, Banks demonstrates that technical fluencies are only a small part of a spectrum of skills, literacies, and knowledges that we may use to interact with others and to build community. In this way, meaningful knowledge production in digital environments goes far beyond simply using social media or learning to code; instead, it comes from using the tools of digital media to address issues of importance to individuals and communities.

New media art like Minneapolis and St. Paul that relies on usergenerated content, then, offers an inclusive model for digital literacy that avoids prioritizing the ability to code above all else. It also provides a corrective to the relative invisibility of female and nonwhite digital media users in a number of scholarly ethnographic accounts where white male users are frequently presented as the norm. In Minneapolis and St. Paul, the ability of young East African men and women to position themselves in relation to a networked public is not contingent upon belonging to a technologically savvy recursive public; instead, it comes from a historically situated practice of self-reflexive media composition based on the presumably preexisting skills and interests of the contributors, who did not code or design the interface, but who nonetheless play an indispensible role in the project. The contributors to Minneapolis and St. Paul document their own emerging, informal literacies and critical knowledges as they depict themselves studying the Koran with their friends, practicing skits for their English class, writing one another notes, and sharing cultural traditions at after-school programs. In these depictions of everyday life, the user-generated content on Minneapolis and St. Paul overlaps considerably with content typically available on commercial social media Web sites, thereby complicating the boundaries between social media and art.

Just as commercial social media sites can become spaces for questioning social norms or developing a political critique, a number of the contributors to Minneapolis and St. Paul use social media composition as an opportunity to interrogate the practices of those around them and, at times, to upend established social relations. For example, Gada Beshir thoughtfully questions his teachers so as to better understand their perspective on East African youth. Just as the teen contributors offer a range of perspectives, memories, and affects, so do the teachers being interviewed. In all of the interviews, Gada insists on knowing what the teacher has learned about East Africa through his or her experience teaching in the Twin Cities. One teacher is East African, and the interview is conducted entirely in an East African language punctuated only by dates and Midwestern place names. The other teachers are not East African, and their responses reflect their different level of engagement with and interest in East African culture: one teacher fondly recalls her participation in women-only celebrations before an East African wedding, another teacher talks about reading about East African warfare, and a third teacher jokes that he's learned some East African curse words. The teachers' individual relationships to East African culture and history are as varied as those of the contributors themselves. By insistently questioning his teachers about their knowledge of East African culture, Gada reverses traditional roles and demonstrates the value of informal modes of knowledge production. In this way, he asserts the significance of cross-cultural literacy; at the same time, his untranslated interview reminds the technically savvy user who has figured out how to navigate the site that technical literacy has its limits. More important, perhaps, than the question of technical literacy raised by work in the digital humanities is the question of public being or critical cosmopolitan belonging surfacing in reparative social media projects like Minneapolis and St. Paul. The opportunity to ask these questions as to how to design and compose the image and actuality of a variegated public sphere is this hypermedia text's reparative effect. Minneapolis and St. Paul thus reveals the potential of digital media to expand our very notion of literacy and composition as public practices or as practices of composing critical cosmopolitan publics.

Toward a Model of Networked, Transnational Literacy

The reparative model of belonging emerging in *Minneapolis and St. Paul* contrasts sharply with the dominant modes of transnational knowledge formation of our time. Rey Chow aptly describes our contemporary



historical period as "the age of the world target" in order to convey how knowledge about global cultures within the United States is typically positioned instrumentally, as preparation for future military conflict, as any world region might become a future target.⁵⁸ The value of a project like Minneapolis and St. Paul, then, is that, instead of appearing as targets who are vulnerable to surveillance and unable to represent themselves, the contributors are able to position themselves as self-reflexive, critical subjects, and the project, although self-ethnographic, defies an instrumental reading due in part to its experimental, imaginative composition and to the fragmented, partial nature of the user-generated content. Instead of lending itself to an instrumental reading, then, the critical display of user-generated content has the potential for resonance, where the user can be moved in a number of different ways, but, at the same time, it offers no guarantees of what will resonate or how it will do so. In this way, reparative social media invites the user to develop a reading practice characterized by curiosity, openness, and a willingness to be surprised characteristics that might avoid reinforcing hegemonic narratives onto historically marginalized communities. In Minneapolis and St. Paul, this becomes particularly relevant in the case of the Muslim women, who, contrary to the typical US and European discourse of hypervisible, faceless victims, present themselves as visible subjects with complex, overlapping ties to a larger networked public so that communal representation and self-representation become feminist acts of reimagining the stakes of media literacy.

As we have seen, media literacy, as demonstrated by Minneapolis and St. Paul, involves reading user-generated content in conjunction with the formal features of hypermedia. This is especially significant because imaginative hypermedia composition has been written off by many as esoteric experimentation with form that lacks any wider audience beyond those immediately concerned with the problems of digital design. This notion is reinforced by the fact that, beyond its enthusiastic proponents like George Landow and Katherine Hayles, hypermedia is not widely studied by critics of contemporary culture, and, in fact, according to Katherine Hayles, some literary critics, including Jerome McGann, have argued that the quality of "the most complex and interesting" electronic literature pales in comparison to "even modest works in the print tradition."59 Regardless of how convincing or not McGann's sentiment may be, looking at hypermedia through the lens of reparative social media demands that we reassess its value, not necessarily as literature in the tradition of print culture but instead, especially in the case of Minneapolis and St. Paul, as a model of formal experimentation that might lead to



politically engaged practices of digital, transnational literacy. In this way, reparative social media projects are more than just apparently opaque experiments with new media poetics; rather, they attempt to develop a new formal language that emphasizes multimodal and radically inclusive literacies and that resonates with concerns around self-representation, mobility, embodiment, and globalization as articulated by postcolonial and feminist critics. These efforts are not always fully realized, but they are suggestive of future possibilities for communal self-composition that take advantage of digital affordances.

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NOTES

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- Julie Mehretu and Entropy8Zuper! Minneapolis and St. Paul Are East African Cities (Minneapolis, MN: Walker Art Center, 2003), hypermedia, http://tceastafrica.walkerart.org.
- 2. I use the term *hypermedia* along with new *media art, digital art, Net art,* and *electronic literature* throughout this essay to refer to Web-based literary and artistic experiments.
- For instance, for an alternative reading of *Minneapolis and St. Paul* as information visualization, see Warren Sack, "Aesthetics of Information Visualization," in *Context Providers: Conditions of Meaning in Media Arts*, ed. Margot Lovejoy, Christiane Paul, and Victoria Vesna (Bristol, UK: Intellect, 2011), 123–50.
- Eve Kosofsky Sedgwick, *Touching Feeling: Affect, Pedagogy, Performance*, Series Q (Durham, NC: Duke University Press, 2003).
- 5. Ibid., 126.
- 6. Ibid., 124.
- 7. Ibid., 146.
- 8. Ibid.
- For instance, see Geert Lovink, *Dark Fiber: Tracking Critical Internet Culture*, Electronic Culture: History, Theory, Practice, ed. Timothy Druckrey (Cambridge, MA: MIT Press, 2002); and Alexander R. Galloway, *Protocol: How Control Exists after Decentralization*, Leonardo Book Series (Cambridge, MA: MIT Press, 2004).
- Rita Raley, *Tactical Media*, Electronic Mediations, ed. Katherine Hayles, Mark Poster, and Samuel Weber (Minneapolis: University of Minnesota Press, 2009).
- 11. Ibid., introduction, 1-30, quotation on 1.
- 12. September 12: A Toy World, Newsgaming.com (Montevideo, Uruguay: Newsgaming, 2003), hypermedia, http://www.newsgaming.com/games/index12.htm.
- 13. Josh On, *They Rule* (San Francisco: Futurefarmers, 2004), hypermedia, http://www .theyrule.net/2004/tr2.php.



- Two examples include Stephen Ramsay and Geoffrey Rockwell's "Developing Things: Notes towards an Epistemology of Building" and Tom Scheinfeldt's "Sunset for Ideology, Sunrise for Methodology?" in *Debates in the Digital Humanities*, ed. Matthew K. Gold (Minneapolis: University of Minnesota Press, 2012), 75–84 and 124–26.
- Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (1988): 575–99.
- Margot Lovejoy, Christiane Paul, and Victoria Vesna, introduction to Lovejoy et al., Context Providers (see note 3), 1–10.
- 17. Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006).
- 18. Ibid., 239.
- Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven, CT: Yale University Press, 2006), 9. For an in-depth response to Benkler, see Ben Roberts, "Against the 'Networked information Economy': Rethinking Decentralization, Community, and Free Software Development," *Criticism* 53, no. 3 (2011): 385–405.
- 20. Alexandra Juhasz, *Learning from YouTube* (Cambridge, MA: MIT Press, 2011), hypermedia, http://vectors.usc.edu/projects/learningfromyoutube/.
- 21. Alexandra Juhasz, "YouTube, Popularity, Inanity, Fun!" in ibid.
- 22. Alexandra Juhasz, "Info Wants a Map (and Ethics)," in Juhasz, *Learning from YouTube* (see note 20).
- 23. Tiziana Terranova, "Free Labor: Producing Culture for the Digital Economy," *Electronic Book Review* (London: Open Humanities Press, 2003), hypermedia, http:// www.electronicbookreview.com/thread/technocapitalism/voluntary.
- 24. Aaron Koblin, *The Sheep Market* (Seattle, WA: Amazon's Mechanical Turk, 2006), hypermedia, http://www.thesheepmarket.com/.
- 25. Terranova, "Free Labor," para. 11.
- Sharon Daniel and Eric Loyer, "Public Secrets," Vectors 2, no. 2 (2007), hypermedia, http://vectors.usc.edu/issues/4/publicsecrets/.
- 27. Eric Gottesman, *Ka Fitfitu Feetu* (St. Louis: PixelPress, 2003), hypermedia, http://www .pixelpress.org/eric/index.html.
- Rudy Adler, Victoria Criado, and Brett Huneycutt, *Border Film Project* (Chicago: Chris Simcox, 2005), hypermedia, http://www.borderfilmproject.com/en/index.php. See Raley (*Tactical Media*, 57) for a more detailed discussion.
- 29. Kate Pullinger, Chris Joseph, and participants, "Flight Paths: A Networked Novel" (2007), in *Electronic Literature Collection*, vol. 2, ed. Laura Borràs, Talan Memmott, Rita Raley, and Brian Stefans (Mountain View, CA: Creative Commons, 2011), hypermedia, http://collection.eliterature.org/2/works/pullinger_flightpaths/index.html. Whereas *Public Secrets, Ka Fitfitu Feetu*, and *Border Film Project* all emphasize more straightforward self-ethnography, *Flight Paths*, which is fictional although based on some real world events, blurs the boundaries between fiction and ethnography.
- 30. Rebecca MacKinnon, introduction to *Consent of the Networked: The Worldwide Struggle* for Internet Freedom (New York: Basic Books, 2012), xxi-xxvii, quotation on xxi.



- Henry Jenkins, Sam Ford, and Joshua Green, Spreadable Media: Creating Value and Meaning in Networked Culture, Postmillennial Pop (New York: New York University Press, 2013).
- 32. 2. José van Dijck, *The Culture of Connectivity: A Critical History of Social Media* (Oxford: Oxford University Press, 2013), 21.
- George P. Landow, Hypertext 3.0: Critical Theory and New Media in an Era of Globalization, Parallax: Re-visions of Culture and Society (Baltimore, MD: Johns Hopkins University Press, 2006), 146.
- 34. Kathleen Fitzpatrick, *Planned Obsolescence: Publishing, Technology, and the Future of the Academy* (New York: New York University Press, 2011), 97.
- 35. Haraway, "Situated Knowledges," 579.
- Johanna Drucker, "Humanistic Theory and Digital Scholarship," in Gold, *Debates in the Digital Humanities* (see note 14), 85–95, quotation on 86.
- 37. Espen J. Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore, MD: Johns Hopkins University Press, 1997). Aarseth takes issue with the term *interactive* for being "typical of industrial terms appropriated by analysts of technoculture" as it "shows how commercial rhetoric is accepted uncritically by academics" (48). In his discussion of hypertext, Aarseth goes on to point out that, despite claims to the contrary, hypertext fiction like Michael Joyce's *afternoon: a story* (Watertown, MA: Eastgate Systems, 1990) is actually perhaps more restrictive than print because the reader cannot browse freely (77).
- James Tobias, "Ethical Address: Designing Publics, Affective Use Value and Social Computing" (draft), p. 16, http://lse.ac.uk/internationalRelations/centresandunits/CIS/ conference/papers/Tobias.pdf.
- 39. Mehretu and Entropy8Zuper! Minneapolis and St. Paul, Ifrah Jimale.
- Jennifer González, "The Face and the Public: Race, Secrecy, and Digital Art Practice," Camera Obscura 24, no. 1, 70 (2009): 37–65.
- 41. Ibid., 38.
- 42. Tobias ("Ethical Address") demonstrates that, through the process of exploring the interface, the user's reading path resembles Julie Mehretu's abstract painting.
- 43. Mehretu and Entropy8Zuper! Minneapolis and St. Paul, Gada Beshir.
- 44. Ibid.
- 45. Ibid.
- 46. Ibid.
- 47. Ibid.
- 48. Ibid.
- Timothy Brennan, At Home in the World: Cosmopolitanism Now, Convergences: Inventories of the Present, book 15 (Cambridge, MA: Harvard University Press, 1997).
- 50. Lisa Nakamura, *Cybertypes: Race, Ethnicity, and Identity on the Internet* (New York: Routledge, 2002), 14.
- 51. Rebecca Walkowitz, *Cosmopolitan Style: Modernism Beyond the Nation* (New York: Columbia University Press, 2006), 2.
- 52. Mehretu and Entropy8Zuper! Minneapolis and St. Paul, Farhiyo Ahmed.



- 53. Ibid., Abdulahi Hussein.
- 54. Ibid., Shamso Ahmed.
- 55. Ibid., Edao Dawano.
- Christopher M. Kelty, *Two Bits: The Cultural Significance of Free Software* (Durham, NC: Duke University Press, 2008), 3 (original emphasis).
- 57. Adam Banks, *Digital Griots: African American Rhetoric in a Multimedia Age*, Studies in Writing and Rhetoric (Carbondale: Southern Illinois University Press, 2011), 13.
- Rey Chow, The Age of the World Target: Self-Referentiality in War, Theory, and Comparative Work, Next Wave Provocations (Durham, NC: Duke University Press, 2006).
- N. Katherine Hayles, My Mother Was a Computer: Digital Subjects and Literary Texts (Chicago: University of Chicago Press, 2005), 38.



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