

Tactical Engagement through Gaming and Narrowcasting

Lev Manovich explains that interaction is an *obvious* function of the computer that should not be confused with precomputer audience interaction in the form of reading audiovisual information and interpreting meaning.¹ Digital media, then, functions within closed systems, not outside them. This chapter examines two types of interaction that are potentially not overdetermined by corporate and state surveillance of data gathering. Here, interaction functions as critical or tactical engagement. We analyze digital media that forwards the ideals of tactical media that Rita Raley has described that engage in strategic micropolitics rather than grand revolutions.² We examine digital media projects that include counter-gaming, machinima (3D animation shot in a game engine), video performances, and documentaries that appeal to affective and subjective forms of knowledge and reject assumptions that objectivity and evidence are the only valid forms. Identities are not fixed but performed, that is, contingent upon politics rather than place. We also probe narrowcasting, which reconfigures the push of broadcasting on commercial networks in the direction of P2P models, somewhat like the “spreadability” described by Henry Jenkins.³ Given restrictions on both print and online access to journal articles, Katherine Hayles argues that academic work largely has “a negligible audience and a nugatory communicative function.”⁴ The same might be said for animation, documentary, experimental, interactive, and narrative media that do not circulate within the system of exhibition networks in theaters, cable, VOD, and DVD controlled by transnational media corporations (TMCs). These forms of media do not benefit from generous state sponsorship as in Europe. Nor do they benefit from the well-established distribution and exhibition

networks of TMCs that themselves benefit from the economic and military power of particular states. They often escape notice by anyone not specifically searching for them. They can, however, convene micro-publics through tactical engagement. By expanding the range of perspectives, narrowcasting on platforms promoted through social media allows a larger multiplicity of ideas that sometimes go viral and thereby possibly change ways of thinking. We discuss these two modes of tactical engagement—gaming and narrowcasting—in tandem. Both offer ways to open debate on marginalized, discredited, ignored, and often controversial voices. They provoke. At times, they speculate; at other times, they foreground irresolution. They mobilize strategies of desire in different ways than commercial films and video games. Such modes of tactical engagement do not suggest an “outside” to a larger system but instead call attention to alternatives within the system.

The democratic promise of interaction is matched by one of participation. While the myths hold some truth, they largely mask ways digital networks have been used to contain and control the types of interactions and participations in which we engage. Ulises Mejias argues that digital networks function within a capitalist order, which “reproduces inequity through participation.” Digital networks become “a mechanism for disenfranchisement through involvement and for increasing voluntary social participation while simultaneously maintaining and deepening inequalities.” Thus, while the Internet broadens participation, it exacerbates disparity through various strategies, such as the commodification and privatization of social space and enhanced surveillance of dissenters.⁵ He contends that P2P networks, where “all nodes can simultaneously play the role of server and client as needed,” are really no more than “a decentralized network structure *superimposed* over a centralized network structure.” Participating in a digital commons is really partaking in an “alternative to the capitalist economy that cannot exist without the capitalist economy.”⁶ He notes exploitation is the very basis for P2P sharing because “the production for the electronic circuitry used for P2P is still dependent on the surplus labor of the Congolese miner or the Mexican *maquiladora* worker.” In Matteo Pasquinelli’s words, there is “no acknowledgment of the offline labour sustaining the online world” according to “a *class divide* that precedes the *digital divide*.”⁷ Comparably, the concept of spreadability has been criticized as a non-centralized model since it “seems to frame a procapitalist approach as neutral.”⁸ In addition to the anticommerical practices

of piracy, we consider practices that might be unabashedly commercial and unapologetically capitalist yet work around forms of power that include state censorship and intellectual property. As we discuss below, Saudi production companies such as UTurn narrowcast web serials on YouTube and promote them on Facebook and Twitter to suggest models for appropriating platforms controlled by TMCs. By thinking in terms of comparison, particularly multiple modernities rather than a universalizing modernity, the frameworks for evaluation shift to allow formerly marginalized, ignored, or silenced groups to use TMC-controlled platforms and technologies to different ends. Comparably, Nollywood film producers have also used YouTube as a free—both for themselves and for their audiences—distribution platform, which counters the so-called dominant distribution practices of Hollywood in much the same way direct-to-video via “wheelbarrows” had in past decades. In other words, Nollywood producers used the direct-to-video as a primary, rather than secondary, mode for distribution and, moreover, were not dependent upon presales like their direct-to-video Hollywood counterparts. Describing the practice as a “minor transnationalism,” Moradewun Adejunmobi points out that Nollywood producers have actually claimed power over TMCs like YouTube and Netflix. She points to the example of Jason Njoku’s NollywoodLove channel on YouTube, which licensed content but later left YouTube which refused to cluster advertisements that interrupted the streaming of features.⁹ Njoku’s Iroko Partners founded iROKOTv with both free and subscription catalog, earning it the epithet of the “Netflix of Africa.” Thinking through digital media foregrounds such structural inequalities as part of new media ecologies.

Researchers have considered how digital media usage changes the way we think and also how it may alter our neural circuitry. We are becoming digital. Hayles notes the digital interface to networked media becomes a form of embodiment “in which human agency and thought are enmeshed within larger networks that extend beyond the desktop computer into the environment.”¹⁰ Role-playing in multiplayer video games—or even single-player games against artificial intelligence (AI) opponents—becomes a way of interfacing with the world. Business, marketing, psychology, design, and, even education employ the neologism gamification. It refers to the “use of game mechanics in traditionally nongame activities.”¹¹ Rating narrowcast videos with “likes” on YouTube or Vimeo is one such instance of gamification. Clickbait journalism is another. Nonetheless, video

games are typically closed, rather than open, spaces for knowledge production. They are algorithmic machines that perform automated functions through specific, codified rule of action. They are *reactive* to user input, but they are seldom *interactive* where a player could actually modify the game. Artists have modded game technologies to produce work that rework game action rules and outcomes. In addition to “industry-sanctioned hacking,” Alexander Galloway cites an important lineage of counter-gaming: JODI, Anne-Marie Schleiner, Brody Cohen, retroYou, Cory Arcangel, and Tom Betts.¹² Mary Flanagan’s *[domestic]* (United States, 2003) transformed the violence of first-person shooter (FPS) games into an examination of the inner turmoil of psychological battles with childhood memories.¹³

Although electronic games have existed for nearly three quarters of a century, video games have only belatedly been considered by screen studies and have not been fully examined for ways that they change our thinking about film and television, not merely in terms of style and content, but in terms of engagement. Electronic games are conventionally traced to Edward U. Condon’s design of Westinghouse’s Nimatron for the 1940 World’s Fair in New York. It was a computer-operated version of the mathematical strategy game *Nim* where players try to remove objects from a pile without toppling it.¹⁴ In 1967, Ralph Baer debuted his “Brown Box,” which simulated the game of tennis. It would become the prototype for Maganvox’s *Odyssey* video game system the following year. Nolan Bushnell and Al Alcorn designed the table-tennis game *Pong*, which Atari released in an arcade version in 1972 and a home version in 1975. Steve Colley designed the first FPS game, *Maze Wars*, at the NASA Ames Research Center in 1974. FPS games would gain popularity with *Mortal Combat* and *Doom* in 1993. Taito’s 1978 release of *Space Invaders* was another landmark in arcade games. Namco’s released *Pac-Man* in 1980 and *Ms. Pac-Man* in 1982. Nintendo’s *Donkey Kong*, featuring the Jumpman character Mario, was released in 1981. A clone of Soviet mathematician Alexey Pajitnov’s puzzle game *Tetris* (Soviet Union, 1984) became part of the handheld Game Boy system in 1989. Blizzard Entertainment’s *Warcraft: Orcs and Humans* (United States, 1994) would later develop in the massively multilayer role-playing game (MMORPG) *World of Warcraft* (United States, 2008). Simulation games gained wide popularity, particularly with female players, with the release of *The Sims* in 2000.

Formerly in public arcades and private consoles, video games now appear on computers, tablets, and smartphones. Arcades remain

popular in places like Japan and South Korea because they serve as a public venue for the performance of gameplay skills. Media artists have written codes to design their own video games. Some can be accessed online, others are performed in gallery installations. Video games migrate from arcades and consoles to social-networking platforms like Facebook for social games like Zynga's *FarmVille* (United States, 2009) and to smartphones for mobile games like Rovio Entertainment's *Angry Birds* (Finland, 2009). PopCap's *Bejeweled* (United States, 2001) has sold well across multiple platforms. More than children's toys, video games represent one of the largest sectors of the entertainment industry. Thinking through the digital media of video games becomes a tactical means to address overlooked or controversial subjects, such as the violence of structural inequality and war under neoliberal economic and military conditions. Video games are also designed to sell a political point of view ("advergaming") to seduce us into embodying an alternative identity off-line.

Galloway defines a video game as a "cultural object, bound by history and materiality, consisting of electronic computational device and a game simulated in software." It fits broadly within the general concept of a game as "an activity defined by rules in which players try to reach some sort of goal."¹⁵ He provides a useful critical vocabulary for analyzing and interpreting video games, distinguishing between:

1. *diegetic machine acts* or pure process, by which ambient acts are automated during nonplay moments, such as interludes and segues between levels;
2. *non-diegetic operator acts* by which the user interrupts automated machine acts in ways that the machine cannot algorithmically predict, such as pausing the game or hacking and cheating through macros, and add-ons are permitted;
3. *diegetic operator acts* by which the user plays the game by changing the position and orientation in the game environment, enacting expressive acts, or activating actionable and non-actionable objects such as buttons, doors, words, inert scenery, or non-player characters; and
4. *non-diegetic machine acts* by which enabling and disabling acts, along with machinic embodiments that are integral to game but outside its story are automated, including power-ups, goals, high-score stats, data on heads-up display (HUDs) or health-packs, deaths, as well as and "external forces" such as software crashes and freezes.¹⁶

He cites anthropologist Clifford Geertz's argument that a game is an "acted document." In other words, "videogames render social realities

into playable form.”¹⁷ Despite their somewhat immersive qualities, players do not blur gameplay with reality. Nonetheless, video games have often taken warfare as a subject, inviting players to role-play as soldiers.

The first war game emerged during the Cold War with *Hutspiel* (United States, 1955). Red- and blue-colored characters represented Nato and Soviet forces. The theater-level game speculated on nuclear weapon deployment. The popular machinima *Red vs. Blue: The Blood Gulch Chronicles* (United States, 2003–2007; dir. Burnie Burns, Matt Hullum, and Geoff Ramsey) parodies the bifocal logic of détente. The absence of warfare leads to a quasi-philosophical questioning of war by the soldiers on both sides. Shot in the game engine of Bungie Software’s FPS console game *Halo* (United States, 2001), *Red vs. Blue* also critiques contemporary US politics, then described by media in terms of polarized “red states” (Republican Party) and “blue states” (Democratic Party) during the US invasion and occupation of Iraq. The satire of *Red vs. Blue* is contingent on understanding gameplay. Experimental filmmakers have also produced machinima, such as Peggy Ahwesh’s *She Puppet* (United States, 2001) shot partially in the FPS game *Tomb Raider* (United Kingdom, 1996), to question identity through the gendered and sexualized violence in commercial video games, and Jacqueline Goss’s *Stranger Comes to Town* (United States, 2007), shot partially in *WoW*, to question identity through the racialized implications of biometrics used in US immigration for noncitizens.¹⁸ In addition to machinima, digital media-makers mobilize the logic of gamification toward alternative politics, offering insights into forms of knowledge production that complicate and contradict the assumptions and expectations of mainstream media, whether European or East Asian, whether Kollywood, Nollywood, Bollywood, Hollywood, or Tollywood.

Tactical Counter-gaming

Video games also perform tactical counter-gaming. Raley argues that the “grand, sweeping revolutionary event” has “removed itself from the street and become nomadic,” engaging in “a micropolitics of disruption, intervention, and education.”¹⁹ Since the Internet allows for a multitude of perspectives, video games with questionable ethics—shooting live birds, “hunting” foxes—are not uncommon. People for the Ethical Treatment of Animals (PETA) developed its own video games, including *Cage Fight* (United States, 2013; www.peta.org/)

[interactive/type/games/](#)) where players “take control of real [Mixed Martial Arts] MMA fighters Jake Shields, Aaron Simpson, and Georgi Karakhanyan to see if you have the moves to foil a secret underground animal testing ring.” The MMA celebrities are vegans or vegetarians; the role-playing demanded by gameplay encourages player identification with animal rights. Other organizations have modified gameplay toward alternative politics to critique forms of imperialism other than anthropocentrism. Video games speculate by simulating alternatives. They mobilize desires to win, so as to disrupt our potential complicities.

In light of the widespread misunderstandings about the Middle East and North Africa (MENA) regions, particularly Israel/Palestine, counter-gaming becomes particularly illustrative of ways of thinking through digital media. Helga Tawil-Souri examines ways that Palestinian youth played Hezbollah’s FPS game *Special Force* (Lebanon, 2003) in an Internet café in Ramallah during the Second Intifada (2000–2005).²⁰ Available in Arabic, English, French, and Persian, the game was enthusiastically promoted by one of the young female players as “the first game where you can shoot Israelis” and “blow up *Markava* tanks.” In previous games, she explains: “I always had to shoot at my own people.”²¹ The young players were very aware that game engines typically enabled them only to “shoot Iran and Libya” along with “the soldiers who started the Intifada” but prevent players from shooting Israel, Europe, or the United States.²² US media pundit Thomas Friedman predictably criticized the game.²³ Tawal-Souri’s analysis of *Special Force*, however, reveals key differences between it and comparable video games designed by military organizations such as Electronic Arts’ *Delta Force* (United States, 1998), Dar al-Fikr’s *Taht-al-ramad/Under Ash* (Syria, 2001) and *Taht-al-hissar/Under Siege* (Syria, 2005), and the US Army’s *America’s Army* (United States, 2002). *Special Force* evidences how media can be appropriated and tactically reworked toward convening critical micropublics—rather than recruiting soldiers. The use of video games by these micropublics challenges standard assumptions that video games numb thinking with mindless entertainment or incite violence through desensitization. As Galloway notes, the context in which video games are played becomes relevant: US youth playing *American’s Army* typically lack experience with everyday militarization, checkpoints, and arrests without charge, which is precisely the environment in which Palestinian youth play *Special Force*.

Some psychological studies attempt to establish links between violent video games and actual violence. However, gameplay is not merely a rehearsal for life anymore than reading a violent book or screening a violent film. Video games offer a tactile, ludic imaginary storyworld for fantasy to roam. For this reason, Tawil-Souri's study offers insight to comprehend ways that video game players think *through* digital media. As one of her subjects explained, the thrill of killing an IDF soldier in the game represents an act that would never be attempted in real life. Like all Palestinians in East Jerusalem, West Bank, and Gaza, these youth were accustomed to everyday IDF violence. Moreover, gameplay re-creates Hezbollah missions during the 1980s against the IDF in southern Lebanon. The gameplay operates as a retrospective fantasy—winning a past war with Israel, which included the massacres of Sabra and Shantila refugee camps by the Lebanese Phalanges (*Al Kata'eb*) Party—rather than training for current warfare or inciting random acts of violence. Moreover, *Special Force* does not include civilians as targets or as victims of urban combat collateral damage.²⁴ Deployed by the IDF during Israel's 1982 invasion of Lebanon, *Markava* tanks were a familiar sight in the Jenin refugee camp. Palestinian boys threw rocks at the tanks, trying to defend their homes from being razed by bulldozers in 2002. Rocks replaced rifles in grassroots uprisings rather than the militarized strikes of the 1970s. *Special Force* was reportedly commissioned by Hezbollah to “help win the international media war with Israel.”²⁵ It coincided with earlier radio and television news broadcasts of Hebrew-language reports on the massacres by the IDF.²⁶

Another important aspect of *Special Force* is the relatively low quality of 3D graphics and gameplay, which are sometimes dismissed as poor or antiquated, incapable of sustaining an illusive immersion based on 3D photorealism. By contrast, newer editions of *America's Army* are so immersive and realist that they have been incorporated into virtual-training application in simulation centers.²⁷ The game focuses on detection of snipers and makers of improvised explosive devices (IEDs). David Machin and Usama Suleiman describe the extent to which US war games are designed for technical realism in terms of declassified terrain maps and the performance of aircraft.²⁸ The games do not simulate actual battles. Instead, they simulate clandestine operations and hypothetical missions to “kill enemies of freedom.” Due to its less convincing graphics and gameplay, *Special Force* operates at the level of fantasy with little hope for actual combat application. “I know this is not real,” says one young boy. “But

it feels good to pretend. It feels good to...imagine that we are not victims, but we are conquerors.”²⁹ For the young Palestinians playing the game, *Special Force* is a form of counterpropaganda to the low-grade anti-Palestinian propaganda globally disseminated through US and European news media and Hollywood films.³⁰ Through their comparative research on *Delta Force* and *Special Force*, Machin and Suleiman ask how the Lebanese video game counters “the view that globalization is a one-way process of Western cultural imperialism,” since “Hizbollah had to both adopt and subvert an American format of representation.”³¹ This act of subversive adoption resonates with counter-gaming.

User-contributed games are sometimes called editorial games because gameplay integrates political interpretations of real-world events. Sometimes, major corporations have censored them. In August 2014, Google Play removed *Raid Gaza!* (United States, 2008; www.newgrounds.com/portal/view/476393) from its store after criticism mounted asserting parallels between gameplay and civilian deaths in Gaza under the IDF’s Operation Protective Edge. Google Play later removed other games on the siege, including *Bomb Gaza*, *Gaza Assault: Code Red*, *Iron Dome*, *Rocket Pride*, and *Whack the Hamas* for violating its policies.³² The games vary in style and form. In *Whack the Hamas*, players “whack” a Hamas soldier as he pops out of tunnels, an animalizing trope borrowed from computerized version of the game *Whac-A-Mole* (United States, 1976). *Bomb Gaza* differentiates between black-colored Hamas militants with rifles and white-colored Palestinian civilians with children. *Gaza Defender* remains in the Google Play store since it does not name an enemy.

Initially released anonymously a few days after the IDF’s 2008 Operation Cast Lead on the user-contributed animation and game platform Newground, *Raid Gaza!* positions players to “defend” the small Israeli town on Sderot against Qassam rockets at the bequest of Israeli Prime Minister Ehud Olmert. Located 800 meters from Gaza, Sderot was a transit camp for Mizrahi (Arab) Jews during the 1950s. The game opens with a citation attributed to Olmert, who led the Likud Party’s so-called withdrawal from Gaza: “The parameters of a unilateral solution are to maximize the number of Jews, and to minimize the number of Palestinians.” Players click on gray squares near Sderot to spend their shekels to construct missile silos, airports, barracks, and headquarters marked by both Israeli and US flags. Afterward, players fire missiles and send armed troops and *Merkava* tanks, attempting to maximize the killing of Palestinians.

When funds are depleted, players phone the United States, which offers millions in “humanitarian [*sic*] aid” since “the Oslo thing didn’t work out.” Players receive bonus points for hitting hospitals, police stations, or UN schools.

Gaza is depicted as a congested urban space with unmarked borders. Unlike the game’s depiction of Israel, Palestinian military and civilian spaces are undifferentiated. No option exists to play the role of Palestine. Machine acts generate rocket launches from Gaza, crude weapons that fly in circular patterns before crashing into the vast, open fields buffering the tiny, gated Israeli city. An instrumental version of the easy-listening pop song “Close to You” (1970) by the Carpenters, a musical duo from the United States, loops during gameplay, suggesting irony. After five minutes, Olmert offers the player a ratio of Palestinians-to-Israelis killed, followed by statistics from previous conflicts. Players learn to minimize lower-cost ground attacks and maximize higher-cost missiles because the United States is always willing to finance. Some bloggers argue the game’s asymmetrical violence questions unprovoked Israeli siege on Palestinian civilians. Others are less convinced, contending gameplay elicits a critical response to actual events.³³ In some ways, dialogue and debate over the video game was more nuanced than the user comments posted on commercial media outlets, particularly in the United States and Canada.

Launched in 2003, the collective Molleindustria has been called “a reaction to what games had become, the corporate power houses that now fueled them and the ideologies that the medium constantly reinforced.”³⁴ Molleindustria games are produced in brightly colored Flash animation under a Creative Commons license. They often include a tactical element, evoking emotional responses on taboo topics such as pedophilia among Catholic priests and Islamophobia in Europe. Many games focus on the incursion of neoliberal economics into workers’ lives in the tradition of Italian radical philosophy from Antonio Gramsci to Antonio Negri. Gabriele Ferri describes Molleindustria’s games as effective in targeting “recognizable and well-known antagonists” and affecting players through “complex emotional engagement, frequently in the form of ‘bitter’ laugh, but also indignation.”³⁵ She explains the games mobilize a nonlinear rhetoric through “schematic simulations that are simplified in some aspects but realistic and accurate in describing causal relations and ideological processes,” so that ludic aspect of gameplay “serves a specific rhetoric and semiotic strategy.”³⁶ Pedercini places the user



Figure 4.1 *Oilgarchy*.

in the position of power “to feel complicit with the ‘bad guys.’” This tactic distinguishes Molleindustria’s games from *3rd World Farmer* (Denmark, 2006), in which players manage an African farm, or *Darfur Is Dying* (United States, 2009), in which players experience being a political refugee.³⁷ Critical reflection comes in the form of being coaxed by the *lure of winning* to engage directly in questionable behaviors typically distanced from us. The game elicits empathy rather than sympathy.

Oilgarchy (Italy, 2008; www.molleindustria.org/en/oilgarchy/), for example, opens with the provocation: “Now you can be the protagonist of the petroleum era: explore and drill around the world, corrupt politicians, stop alternative energies and increase the oil addiction. Be sure to have fun before the resources begin to deplete.” The game frames the green revolution as an obstacle—a “virus of environmentalism,” satirizing conservative news media rhetoric. Players parachute equipment and personnel to explore lands and waters for possible oil reserves, construct wells and rigs, and demolish local housing. Players explore Alaska, Iraq, Nigeria, Texas, and Venezuela and lobby in Washington DC, attempting to influence political policy by locating “well-oiled” (i.e., easily bribed) representatives and president rather than “eco” (i.e., ecologically inclined) ones. When wells are constructed in the jungles of Venezuela, birds and monkeys flee from trees before they are felled. Jaguars and indigenous populations evacuate before their lands are appropriated. Lakes fill with the bones of dead fish. Indiscriminate oil drilling brings ecological disaster.

As in peak-oil scenarios, the need for unexplored lands in Alaska and Iraq become more apparent. When players explore Iraq, they

receive a notice: “Iraq slipped away from the British grasp and is behaving like a problem child. The immense oil reserves are not available to foreign companies and the Iraqi crude tends to flow to anti-Western countries. Hopefully, sooner or later somebody will teach this nation a lesson about free markets.” For Alaska, the notice complains about wildlife refuges with “noisy birds and stinky caribous.” Strategies to win the game according to its rules open up questions about the ethics of the actions required to profit from oil and our complicity with a system based on fossil fuels.

Set in 2010, *Tuboflex* (Italy, 2003; www.molleindustria.org/en/tuboflex/) asks players to consider flexible-labor practices by role-playing as a worker who physically transforms to meet the needs of the “dynamic labour market” without becoming “blacklisted and expelled from the market.” Although many video games involve repetitive tasks, *Tuboflex* transmutes this feature into a means of gameplay that elicits empathy for low-paid and low-skilled labor. When working at the pickup window for a fast-food restaurant, the task of clicking the desired amount of preassembled bags of hamburgers, fries, and soda for each customer requires simply holding the cursor over the bag-icon and clicking the mouse. If players succeed, they earn one-hundredth of a point, suggesting the extremely low pay for these jobs. If they do well, it does not translate into a higher salary or a better position. Instead, they are sucked by a tube into another repetitive unskilled job based on the neoliberal logic of flexible labor. Failure, however, leads to ejection onto the street, where the avatar sits on the pavement with a dog and plays an accordion for handouts from passing cars filled with laughing children. The game updates the trope of the homeless man with a pet dog from films like Raj Kapoor’s *Awara/The Tramp* (India, 1951) and Vittorio de Sica’s *Umberto D* (Italy, 1952) to visualize how modern progress continues to leave many behind. Constructed in five days as part of an experimental gameplay project, *Kosmosis* (Italy, 2009; www.molleindustria.org/kosmosis/kosmosis.html) presents an alternative-reality game as a socialist fantasy: a communist space shooter. The objective is to gather support: “Don’t try to dominate the swarm: become the swarm.” Molleindustria reroutes the acts of playing video games from competitive (following the rules to win) to contemplative (questioning the rules of winning) in the context of capitalism, which becomes an urgent question as the BRICS, MINT, and GCC states ascend to global capitalism.³⁸

Edo Stern's *Waco Resurrection* (United States, 2004) asked participants to place a "specially designed voice-activated, surround-sound enabled, hard plastic 3D skin"—over their heads to play the role of a "resurrected" David Koresh. The participants relive the siege of a compound of the Christian-reformist group Branch Davidians (aka The Branch) near Waco, Texas, led by Koresh, who was accused of polygamy, statutory rape, child abuse, and stockpiling weapons. From 28 February to 19 April, 1993, US federal and Texas state officials sieged the compound with gunfire, teargas, and fire. About 76 members of The Branch died. The video game portion functions much like an FPS. Inside the "Koresh skin," however, Stern describes the experience as one of hearing sounds including "government psy-ops, internal voices and the clamor of battle, and empowered to voice messianic texts from Koresh's exegesis of the book of revelation." Players fight state authorities with "a variety of weapons from the Mount Carmel cache" and attempt to "influence the behavior of both followers and opponents by 'radiating' charisma."³⁹ For Stern, the siege of the Waco compound emblemized the shifting role of violent Christian fundamentalism in the United States, including Timothy McVeigh's 19 April 1995, bombing of the federal courthouse building in Oklahoma City, which killed about 168 people and injured a hundred more. The experience of *Waco Resurrection* operates in the folds between video game and documentary. Stern explains he intended to spur the experience of "a 'subjective' documentary rather than an accurate historical reenactment through game" by prompting players to think about the implications of identification *through* the acts of gameplay.⁴⁰ Stern compares the players' experience of identifying with Koresh as deliberately disconcerting—akin, he explains, to the experience of playing the role of Adolf Hitler in a video game rather than screening a documentary on Hitler. This dissonance elicits critical response.

Paolo Cirio's *The Big Plot* (Italy, 2008–2009; www.thebigplot.net/) engages the complexities of digital identities generated on social-networking and social-media platforms such as Facebook, Google, LiveJournal, MySpace, and Twitter, as well as web-based references that publish user-generated content (UGC), such as Wikipedia. The project is a "romantic spy story played into the infosphere"—an online game about piecing together identity in the Web 2.0 realm of networked and fragmented information. The game asks players to imagine being assigned to an investigation to reconstitute one's own identity from the data fragments uploaded to social-networking

platforms in order to clone and counterfeit it. In *The Big Plot*, identity operates as an exercise in what Cirio calls “recombinant fiction” that migrates between alternative reality games, transmedia storytelling, and viral marketing. Participants interact with four characters with real-life presences in blogs, profiles, and tweets. Unlike most video games, users can create content that becomes part of the spy narrative in *The Big Plot*. They contribute to a story that involves a Russian oligarch, a Canadian journalist, an English psychoanalyst, and a Russian man who initiates the “Eurasian Revolution” aspiring to create a new society across Russia, Europe, and MENA regions. Players enter into the game’s parallel universe of digital identities to explore love, violence, and betrayal. The project reverse-engineers storytelling with social-media reality and performance collapsing into each other.

Cirio’s *P2P Gift Credit Card* (Italy, 2010; www.p2pgiftcredit.com/) offers an innovative means of wealth sharing through counterfeit money. The project presumes P2P economies provide alternatives to the limited choices of financial globalization. It appropriates the concept of virtual monies loaned by banks under the Fractional Reserve Banking system, which allows them to loan more money than they hold on deposit. People are free to distribute this wealth according to social algorithms through a gift economy. Users can activate it for their own “visionary and illicit type of VISA credit card,” and begin receiving GBP 100 for each referral. The project anticipates Cirio’s collaborative project with Alessandro Ludovico, *Face to Facebook*, discussed in chapter 3. By luring us with seemingly recognizable acts in gameplay, these counter-games ask us to reconsider our internalization of rules that reproduce the logic of war and violence through capitalism, which takes form in chronic malnutrition, ecological crises, and working poverty.

Narrowcasting Dissent

One of the most important media events of 2011 was the coverage of the uprisings that came to be called the Arab Spring. Inspired by the self-immolation of Mohamed Bouazizi on 17 December 2010, Tunisia’s Jasmine Revolution culminated three weeks later in the deposition of President Zine El Abidine Ben Ali on 14 January 2011. Others were inspired by the Tunisian success in deposing a corrupt regime that extended structural inequalities from European colonialism where many of the leaders were close allies with the United States.

Uprisings and demonstrations ensued in Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Libya, Morocco, Saudi Arabia, Sudan, Syria, and Yemen.⁴¹ Other uprisings also emerged in India over political corruption in the Congress Party and in the United States over ineffectiveness of two-party monopoly of power. Earlier uprisings include the Green Revolution in Iran from June 2009 to February 2010, following the highly contested election of Mahmoud Ahmadinejad. Despite their different histories and contexts, these various uprisings share common features of protesting corrupt bureaucracies, inadequate education, ineffectual democratic processes, and state broadcasting systems.⁴² Protestors claimed political agency through performance and graffiti.⁴³ They bypassed state control of mobile-phone networks and the Internet by posting texts, images, and videos on social-media and narrowcasting platforms. The world belatedly noticed an Arab world, putting it under the microscope—or, alternatively, on the world stage.

Ali Kadhum's *Under the Microscope* (Iraq/Belgium, 2012) considers MENA as a region divided by geopolitical borders and cultural difference but united by blood, air, and light. *Under the Microscope* responds to the Arab Spring of pro-democracy protests throughout the Maghreb, Mashriq, Levant, and Arabian Peninsula. Defined by light, shimmering silhouettes of the MENA region contour movements across geopolitical borders to the chants of demonstrators in the streets and squares that disperse into the air as naturally as pollen. Later distributed by a bee, the region becomes united in the color of blood. From a period when all interactions seemed under the microscope of domestic surveillance to one in which all interactions seem under the microscope of international scrutiny, the video captures blaring sirens. Rigid shapes remain, filled with the blood that makes the air and light around them seem different.

The graphic representation of the MENA region simultaneously animates and deterritorializes. The territorial block looks precarious: it dangles in space, as though the rest of the world had suddenly dropped away. Geopolitical borders between the states are invisible, signifying both continuity and unity. It also looks immaterial, with the black surface of the landmass matching the background. Light varies from bright white to soft golden tones. The region hangs decontextualized; it is rendered as though under a microscope that examines detail such that the broader social context fades from view. *Under the Microscope* evokes a fragile sense of hope for the younger generation. Some uprisings fueled revolutions; others were extinguished. As elsewhere, dissent is more often narrowcast than broadcast.

As academics and critics have argued, the Arab Spring may have surprised the former colonial powers of the North Atlantic, evidenced in US Secretary of State Hillary Clinton's support for Mubarak despite police violence against protestors, but the uprisings were anticipated and rehearsed in skateboarding, graffiti, hip-hop youth culture; theater; and even popular Egyptian film and television. Popular culture allowed people to "place themselves in the center of their own narratives in profound ways," according to Tarik Ahmed Elswwei. He suggests a less narrow definition of political to recognize "new forms of political practice" that differ from the ideologically driven Arab nationalisms of past generations. These new practices use foreign technologies like Facebook and Twitter to "make ordinary people the stars of their own mediated narratives."⁴⁴ His work extends arguments from an era of broadcasting. In the context of prerevolutionary Egypt, Lila Abu-Lughod argued soap operas shaped social and political debates on modernity, particularly concerning women's roles.⁴⁵ In the case of Saudi Arabia, protest culture emerges in even less apparent forms. Saudi comedy has been described as a manifestation of the Arab Spring.⁴⁶

Web series suggest a counterpoint to the popularity of Ramadan series or Turkish soap operas dubbed into Arabic throughout the Arabic-speaking markets.⁴⁷ Elswwei calls them "experiments with self-making," after Arjun Appadurai.⁴⁸ "Young Saudis, like others of their generation around the world, communicate in videos," explains Canadian writer and producer Jared Lorenz for the Saudi-based Arab Internet Channel. "They have grown up with cameras and software that lets them make movies and understand the basic grammar of film."⁴⁹ Short videos are the "self-expression of the generation," he adds. For Elswwei, new media platforms become "production and consumption" that "bypass both the authoritarian state and trite binaries between local and global."⁵⁰ Although state television during the 1950s could mobilize Nasser's construct of "the Arab common people" (*al sha'ab al 'arab*), contemporary Arab soap operas are often "produced in Cairo or Damascus with Saudi or Gulf Arab money, Egyptian writers, Syrian actors, and Lebanese cinematographers, and can ultimately be delivered through satellite, terrestrial television, DVDs, and the Internet." He points out "Turkish, Mexican, or Argentinean soap operas are dubbed into widely understood Arabic dialects and then distributed on pay satellite channels" and are more concerned with profit than censorship.⁵¹ With growing diasporic populations, Egyptian, Syrian, Lebanese, Palestinian, and other Arab

identities are diffused. The male-oriented humor of many Saudi and Egyptian web series, for example, becomes a means to rethink what it means to be part of a Saudi or Egyptian generation that might be educated in a post-9/11 United States and aware of new forms of institutional and informal racism retaining mid-1970s' "Oil Crisis" stereotypes of Saudi Arabians as "oil-rich sheikhs."⁵²

Saudi television broadcasts comedy series, such as the Ramadan series *Tash Ma Tash/No Big Deal* (Saudi Arabia, 1993–2011), which included the controversial episode titled "Terrorist Academy," a parody of *Star Academy* franchise. "What is remarkable about *Tash Ma Tash*," writes Eric Jensen, "is that it is being broadcast with the consent of the government through national media."⁵³ It was not until Haifaa Al Mansour's feature film *Wadjda* (Germany/Saudi Arabia, 2012), about a young girl wanting her own bike, that international film festivals took notice of Saudi films. Viola Shafik identifies the subject of socially oppressed women as one of international film festival milieu's "hot topics," along with terrorism, poverty, religion, or other so-called tensions between tradition and modernity that foreigners often associate with MENA, particularly Saudi Arabia and Iran. This programming sensibility excludes less sensational and exoticizing subjects, which are often not legible—or even interesting—to foreigners because they contradict dominant stereotypes.⁵⁴ *Wadjda* has been criticized for its displacement of state policies onto social norms.⁵⁵ Nonetheless, the film does negotiate the complexities of indirect dissent. Although public cinema has been banned in Saudi Arabia since the 1980s, the country's 12 million Internet users view about 90 million videos per day on YouTube. Narrowcast series cross geopolitical borders and places where censorship prohibits broadcast.

Popular genres include web-soaps, hidden-camera and reality shows, animations, and satirical comedies. Through advertising embedded in YouTube, the series are profitable. Mohammed Makki's original miniseries *Takki/Adapting* (Saudi Arabia, 2012–present), whose title is slang for "sit down," was allegedly designed for youth attention spans. In Saudi Arabia, about two-thirds of the population is below the age of 30. The series consists of a 15-minute first episode followed by 11 ten-minute episodes per season. The series focused on Malik (Moayad Al-Thagafi), who aspires to be a filmmaker despite the absence of public cinemas. For Makki, the YouTube platform allows for audience engagement through comments and discussions across differences within Saudi society. The series becomes a site for debate, serving an important social function in Saudi Arabia. It also

gives global visibility to Saudi youth culture, including the practice of drifting and joy riding, appropriated by foreign media.⁵⁶

Describing itself as “an online entertainment channel that provides edgy, local, interactive, yet professional content for Internet users” through YouTube, Facebook, and Twitter, UTurn Productions promotes the series. *Takki* is somewhat unusual because it is a drama. Most of UTurn’s series are comedic satires, such as *EyshElly/What Is* (Saudi Arabia, 2010–present) with Bader Saleh and *3al6ayer* aka *Al-Tayer/On the Fly* or *As It Goes* (Saudi Arabia, 2010–present) with Omar Hussein. *EyshElly*’s channel is the most popular on YouTube for Arabic speakers, with nearly two million subscribers in 2013. *3al6ayer* discusses controversial topics such as employer preference for foreigners over Saudis, poor manners during prayer, corruption, censorship, and the ban on female drivers. It does not cross the lines into the taboo topics of religion and the monarchy. The series is also accessible through a Blackberry app. Actors use real names, suggesting a new arena for almost-public debate, ones that are considered safer than on-site venues for stand-up comedy.

The creative potential of Talfaz11.tv, the first and largest Arabic-language online video network in the MENA region, has been recognized. The 2013 Venice Biennale showcased samples from its videos. Operating under Creative Culture Catalyst (3C) in Riyadh, Talfaz11.tv celebrates “human imagination, aspiration, and creativity.” The videos constitute a part of the dynamic experimental art scene in Saudi Arabia, which is perhaps most widely recognized for art galleries in Jeddah. Proposing a “reverse cultural invasion” of the United States, Saudi comedy narrowcasts through YouTube in the standup comedy and skits of *La Yekthar/Zip It* (Saudi Arabia, 2010–present), starring Fahad Albutairi. The series flips the present media flows from Hollywood to the United States: a large number of US television series and films appear on Saudi cable, such as *Desperate Housewives* (United States, 2004–2012), which US newspapers interpret as a means to counter fundamentalist messages.⁵⁷ Al-Butairi’s spin on the “International Burn a Koran Day” by Terry Jones, a Christian pastor in northern Florida, was to interpret Jones’s deliberate racism as a mistake. The burning of 2,998 copies of the Qur’an—allegedly one for each 9/11 victim—became an accidental burning of Arabic-language “bibles and children’s books.” Albutairi asked viewers to send biology textbooks to the Christian man. The skit parodies the news-media practice of translating from Arabic into English by inserting entirely different content. It also shows Saudi knowledge



Figure 4.2 “No Woman, No Drive.”

of attacks by Christian religious fundamentalist groups on US public schools for teaching evolutionary science.

Other episodes of *La Yekthar* comment on the foreign appropriation of Saudi culture, such as M.I.A.’s “Bad Girls” video, widely read by non-Arab media as a commentary on Saudi Arabia’s ban on female drivers. *La Yekthar*’s Hisham Fageeh’s music-video spoof “No Woman, No Drive” (Saudi Arabia, 2013) reworks the 1974 Bob Marley reggae song “No Woman, No Cry” to criticize the ban in a comedic mode. Dressed in Saudi-style white *thawb*, red-checked *shemagh*, and black *egal*, Fageeh and his friends, Albutairi and Alaa Wardi, perform as a band, some characters wearing hipster glasses that update 1980s eyewear styles. The video received nine million views within days of being posted. *La Yekthar* also satirizes Saudi stereotypes of the United States: it represents thinking through narrowcast digital media to negotiate a new transnational moment beyond colonial imaginaries. As Layan Jawdat has argued in *Jadaliyya*, the politically and socially conscious web series “work in a carefully calibrated way—raising questions and awareness without explicit criticism.”⁵⁸ *La Yekthar* opens with Albutairi raising social issues, often by reciting exact lines from official television media but punctuating them with irony in the form of confused facial expression. In this way, Jawdat finds that the series “succeed in making the viewer question what he/she may have heard in the news, or laugh at what he/she may have already found

ridiculous, but they do not verbalize any commentary on the subject.” *La Yekthar*’s producers also launched the popular *Khambalah* (Saudi Arabia, 2012–present) series. *La Yekthar*’s spin-off *Temsa7ly* (Saudi Arabia, 2013–present) stars the puppet Temsah (alligator), who interviews people in the Gulf region, thus recognizing the Gulf as a global destination for tourism and celebrity.

Inspired by the animated web series *Happy Tree Friends* (United States, 1999–2006), Thamer al-Sikhan launched the Arab Internet Channel with two series, *Why Me?* (Saudi Arabia, c. 2007) and *Big Trouble* (Saudi Arabia, c. 2007), which starred a Syrian male actor, Mohammad Al-Qass, as the matron Shawqat. More recent narrow-cast series include the hidden-camera *Slamaaat Show* (Saudi Arabia, 2014). Like *Tash Ma Tash*, which nearly ignited public controversy each season, Jensen finds that comedy series on YouTube function as “platforms for satire and criticism militating against censorship by maintaining their liminal status as entertainment programmes that humorously and ironically address current affairs issues.”⁵⁹ He argues, “such programmes present a critical perspective on Saudi social structure that subaltern Saudis are currently unable to express themselves for fear of government or religious reprisal.”⁶⁰ Another series produced by UTurn, Ahmed Al-Ghazi’s *Housa Silicon Valley/ Here Is Silicon Valley* (Saudi Arabia, 2013), takes a more interventionist approach by teaching young viewers how they can become technology innovators and entrepreneurs in the Gulf’s knowledge-based economy.

Comparable series appear elsewhere in the MENA region. Two Iranian Americans, Kambiz Hosseini and Saman Arbab, hosted *Parazit* (United States, 2009–2012), broadcasting in Farsi from the Persian New Network office of the US “public diplomacy” (propaganda) Voice of America (VOA), which funded its production. *Parazit*’s VOA connection is ironic. The show’s title translates to “static,” a reference to the Iranian state’s efforts to jam signals from foreign governments. The series’ Facebook and YouTube pages transformed into sites for Iranian political discussion, particularly about then-president Ahmadinejad, who dramatically restricted dissent after 2009. “Satire here is considered truly subversive, especially because the text is beamed into Iran from outside,” writes Mehdi Semati, yet the series is also “a tool for geopolitical influence in the context of the adversarial relationship between the Islamic Republic and the United States,” along with other soft warfare tactics on YouTube, such as US president Barack Obama’s best wishes to the Iranian people on

Persian New Year.⁶¹ Like several of the Saudi series, *Parazit* was inspired by the US cable network Comedy Central's *The Daily Show* (United States, 1996–present), hosted by Jon Stewart since 1999, and its spinoff *The Colbert Report* (United States, 2005–2014), hosted by Stephen Colbert. During the second US invasion of Iraq in 2003, the two series were associated with political critiques of broadcast- and cable-news networks, which were highly censored, rather than with fake news. In other words, audiences turned to them for news rather than to CNN or NBC. Its “categorization as comedy grant[s] it immunity from accusations that it violates journalistic standards,” writes Geoffrey Baym. He adds: “never claiming to be news, it can hardly be charged with being illegitimate journalism.”⁶² The series have become news sources for audiences between the ages of 18 and 29, a similar demographic to Saudi and Egyptian comedy series reception on YouTube. In all cases, comedy grants some immunity.

Based in Cairo, Qsoft Ltd. produced *Al Bernameg/The Program* (Egypt, 2012–2014), developed from a series *B+ Show* (Egypt, 2011). Host Bassem Youssef and colleagues put the show together after the revolution that catapulted Youssef to *Time* magazine's “100 Most Influential People” list of 2013.⁶³ “Bassem Youssef does my job in Egypt,” explains Stewart in *Time*; “The only real difference between him and me is that he performs his satire in a country still testing the limits of its hard-earned freedom, where those who speak out against the powerful still have much to fear.”⁶⁴ Media critics assert *The Daily Show* might “revive a journalism of critical inquiry and advance a model of deliberative democracy” in the United States beyond sound bites and talking points.⁶⁵ The series underscores structural similarities between so-called democratic regimes, modeled after the United States, and authoritarian regimes in Egypt, Iran, and Saudi Arabia—all of whom have long histories of support by the United States.⁶⁶

The transnational dimension of narrowcasting is also evident in antiwar videos. The Cultures of Resistance (CoR) Network responded to the second US invasion and occupation of Iraq in 2003 with the *Make Films, Not War* project.⁶⁷ The network takes its name from founder Iara Lee's feature documentary *Cultures of Resistance* (United States, 2010), which shows how art, dance, and music can be mobilized as weapons for peace and justice.⁶⁸ CoR engages in projects around film, music, food, education, and urgent action. Rejecting then-US president George W. Bush's characterization of Iran as part of an “axis of evil,” CoR responded with *Postcards from Iran: Towards an Axis of Understanding*, a series of short videos.⁶⁹ Kurdish Iranian

filmmaker Bahman Ghobadi helped student filmmakers produce a series of Farsi-language videos subtitled in English for narrowcasting on YouTube. As postcards, the videos deploy striking graphic composition that can be screened on a mobile device or projected onto a wall. The video postcards are designed to be *shared*.

The nine-minute *On That Day* (Iran, 2008; dir. Babak Amini; www.youtube.com/watch?v=rOA2Of4kYs8), for example, begins with a female voice in voiceover. Golnar Fallahian recounts the story of Saddam Hussein's destruction of her village and killing of her parents 12 years earlier during the Iran-Iraq War (1980–1988), resulting in her emigrating from Iran. The video's narrative concerns her journey back to Iraq a few months after the United States captured Hussein and asked anyone with a complaint against him to come forward. She walks along the snow-covered land with a brown suitcase in her hand. Moving from screen right, she moves under a black *chador* against the blue sky and brown ground, both dusted with the white of snow and clouds. A solitary tree, barren of leaves, occupies the left side of the screen. At the stark border checkpoint, her *chador* billows around her, as a young male border guard, Latif (Behman Amini), examines her crossing permit. The barbed wire of the militarized border cuts through the frame as he explains that Iraq is no longer safe: she must wait three hours for the Iraqi side of the border to open. As they discuss her story, giant coils of barbed wire tower above her, suggesting the precarious position of both civilians and soldiers in the geopolitics of the region. Her hope for fulfilling her fate, however, is dashed when the guard declares Hussein has been executed. The video subtly graphs how US warfare thwarts Iraqi agency and emotional closure. In *The Piggy Bank that I Found* (Iran, 2008; dir. Arsham Naghshbandi; www.youtube.com/watch?v=dKpSG1mm5FE), a young boy discovers a landmine in a spring. Mistaking it for a piggy bank full of money, he invites two friends to help him open it. Later, an explosion is heard. The six-minute video conveys the dangerous collision of childhood curiosity and imagination with the realities of post-conflict warfare. Narrowcasting, then, provides a respite from broadcast and cable media, offering alternative perspectives, though distinctions between types of media are never clearly defined.

Interacting Connections

In uneven and unequal ways, interactive documentary often visualizes connections potentially affecting everyone, such as climate change and

pandemics. Part of *The Refugee Project*, Hyperakt's *An Interactive Map of Every Refugee in the World* (United States, 2014; www.therefugeeproject.org/), for example, visualizes noneconomic refugee migrations since 1975 based on UN data. Designed and conceived by Deroy Peraza, Eric Fensterheim, Josh Smith, Ambika Roos, and Ekene Ijeoma, the map organizes data on 35 million displaced people across 126 states over the past four decades. The size of the red circle over a grey map allows the user to see the number of refugees from particular sites. By placing the cursor on one, a word balloon opens with information on the number of refugees for that particular year. Red lines trace the destinations of the asylum seekers. Users access information on the percentage of a particular state's population that became refugees during a particular year, places that offer asylum, and global conditions that produce refugees. The project unsettles assumptions—and even shocks. Academic scholarship also thinks through digital media to interact connections. Published on *Vectors*, Minoo Moallem's *Nation on the Move* (United States, 2008; <http://vectors.usc.edu/issues/5/nationonthemove/index.html>), for example, is a digital essay with an interface designed by Erik Loyer that draws upon digital ways of thinking about Persian carpets as art, craft, and commodity in a “mingling of the old, the new, and the emergent.” Users participate in the project by weaving—connecting what seems unconnected—the threads of Moallem's essay in order to understand ways that “linkages between the current global feminization of labor and questions of political oppression and the politics of value,” as she explains in her artist's statement.

Other projects mobilize paranoia and conspiracy theories, jolting users from complacency, encouraging speculation about other circumstances, even rewiring their thoughts. Jason Nelson's *Pandemic Rooms* (United States/Australia, 2006; www.secrettechnology.com/pandemicrooms/) explores the social paranoia over killer flues, diseases, and other disasters. It plays on obsessions with global viral transmissions by redrawing the spread of contaminants. A cough travels the world. Pandemics emerge. This interactive web-based project confounds irrational fears and necessary precautions. Underneath a black box with gray outlines, four syndromes can be triggered: the afflicted, the emotion, the pathogen, the cleansing. In *Pathogens*, pictures of an empty kitchen, office, breezeway, warehouse, and church appear. As the cursor glides, glitches and lines draw contamination onto the image. Paolo Cirio's *Drowning NYC* (Italy, 2010; www.drowning-nyc.net/) investigates audience responses to rising sea levels

due to climate change on urban populations. The project questions mass media through theatrical, pedagogic, and cinematic forms. The project draws upon participatory practices of recombinant fiction.

Lauren Rosenthal's *Political/Hydrological: A Watershed Remapping of the Contiguous United States* (United States, 2006; http://laurenrosenthalstudio.com/section/122327_River_Atlas.html) presents an eco-centric vision of the United States by swapping the land-centered cartography inherited from generations, who abused freshwater systems, with river-centered cartographies. "Rivers move from margin to center," Rosenthal explains. "Water is given priority, not as a resource to be exploited, but as the defining element of the social/biological system." This perspective on freshwater systems offers the possibility for "new American" identities. Renderings these freshwater system flows redraws the contours of water. It reimagines the iconic images of familiar geopolitical spaces of individual US states such as Florida and Michigan. Large water systems refuse state borders, whereas small ones reveal what look like deflated versions of states like Massachusetts, New Mexico, and New York—or divided versions of states like Connecticut or Washington.

Productive paranoia can also take the shape of jamming commercial mapping apps. Understanding the power of Google Maps to frame our thinking about possible ways to connect, JODI's *GeoGoo* (Netherlands/Belgium, 2008; <http://geogoo.net>) is a web-based performance, which disrupts the useful data-visualization in web apps. As JODI, Joan Heemskerke and Dirk Paesmans captured attention in the pre-Web 2.0 era of net.art with www.wwwwwwwww.jodi.org (Netherlands/Belgium, 1995), which thwarted expectations by transforming what functioned like a typical 1990s-era website into a labyrinth of purposeful glitches. *GeoGoo* extends the same inquiry into user expectations based on limited understanding of ways that computers produced knowledge. The web iteration of the project solicits us to confront the possibility of our digital illiteracy, despite daily use of useful web apps. With more advanced graphics and automation of functions, users open *GeoGoo* to find a webpage already in motion. Placemark icons, such as airplanes or cups of coffee, which are easily understood when superimposed onto basemaps, no longer work. Instead, they dance atop the ocean like digital flotsam in a typhoon. Navigation sometimes functions according to expectations, such as the scale tool; at other times, it is incomprehensible to nonspecialists, with drop-down menus titled "geo," "goo," and "." that offer choices such as "90-90-40y," "xypl2r," "mpowcos," and "ge/rot." Selection

activates a page refresh, followed by a parade of icons generating geometric designs resembling mandalas or DNA models. The screen continually refreshes itself without user input. A thick red polyline scrawls a jagged pattern across the basemap, mocking the conventional use of line to visualize direction between locations. The line often extends over the map's edge. The project simulates a so-called first-world problem of infinite magnitude. It unsettles centuries of misconceptions about space and prejudices about people drawn from them.

JODI's digital performances are aesthetically innovative and politically engaged. Audiovisual and temporal intervals (glitches, unexpected detours) disrupt the invisible, seamless interface of networked communication. JODI questions our assumptions and expectations of everyday practices like clicking on hyperlinks to access information immediately and entering street addresses to services visualizing their spatial and temporal relations. Although *GeoGoo* does not critique Google's use of a modified Mercator projection, it does ask us to reflect upon ways that the seemingly open architecture of customizable web apps is closed. Users can pin data, but they cannot alter or correct the basemap distortions, such as the much-noted flattening of the difference in the size of Africa and Greenland on the Mercator projection. JODI invites us to recognize that without a basic digital literacy to understand the underlying code that makes web apps function, we cannot control the means of knowledge production from the available data. Google's *Map Maker* app hardly makes us mapmakers. We simply tag maps someone else has made. We are out of control, quite literally, in a so-called information age. JODI's work evokes insights into digital divides we might not care to recognize, such as our illiteracy despite dependency on web and smartphone apps. These strategies share affinities with Audre Lorde's insights into the futility of opposing racism and homophobia with tools made available by racists and homophobes: "For the master's tools will never dismantle the master's house."⁷⁰ Working with the tools made available by corporations like Google does not really liberate us from their control.

Performing Existence

Invoked by indigenous groups from Chiapas to Gaza, the expression "existence is resistance" underscores that acts of resistance need to be continuously performed. More significantly, mere existence is a powerful expression of resistance. Digital media offers opportunities

for artists to work across the conventionally defined media of video and performance in modes that combine documentary and experimental practice to think through digital media. If identities must be continuously performed, as philosopher Judith Butler argues, then the existence of a history of other identities also needs to be performed to overcome misrepresentation or underrepresentation.⁷¹ Video performances become modes of constructing and contesting identities.

Digital media reinvestigates documentary as networked and performative. Nina Simões's "docu-fragmentary" *Rehearsing Reality* (Brazil, 2007; www.rehearsingreality.org/film/engine.html) examines the landless movement or MST (*Movimento dos trabalhadores rurais sem terra*) deployment of Augusto Boal's Theatre of the Oppressed as a mode of rupture and interaction to prompt social transformation and cultural formation. Users interact with the documentary project by activating short sequences of varying duration and content. Rather than linear, casual, and chronological development, the docu-fragmentary functions according to the logics of disintegration: it encourages users to forge their own networks of connection. The project questions documentary assumptions about the indexicality of visual evidence because this privileging of conventions of realism and rationalism sometimes obscures other forms of knowledge, such as performance. Activist media, by contrast, emphasizes enacting policy change. It dislodges ideologies of impartiality and balance, naturalized by commercial broadcast media, and channels anger and outrage over injustice into productive outlets.

Like Boal's spect-actors, users click on images for segments that document performances and interviews from opposing points of view, opening to multiplicities of meaning toward education and activism. Both the content and the structure of the project require self-reflection about performance. The MST is Latin America's largest social movement with an estimated 1.5 million members. In Brazil, almost half of the arable land is controlled by about 1.6 percent of the population—and two-thirds of it by 3 percent of the population. The MST enacts land reform by peacefully occupying lands to establish cooperative farms, houses, schools, and health clinics. Members camp until the government recognizes them, invoking a stipulation in the Constitution that maintains land that remains unproductive should be used for what is called "a larger social function." The MST seeks to "develop a sustainable socio-economic model that offers a concrete alternative to today's globalization that puts profits before people and humanity."⁷² Boal's training in Theatre of the Oppressed

methods is geared toward training members to disseminate what they have learned at the settlement camps. Intervention occurs at the micropolitical level. It spreads through layers and across nodes, doubling the structure of the Internet.

If Baghdad was once a center of arts, sciences, and education, it had been reduced to a memory of unending war, particularly after the second US invasion in 2003. Deena Al-Adeeb and Sama Alshaibi's collaborative *Baghdadi Mem/Wars* (United States/Iraq, 2010) explores how war and displacement perform memory on the body.⁷³ Each of the project's three suites explores a different aspect of corporally, intellectually, and emotionally embodied responses. In "Still/Chaos," the artists perform the roles of two women dressed entirely in black in a tiny white room with padded walls. The women thrash against the walls and resign themselves to imprisonment in what feels like an insane asylum. They perform a sensorium of living with memories of war. "Efface/Remain" shows a woman write a line from Nezak Al Malaika's poem "The Stranger," repeatedly, as though trying to fight against social amnesia that erases cultural memory and against self-censorship. In "Absence/Presence," the two artists stand in a vast open field, where their bodies reveal feelings of suffocation and entrapment, even more so than in the small white rooms of "Still/Chaos." Desaturated video renders the open field snowy white, a site where identities are engulfed and lost in solitude. The three-part performance graphs a collaborative exploration of the memories of two Iraqi exiles.

Similarly, Markus Keim and Beate Hecher's videos explore performance and documentation to consider how revolutions and civil wars affect everyday life, whether tourism to Egypt or European and Syrian artistic collaboration. Their power emanates from dislocation and absence. In a moment of Vine and GIFs, the videos ask us to look and listen for longer than six seconds. A reconstruction of a collaboration that never happened, *In Abwesenheit/In Absentia* (Italy/Austria, 2012) evokes Syria and its civil war through the Egyptian desert a thousand kilometers away from Damascus where the collaboration was planned to take place. Two figures dressed in black move against the light-colored sand. Later, they drop and blend into a pattern of black plastic sheets that mark the ground like graves, flashed by dates and locations of civilian massacres around the world. In *All Inclusive* (Italy/Austria, 2012), the camera pans to reveal a lone snorkeler, standing in an unfinished construction. The figure evokes images of Jean Painlevé and Chris Marker. As the camera pans, clones

of the lone snorkeler are revealed. Police sirens and explosions create an eerie soundscape. Later, a German-language male hotelier assures a German-language female voice that the political situation in Egypt has not disturbed his guests' ability to "indulge in a rich buffet" since "ordinary tourist life continues normally."

Gazing at one of the new global capitals of tourism, Anne Spalter's *Sky of Dubai* (United States, 2012; <http://vimeo.com/55865257>) reworks footage of the city through kaleidoscope and color filters. Here, geometric patterns of traditional Islamic art infuse daily life with the colors of the Arabian Gulf and Ramadan. Rendered from original video shot from a helicopter, *Sky of Dubai* visualizes identifiable modern architectural and engineering landmarks of Dubai like the Marina and the Jumeirah Palm blending seamlessly via a blue kaleidoscope filter into abstract geometric patterns. Their fractal organization merges patterns found in traditional Islamic art with aerial views of the city itself. Eurocentric critics might dismiss Dubai as "the real capital of Second Life," but the artificial land and manufactured water bodies resemble the natural geometries of Dubai, Sharjah, and Abu Dhabi shorelines. Islands look like fountains, and fountains look like islands.⁷⁴ Blue and turquoise evoke the crystal waters of the Arabian Gulf and the glass lanterns of Ramadan celebrations, turning natural and artificial environments into microtopias for a new century. "The Dubai phenomenon is part of an upheaval in the Arab region whereby the centre of power has shifted to the Gulf states (GCC)," writes Yasser Elsheshtawy, "and of course leading this 'revolution' is the city of Dubai," which uniquely adapted neoliberal economics.⁷⁵ Spalter's video shows the reemergence of Dubai after the 2009 crash when the Dubai model of speculative cities had come into question. It looks down from above in an aspirational mode, evoking Dubai's potential as what some have dubbed "the new Adalusia" in terms of religious and cultural openness despite structural inequalities inherited from European and US systems.⁷⁶

Shambhavi Kaul's *Scene 32* (India/United States, 2009; www.shambhavikaul.com/open/SCENE_32.html) reworks HD video and hand-processed 16mm film of barren salt fields of Gujarat into a landscape rich with color, performing a complex identity of a particular space. Reworking Central Kutch from a specific landscape in Gujarat into a nonspecific landscape that could be anywhere, *Scene 32* obliterates familiar psychological moorings to place-based size and scale, replacing them with a world where microscopic textures form precipices for wind sounds. The salt fields emerge as a site for

meditation, an alternating succession of higher and lower resolution images and compressed and uncompressed spectrums of lights and color distinguishing HDV from black-and-white celluloid. Kaul's images of Kutch are remarkable beyond the textures of different formats. Located close to Ahmedabad in India and Karachi in Pakistan, the Kutch District has been the site for political tensions between the two states since Partition in 1947. The Rann of Kutch was designated a disputed area in 1960, and became a site of conflict in 1965. Some even interpret the invasion of Pakistani tanks in Kutch as part of a broader military strategy than an attack in Kashmir as a primary site for Indo-Pakistani conflict.

Indian films about the border with Pakistan tend to focus on Jammu and Kashmir, especially the Line of Control (LOC), seldom considering the border between Kutch and the province of Sind in Pakistan. Although peace was established, the precise demarcation of the border within the Sir Creek in Rann of Kutch remains unresolved, particularly following the attacks on Mumbai by Pakistani citizens in 2006. Tensions continue, with incidents such as India shooting down a Pakistani surveillance airplane in 1999.⁷⁷ Although parts of Kutch remain militarized, the Indian state has also become a popular tourist destination, promoted by Amitabh Bachchan for Gujarat Tourism. Kaul's images conjure the silence of the salt marshes, a different Rann than the one that appears in recent Bollywood films, including *Goliyon Ki Rasleela Ram-Leela* (India, 2013; dir. Sanjay Leela Bhansali), *R... Rajkumar* (India, 2103; dir. Prabhu Deva), *Gori Tere Pyaar Mein* (India, 2013; dir. Punit Malhotra), and *The Good Road* (India, 2103; dir. Gyan Correa). One patriotic Gujarati blogger pondered whether a "Kutch era" had replaced the "Kashmir era."⁷⁸

The performance of space also becomes a preoccupation in Donald Abad and Cyriac Allard's *Entre Deux* (France, 2006), a series of 20 video-performances between two artists. Far from "civilization," human bodies confront nature with endurance, contemplation, defeat, and cooperation.⁷⁹ Clad in white tennis clothes and armed with a piece of rope, the artists perform experimental meditations on the body's relationships with another body and the environment to hilarious or poignant ends. Their surroundings defeat the human characters when they fight each other in "Jumeaux" (*twins*) video-performance. They merge with these spaces when they cooperate with each other in "Épaule contre épaule" (*shoulder against shoulder*). In many performances, nature is ambivalent to human interactions. In "Suspendu" (*suspended*), one human anchors a rope hanging over a tree branch

to suspend the other human. In “Pendus” (*hanged*), the two humans hang side by side by the arms from the branch of a tree. In “Défense” (*defence*), two humans challenge one another from opposite side of a white strap dividing a field of grass like tennis court lines. In “Liés” (*linked*), the two humans attempt to move in opposite directions in an open field, against the tension of a binding white cloth. In “Victoire” (*victory*), one of the humans stands suspended in the position of a runner crossing a finish line. Here, the broken white finish line waves in the wind from the body of the inert human and the trunks of the two trees. In front lies a deep ravine, suggesting a pregnant moment in an imaginary narrative. The video performances are staged within the Aravis range in Haute-Savoie in eastern France or on the Island of Icaria in the Aegean Sea, where Icarus and Daedalus attempted to fly on artificial wings.

Comparably, Sarah Kanouse’s *Don’t Mourn* (United States, 2007; <http://liminalities.net/3-3/dontmourn.html>) investigates the environment through performance. The project combines video recording of artist’s live performances as she made pilgrimages from 2005 to 2007 to postindustrial sites left to rust and decay by the global economies of free trade. Often, they were sites for labor uprisings and strike violence. In each visit, Kanouse carries with her “a battered, vinyl-sided suitcase and HAM antenna cut to a commercial FM frequency.” As a radio memorial (or counter-memorial), she broadcasts a distorted version of the Communist *International* into empty space. If no one has a radio receiver, the performance appears silent; however, if someone is listening, her performance interrupts regular radio broadcasts. Collectively, her performances map forgotten geographies, the majority of which have not been recuperated for recycling or for storage. Instead, their rust and decay bear witness to what she calls “old and not-so-old” labor struggles between unions and bosses, between striking white workers and black labor imported from elsewhere.

The project develops Kanouse’s thinking about radio as a material simultaneously eternal and ephemeral and about electromagnetic radiation moving infinitely through space yet blocked or distorted by object. These tropes create “memorials to difficult, violent, yet largely forgotten moments in American [*sic*] history,” so that the “material characteristics [of radio] echo the selective and hazy processes of cultural memory” that is contingent and unstable.⁸⁰ Working at the arts organization free103point9’s residency program “Wave Farm” in the Hudson Valley of New York State, Kanouse explains they began “to

think about ‘radio art’ as something *made from* rather than *received by* radio waves,” settling on the term “transmission art” for projects that engage with electromagnetic spectrum spatially as well as temporally.⁸¹ She describes transmission and radio art as exploring the electromagnetic spectrum as a site and material for art that can be combined with digital and networked forms. With *Don’t Mourn*, a website functions as a digital archive for video of Kanouse’s performance with notes and historical information on the histories that haunt each site.

Brannon Dorsey’s *Zetamaze* (United States, 2014; <http://zetamaze.com>) invites users to participate in the performance. *Zetamaze* is an open-source game in which players construct a maze, decorate its walls with virtual graffiti, and fill folders with files to share with other players. Drawing upon W. H. Matthews’s *Mazes and Labyrinths: Their History and Development* (1922), *Zetamaze* updates meandering by translating the “lure of the labyrinth” into 3D virtual space. Interaction with other players is entirely anonymous. The project moves away from digitally mediated reactions and toward digitally mediated interactions by allowing players to alter the structure of a maze. They express themselves by adding graffiti to the walls of the maze or dropping files into folders within the maze’s corridors. The player imagines forms of anonymous communication in a space that appears free of the typical data-harvesting features in video games on social-networking platforms or in mobile apps. Participants can paint political slogans—“We Are All Khaled Said,” “No Justice, No Peace,” “Siamo tutti clandestini” (“We are all ‘illegals’”), or “Black Lives Matter”—on the maze’s walls to evoke the graffiti in Tahrir square after the death of the young Alexandrian in 2010, sentiments around Italy after the *carabiniere* assassination of Carlo Giuliani during protests against the 2001 Group of Eight (G8) talks in Genoa, protests against anti-immigration policies of Fortress Europe, and protests against racial violence by US police in 2014. If these slogans reclaim public place, then *Zetamaze* suggests a small way to take back Internet spaces. Users can also drop files for entire books into the maze’s folders through a form of relatively anonymous P2P file-sharing. The game adds an element of unpredictability to the otherwise well-ordered Internet. Unlike commercial maze games, meandering aimlessly often becomes more meaningful than strategic play to solve the maze. Not thinking and acting in relation to preset goals transmutes into both a form of protest and a figuration of potential community outside dominant structures.

Animating Histories and Futures

Animation has become an important mode to explore often overlooked and under-examined stories about places in the world who hold great importance but are overshadowed by larger, more spectacular, conflictual stories. Activist films about oil spills often concentrate on the destruction of nature but ignore stories of people who work in the energy industry or make their living from these oceans or lands. Whether produced for US public television or made by Chinese independent filmmakers, films about China focus on characters or situations but ignore the processes and people that explain and complicate China's rapid modernization and position within globalization. Films and investigative news stories probing commodity production in Cambodia, China, India, and Indonesia reduce globalization to sweatshops and their immiserating labor situations, disconnecting products from the global flows, transnational processes, and contradictory subject positions across the commodity chain. The projects analyzed in this section deploy a less confrontational conceptual strategy that opens up multiple paths and voices through social and political problematics such as migrant labor, the British Petroleum (BP) oil spill, the Congo, Chinese textile manufacturing, and media saturation that can numb us to ongoing war and occupation. These projects animate histories with more polyphonic structures, opening up through multiplicity. They eschew borders, lines, and deductive arguments. They offer explanation through exploration, assembling myriad voices, positions, and viewpoints.

The driving force behind the counter-gaming collective Molleindustria, whose *Oilgarchy* and *Tuboflex* are discussed above, is Paolo Pedercini, whose short animation *Welcome to the Desert of the Real* (Italy, 2009; <http://vimeo.com/4750691>) is a reverse-propaganda machinima. It combines text sampled from the post-traumatic stress disorder (PTSD) checklist with 3D animated images shot in the game engine of the advergaming *America's Army: Special Forces* (United States, 2003). The title functions as a mise en abyme: it borrows the title from Slavoj Žižek's 2002 book, which in turn borrows its title from a line in the Hollywood film *The Matrix* (Australia-United States, 1999; dir. Wachowski Brothers), which borrows the line from Jean Baudrillard's 1981 book *Simulacres et simulation/Simulacra and Simulation*. These embedded allusions reflect upon reality and simulations of experience, memories, feelings, patriotism, and guilt. In Žižek's critique of an "American holiday from history" that ended

with 9/11, global capitalism and religious fundamentalism are both symptoms manifested in unjustified torture and terrorism. Pedercini's machinima mobilizes the psychoanalytic symptoms of PTSD: difficulties in sleeping, remembering, experiencing pleasure, or conceiving a future. After the pre-title sequence of a kill seen through a POV shot of a crosshair, the video is composed of shots of a solitary soldier, who drops his machine gun to wander through a desert. A black screen interrupts with passages about PTSD symptoms. Whereas *Red Vs. Blue* prompts contemplation about the US War on Terror, *Welcome to the Desert of the Real* asks us to ponder the consequences of such delusions upon the lives of US soldiers. It also invites us to question ethics of the military's use of video games as recruitment tools.

Born in Israel and now residing in the United States, Eddo Stern is familiar with the use of religion in settler colonies to legitimize dispossession and genocide. His machinima *Sheik Attack* (United States, 2000) is a "contemporary non/fiction horror" that weaves together "pop nostalgia, computer war games, the sweat of virtual commandos, the blood of Sheiks and a mis-remembrance of a long lost Zionist Utopia."⁸² Shot in the game engines of Westwood Studios' *Command and Conquer* or C&C (United States, 1995) and Raven Software's *Soldier of Fortune* or SoF (United States, 2000), *Sheik Attack* mobilizes US militarism to critique Israeli militarism. It is based on Stern's own obligatory IDF service.⁸³ Due to incongruities between setting and avatars rendered by the game engines and the context of audio of patriotic songs, the machinima exposes the twin colonial logics of the United States and Israel. As Stern explains, the video critiques the commercial games industry's desire to "capitalize on political tension and fantasies of war while never being held accountable for a specific point of view since everything is abstracted into fantastical versions of reality."⁸⁴ His *Vietnam Romance* (United States, 2003) advances a similar critique of what might be called the "Vietnam War Industry," a national imaginary producing a barrage of books, songs, television series, and films about the failed US colonial invasion of Southeast Asia during the 1960s and 1970s.

An aerial view of political territories from Israel to Lebanon opens *Sheik Attack*. Labeled "1966," the first scene shows C&C gameplay in which armies construct bridges, towers, and rivers. Naomi Shemer's "Zeheerut Boneem" / "Careful, We're Building" (1966) plays, in a later recording by folksinger Chava Alberstein, whose post-1967 music critiqued state policies toward Palestinians. In pre-1967 Israel, Alberstein was a star of the IDF. The opening scene in *Sheik*

Attack can be read as unsettling colonial mythologies. Subsequent scenes show a never-ending pan down a cityscape of skyscrapers that undercut kibbutz communalism with neoliberal capitalism, particularly through the prison- and military-industrial complexes. Later scenes move from Israeli to Lebanese territory with additional gameplay from C&C of coordinated helicopter maneuvers. A final scene of undoing uses footage from SoF of soldiers looking through night-vision crosshairs and entering into buildings to assassinate targets. In one scene, a woman is made to kneel on the ground before she is assassinated with a shot to the neck, followed by the shooting of another man in the head. Most striking, the final two and a half minutes of the 16.5-minute video contain headlines from various online news sources about Israeli abductions and assassinations after the disappearance of IDF pilot Ron Arad during a secret air raid on Lebanon in 1986.⁸⁵ By layering the story of Israeli violence onto gameplay from US war video games, Stern's machinima renders a critique of the expansionist militarism in both settler colonies within their foundational myths of escaping religious persecution in Europe.

Xuan Chen's animated video *Out* (China/United States, 2010; www.xuanchen.net/out.html) captures the geopolitics highlighted by anti-trafficking organizations. Its textured animation conveys the harsh lives of Chinese migrant laborers, deploying symbols of women, cities, and power that facilitate dialogue about human trafficking, labor issues, and the possibility of activating changes in the migrant worker's circumstances. Rendered in black-and-white hand-drawn images of identical women living underground, the video counters the glitzy skyscrapers of China's neoliberal modernization with the handmade. Digging out, the women encounter large buildings and men in top hats, signifying the Chinese male bureaucracy. The animation is inspired by the phenomena of migrant workers who have constituted a large portion of China's workforce since the early 1990s. Income disparities, rural poverty, and rapid urban modernization propelled country dwellers to leave their hometowns to work in the big cities near Special Economic Zones (SEZs) and Free-Trade Zones (FTZs) for the economic advancement of their families, representing the largest migration in human history. These migrant workers constitute China's most valuable economic asset. *Out* genders this migration. Women populate the manufacturing industries; men constitute the majority of China's coal miners and construction workers. While their efforts built Chinese skyscrapers and presented the world with "Made in China," the lives of migrant workers have been difficult. They live

precariously in the cities while their hometowns remain undeveloped, paralleling the trajectories of Latin American and Caribbean workers in the United States, along with South Asian, Southeast Asian, and African workers throughout the MENA regions, and Southeast Asian workers in Japan and South Korea.

Offshore (Canada, 2012; <http://offshore-interactive.com/site/>) by Brenda Longfellow, Glen Richards, and Helios Design Labs is an animated documentary that dives into offshore oil drilling. At 71 minutes, it is feature length, but can be accessed in sections in any order. A recurring motif consists of aerial shots of bayous and Gulf of México, peppered with rigs, oil tankers, and fishing boats. The slow ambient soundscape features electronic and string music without melody, mixed with sounds of water and machines, in a repetitive loop, a sonic Brechtian device communicating the threat of deep-water oil exploration. Rather than presenting a simplified linear narrative bolstered by argument and political analysis, the documentary reveals complexities to open different forking paths into this complex nexus of energy, oil, offshore drilling, people, fishing, spills, and environmental protection. Users become more like workers as they wind their way through the documentary's architecture to access its content. Users are put on helicopters flying over bayous and the gulf in aerial shots. Users also enter the offshore rig, descending stairs and entering control rooms. *Offshore* prompts reflection upon our investment in actually knowing more than corporate talking points and legal settlements. How far will you go? How deep is too deep? How dangerous is too dangerous? Organized in a mosaic structure, *Offshore* tackles offshore drilling from a series of different positions: executives, policy makers, analysts, rig workers, shrimp- and oyster-fishing-boat captains. Different sections of the project complicate and specify the vagueries of offshore drilling and the BP spill, such as "A Danger Frontier: The High Risk of Extreme Oil," "Deep to Ultra Deep: Histories of offshore in the Gulf of Mexico," "Port Fouchon: Oil Capital," and various portraits of rig workers and fishing-boat captains discussing different points of view on offshore drilling. On one side, offshore rigs moved some Louisianans into the middle class; on the other side, shrimp and oyster populations have declined.

A film about indentured labor, Paolo Unger Dvorchik's *Modern Slavery* (United States, 2010; www.highimpactart.org/slavery.html) highlights different types of trafficking and slavery via encounters with both victims and activists. Focusing on the resilience of victims, their assessments of their situations, and what lies ahead after their

rescue, *Modern Slavery* extends beyond the fetishism and glamorizing of trafficked victims found in so many contemporary broadcast documentaries. The project also inverts the ideological fantasies and geopolitical imaginaries engulfing trafficking. A typical trope of US broadcast documentaries is a focus on trafficking in Guatemala, India, México, Pakistan, Southeast Asia, and the former Soviet Union—a projection of everywhere else as a space for human rights violations. *Modern Slavery* returns to the United States, resituating it as part of these flows of people. It also invokes the legacy of chattel slavery and indentured servitude in US history. Although slavery was outlawed in the United States in 1863, the US Department of Justice estimates that between 14,500 and 17,500 individuals are trafficked each year. This video explores modern slavery, the plight of trafficked persons, and the possibility of life after rescue.

Promoting awareness of our complicity with war and violence in the Congo through the conflict minerals that enable our digital devices, *All Eyes on the Congo: Films for Peace in the DRC* is a partnership between Cultures of Resistance in the United States and Friends of the Congo and Salaam Kivu International Film Festival (SKIFF), in the Democratic Republic of Congo (DRC).⁸⁶ In particular, the project focuses attention on the role of foreign powers, such as Rwanda and, indirectly, the United States, in escalating and sustaining war and violence with some of the world's most horrifying statistics of murder and rape. Friends of the Congo's *Crisis in the Congo: Uncovering the Truth* (United States, 2011; <http://congojustice.org/>) is a 26-minute preview of an activist documentary conceived to educate about relationships with the crisis in Congo. Available for streaming or download, the video untangles misconceptions and paradoxes, such as DRC's rich natural resources yet economic poverty and its waves of rebel factions that sustain the power of long-standing players. The activist documentary also questions silence as complicity with the deaths of more than six million people, half of whom were under the age of five. A primary argument is that DRC's borders were determined in the Berlin Conference of 1884, when it was given as personal property to King Leopold of Belgium. Leopold amassed a fortune by forcing Congolese into servitude to acquire ivory, rubber, gold, diamonds, copper, and minerals. Slavery was followed by colonialism, a dictatorship, and then war. Today, automotive, aeronautic, electronic, and jewelry industries globally continue to depend on minerals and other natural resources extracted from the DRC, often via proxy forces through DRC's neighbors in the absence of a functional

national government. Under the cover of what the media often frames as so-called ethnic wars, *Crisis in the Congo* explains illegal exploits, including rape as a weapon to destroy communities.

The international community, particularly the United Nations and United States, remained silent on the genocide and the invasions by Rwanda and Uganda. In addition to economic interests, the Rwandan and Ugandan armies facilitate US interests in central Africa to sustain tyranny and dependency. Congo is also important to the global community in terms of the fight against climate change. It has the second largest rain forest. The activist video ends with “educate yourself,” “educate others,” and other phrases that emerge from a black screen. *All Eyes on the Congo* also contains information about Salaam Kivu International Film Festival (SKIFF). Since 2003, the festival has taken place in Goma (North Kivu), near the border with Rwanda, for film screenings, community discussions, workshops, and performances to inspire youth to “keep on building rather than destroying.”⁸⁷ Guided by filmmaker and activist Petna Ndaliko Katondolo, the festival is organized by the Yolé!Africa youth center that Ndaliko founded in 2000 with Dutch anthropologist Ellen Lammers to promote peace through art, and Alkebu Film Productions, which Ndaliko founded with producer Yehudi Van de Pol to produce “challenging work by exploring the narrative possibilities of creative imagination, documentary, feature films, music videos and art based films.” SKIFF carves a space for role models like rapper S3, whose 2012 song and video “Je vote” (“I Vote”) won third place at Fair Play’s Anti-Corruption Youth Voices Award, a global competition for musicians aged 18 to 35 on the theme of anticorruption.⁸⁸

Ezra Wube’s videos combine stop-motion animation and live-action footage. An adaptation of Hadis Alemayehu’s 1968 novel *FeQir Iske MeQabir* (“Love to the Grave”), *Hidar* (Ethiopia/United States, 2011–2012; www.ezrawube.net/hidar.mov) places art in interaction with the environment, where a cutout drawing of a person opens an actual door. The video reinvents the images and stories of the classical Amharic text about the journey to peace. Moreover, it visualizes a major work in modern African literature for a global population that has only recently come to appreciate African novels. Its play of textures, light, and color animate digital video that can often seem flat. Guided by an artist’s hands, *Mela* (Ethiopia/United States, 2011; www.ezrawube.net/mela.mov) shows colorful paperclips crawling like caterpillars over the edges of buildings in Johannesburg, animating lifeless cityscapes.



Figure 4.3 *Hidar*.

The colors of the paperclips evoke Rainbow Nation utopic discourses in post-Apartheid South Africa, particularly ones used on maps of the involuntary migrations (*mfecane* or *difaqane*) of Sotho, Swazi, Tswana, Xhosa, Zulu, and other nations due to environmental and political changes. Wube's other videos offer comparable transnational African perspectives on history and the present.

Cao Fei's *iMirror* (China, 2007) engages China's changing urban landscapes and increasing personal alienation through futuristic animation in the form of machinima in Second Life (SL). Based in Guangzhou, Fei creates an SL avatar named China Tracy, a curvaceous, action figure with long ponytails. The name China Tracy alludes to young Chinese adopting an "American" or "English" name to aid their interaction with foreigners. The title *iMirror*, a 28-minute, three-part documentary about China in the multiuser platform of SL, puns Apple products (iPhones are produced near Guangzhou in Shenzhen). First screened for the 2007 Venice Biennale China Pavilion, *iMirror*'s three sections are also posted on YouTube. The film counters the idea of documentary chronicling the past or the present by creating a futuristic landscape. It is part of a larger project called RMB City, consisting of a website for a fake city, events, projects, shop, and city hall. As the website explains, RMB City is about "exploring the creative relationships between real and virtual space, and is a reflection of China's urban and cultural explosion."⁸⁹ Robin Peckham has pointed out that in Mandarin, RMB City is called *Renmin Chengzhai*, translated as

“walled city of the people,” a twist on the historical walled cities of previous dynasties.⁹⁰

The film is shot in SL with floating neon buildings. The images reference contemporary Chinese landmarks like the CCTV tower, pandas, and skyscrapers. However, this cityscape is empty, the camera constantly panning. China Tracy barely interacts, floating. Part One of *iMirror* begins with a spinning neon red sign that says, “Land for Sale,” then a spinning large green neon dollar sign. Tall, grey buildings emit smoke; screens are inserted into buildings. The camera alternates between low-angle shots and bird’s-eye views. Barrels of toxic waste pour into an ocean. Fires erupt from factories. Throughout, a slow, whispered song suggests alienation and melancholy. Part Two features a romance between China Tracy and another avatar, Hug Yue, a non-Asian (white) man of 65 who is a former activist. The avatars play piano and guitar. Empty cityscapes, subways, squares, and streets mark this landscape. Underneath the images, the online conversation between China Tracy and Hug Yue ensues, typed out like subtitles. It details alienation in real and virtual worlds. For example, Hug Yue states, “I suppose SL is a drug.” China Tracy later observes, “Sometimes I don’t know where I am,” and Hug Yue responds, “We are all in the Panopticon.” Part Three features a series of avatar portraits, couples, pole dancing and couple dancing in a nightclub. The music by the group Prague is slow, ambient, and pondering. All three parts of *iMirror* ruminate about constructed fantasy spaces where the real of China in the twenty-first century collides with the virtual China imagined as a place without people, crowds, environmental destruction, overcrowding, and polluted skies. *iMirror* invokes the documentary essay film, with its meditative tone and distancing from the subject, but inflects this mode with longing, sadness, isolation, and slowness.

Cotton Road (United States/China, 2014; www.cottonroadmovie.com) by Laura Kissel with Li Zhen is an ambitious transmedia project that animates the histories and transnational relationships imbedded in the manufacturing of cheap clothing. Inexpensive jeans, blouses, dresses, and sweatpants, spilling from racks in Target and Wal-Mart, are presented as static consumer objects, good deals for fashion updating and style enhancement in the malls of the Global North and night markets in the Global South. *Cotton Road*’s website, film, and exhibition strategies render transparent the submerged and concealed global supply chain of cotton from planting seeds in South Carolina, United States, to container shipping, ports, and manufacturing plants

near Shanghai, China.⁹¹ The project proposes the complexities of globalization can only be fully understood through the construction of a mosaic of multiple voices of labor across the entire supply chain of cotton.⁹² The project rejects the character-driven, conflict structure of many broadcast documentaries about outsourced textile manufacturing, which figure women workers as victims who lack agency and install binaries between China and United States. Instead, *Cotton Road* follows the seeds as they transform into clothes that return to the United States, exploring the flows, processes, polyphonic voices, and multiple stories sewn into cotton clothing.⁹³ Following the path of the cotton seed, the project gestures toward confounding false binaries between East and West or North and South, farmers and factory worker, Mexican migrants, and rural Chinese migrants, local and global.

Kissell collaborated with Sourcemap (<http://free.sourcemap.com>) to produce an interactive map, tracing the movement of cotton from South Carolina to Shanghai. Sourcemap represents a critical cartography project to map the supply chains and carbon footprints of consumer items like Tom's Toothpaste, iPhones, apricots, Starbuck's coffee, Adidas, trainers and Ralph Lauren jeans. "Find out where things come from," the site asserts. The crowd-sourced directory includes both activist and corporate uploads of lines connecting sourcing nodes to graph supply chains. The *Cotton Road* sourcemap features maps of the southern United States and the eastern coast of China. When scrolling over a location, a description of the supply-chain process appears with a link to a short clip of that site and its people and processes from the long-form film, such as the farmers, cotton products factory, the Shanghai Farmers Market, the recycling of fabric scraps. The project released the sourcemap before the film.

Identifying itself as "a supply side journey," *Cotton Road* is also an 83-minute feature-length analogue film. Kissel, who directed, produced, shot, and edited the film, collaborated with Shanghai producer Zhen. With carefully composed tableau shots, the cinematography visually connects the various people in the supply chain of cotton whether in South Carolina's fields, Yangshuan ports, or textile city of Chongzhou. Both receive equal compositional mass as well as subtle natural lighting, deep color saturation, and variegated textures, visually restoring people to the process. Tableau shot in long takes—for example, cotton-processing plants in South Carolina, weaving plants near Shanghai—insist on a human scale. They open a space for conversation and direct address to Kissel, displacing the tradition of the

interview. They generate conceptual counterpoint to the unrelenting flow of cotton, manufacturing and globalization, inviting us to think about labor and labor processes and not simply commodities. Kissel as camera operator is always positioned at eye level with her subjects, in dialogue, referencing the critical ethnography of David MacDougall advocating for documentary as marking an encounter rather than providing evidence.

Cotton Road's exhibition strategy parallels the media socials of *Lunch Love Community*. Although the film has garnered awards and screenings in various environmental film festivals, its exhibition disengages from auteurism toward a more collaborative transnational politic. Its screenings connect to Fashion Revolution Day (commemorating the collapse of Rana Plaza in Bangladesh), the Clean Clothes campaign, and the Inside Out movement of wearing one's clothes with the seams and tags showing to make visible labels with places of manufacture. For her world premiere screening at the Finger Lakes Environmental Film Festival (FLEFF) in 2014, Kissell engaged interns and Ithaca College students prior to the screening to mobilize them to come to the screening wearing their clothes "inside out."

Making "Noise" through Viral Dissonance

If one of the greatest hopes in going online is finding community, then one of the greatest fears is catching a virus, but viruses can also have productive associations. "The virus as a metaphor," argues Ravi Sundaram in the context of India's pirate modernity, "suggests parasitic attachments to larger structures, rapid replication, disruption, and transformation of official networks through nonlinear communication."⁹⁴ Brian Larkin examines the vast viral infrastructure in Nigeria that moves with the speed of globalization through postcolonial material conditions. He claims piracy's "parallel economy has migrated onto center stage, overlapping and interpenetrating with the official economy, mixing legal and illegal regimes, uniting social actors, and organizing common networks."⁹⁵ Viruses and piracies can be forms of dissonance that disrupt the status quo of silence as "civility." Viral networks of piracy and disruption transform by contamination, producing locative places for dissonance within transnational spaces. Dissonance makes visible and audible an ever-expanding multiplicity of clashes, tensions, disharmonies, and disequilibriums so integral to everyday life that they pass unmarked and seem unremarkable. Dissonance thrives on contradictions,

moving restlessly toward irresolution. It intervenes through imbalance. Neither noise nor cacophony, dissonance pairs together the incompatible with results that surprise, offend, invite, disturb, and excite, spurring action and creativity.

Digital media projects make an important counterargument to corporate and state talking points about participation and flexibility. They can localize micro-publics against corporatized media through satire and postcolonial mimicry.⁹⁶ The concept of viral dissonance pairs two terms to explore ways that artists, activists, and intellectuals have mobilized dissonance as an object and method to investigate everyday life. They propose dissonant ways of thinking that can be transmitted virally toward productive ends. These projects ask us to think: they expose deep secrets on corporate and state collusions or by nudging us to imagine other ways of becoming. They ask us to open space to dissent and contestation. In everyday usage, going viral is largely equated with viral videos. It is associated with Internet memes: ideas replicate themselves and spread, jumping between social networks. With their unpredictable movement, viruses themselves often frighten. Epidemic viruses like SARS, H1N1, and MERS emerge at the intersections between human and nonhuman, casting chickens, pigs, camels, and bats as “natural” transmitters rather than addressing the possibility for human-made conditions that enable to such viruses spread and mutate, such as industrial farming and GMOs. They also develop where science and superstition converge. Computer viruses spread through self-replicating malware programs, disabling proper functionality—or even shutting it down through worms like Code Red, Nimda, and ILOVEYOU. Viruses travel quickly against dominant flows. They often defy attempts at isolation and containment, making them ideal carriers for dissonant ideas. Ulises Mejias advocates for disruption through *parasitology* and *paralogy* that “disrupt the flow of information by adding noise (information outside the logic of the system) and forcing the network to adjust to its presence” and “concerns itself with everything that cannot be resolved within the (capitalist) system.”⁹⁷ He identifies forms of disruption that decenter nodes. Disruption can be located “nowhere, elsewhere, and everywhere,” he suggests.

Grassroots forms of dissonance have erupted to open space from Tunisia and Egypt to Syria, Spain, Greece, United States, and Brazil. People have gathered in the streets and in squares to demand to be heard and to be seen. News media have occasionally offered space for these dissonant expressions. People have also mobilized digital technologies

like SMS and social networking, working around and within the control of states and corporations. Working with Electronic Disturbance Theater (EDT), the Zapatistas (EZLN) built websites and, more significantly, stages denial-of-service (DoS) attacks on state websites, as activism against the dispossession of indigenous nations by neoliberal corporations with state collusion during the early days of the WWW. Following their lead, movements like Occupy in the United States and Los Indignados in Spain, among others, have garnered middle-class momentum by using social media alongside word of mouth. Even the global campaign of Boycott, Divestment and Sanctions (BDS) to pressure Israel to end its occupation of East Jerusalem, Gaza, and the West Bank has gained unprecedented support in the United States, partly driven by blogs, posts, and tweets. Groups like Anonymous mobilize hacktivism across divisions imposed by states, such as nationality papers and passports, and corporations, such as software licenses and even DVD regional codes. Social media can help dissonant ideas become viral and open space, but it also makes dissonance easier to police. People have spoken against data mining of citizens, police corruption, and against the financialization and militarization of everyday life. They have also spoken against corporate co-option of dissonance as Twitter or Facebook revolutions.

Miyö Van Stenis's *Totally Not a Virus, Trust Me... I'm a Dolphin (or I'm a Dolphin)* (Venezuela, 2013; <http://miyovanstenis.com/dolphin/>) is a whimsical look at moments of paranoia over computer viruses in an era of ever-tempting clickbait. The work asks us to think about nonhuman life in the wake of recognition of the right to rights of life and liberty for cetaceans, such as bottlenose dolphins and orcas in places like India. Like other malware, computer viruses infect software, files, and drives, rendering computers less useful or utterly useless and disrupting the Internet as a platform for sharing information. An infected computer might render the Internet inert. Unlike computer worms, *I'm a Dolphin* declares its innocence graphically while a code window reveals a computer worm (ILOVEYOU.txt.vbs) in code. Since we no longer require click-here instructions to operate GUI, *I'm a Dolphin* asks us to think about the machine acts we initiate by clicking our mouse on innocent-looking images, particularly the clickbait of tantalizing images and suggestive headlines. It considers the potential hazards of clicking on impulse, such as clickbait journalism that not only hyperlinks to advertising but transmits spyware.

No Television (México, 2006) was a performance by Fabián Giles that critiqued the mass media's banal fictions and distractions that

manipulate thinking and action. The blog contained submissions of graphic, photo, and audiovisual work from Europe, North America, and South Asia, including video.freegar.org, which interrogates various ideas about México and Giorgio Celon's "11-9" which takes an MTV-style look at the 9/11 attacks of the World Trade Center in New York. The project's logo reworks the MTV ones into an NTV for "No TV." While *No Television* despairs of television consumption, Giles's short video *I Hate* distills the simplicity of media icons and hatred. Memorable images such as a bottle of Coca-cola announcing, "I hate god," and an atomic explosion proclaiming, "I hate CNN." Comparably, the collective lemeh42's *Per fare un tavolo/How to Make a Table* (Italy, 2008; <http://www.vimeo.com/711136>) poses questions about self-assembled home furnishings, which conceal how flat boxes reduce container shipping costs by outsourcing assembly to the consumer while increasing the demand for low-skilled, low-paid, flexible labor in the shipping and packing sectors. *Per fare un tavolo* spoofs the faux environmental friendliness of the furniture industry. Taking on the style of instruction manuals for Ikea furniture, lemeh42 reflects on the globally successful trade in self-assembled home furnishing for the middle classes. A lively, upbeat, lilting song, sung by a man with the chorus sung by children, describes the environmental history backward as table, legs, seed, fruits, flower, tree, branch, mountain, and earth. The images adopt the flatness of an assembly manual, with lines drawn between the seeds and the fruit, the reduced graphic style and very minimal animation referencing the simple assembly instructions inserted into manufactured products.

Dara Greenwald, Josh MacPhee, and Steve Lambert's *The Samaras Project* (United States, 2006–present; www.samarasproject.net/about/) operates as an anti-advertising collaborative project that engages multiple layers of the commons: open source, free access, street teams, alternative economies. A transmedia campaign mimicking corporate product campaigns, it "sells" ideas like open source, gleaning, local currency, co-ops, and common networks. It produced five postcards with headlines such as "We Mint It," "We Own It," and "We Share It" over images of groups of people. Short explanations of each strategy are printed on the back of each postcard, available for free download. The blog includes useful information about sustainable economies as alternatives to transnational capitalist enterprise, with notices of conferences, gatherings, book publications, and initiatives for creating local economies circumventing global capital. For instance, the blog entry dated 20 February 2006,

discusses worker-owned cooperatives. The project toggles between online and embodied worlds. In October 2006, the Anti-Advertising Agency assembled a street team to pass out the postcards in the San Francisco Financial District. The team wore blue Samaras Project t-shirts and blue messenger bags emblazoned with the samaras seed, a winged seed that flies and can grow almost anywhere—a counter-image to Monsanto's GMOs.

Under the leadership of Julie Ristau, Ana Micka, Jay Walljasper, Alexa Bradley, and Camille Gage, the collaborative *On The Commons* (United States, 2001–present; <http://onthecommons.org/>) offers reports of events and possibilities that harness the capacity of the commons. It postulates public spaces need to be at the center of thinking through how to live in the world in a sustainable, interactive way in the face of globalization, virtualization, the fracturing of community, and the decline of face-to-face interactions. The website offers strategies from green activism and common creativity that advance positive social change concerning global climate crisis and the commodification of nature. *On the Commons* connects anyone who identifies with the common movement and its principles of equitable access, democratic values, transparency, and social fairness. Through its essays and blogs, commoners exchange knowledge that escapes corporate media. The commons transforms simple stories into complex histories. *On the Commons* contends: “some forms of wealth belong to all of us, and that these community resources must be actively protected and managed for the good and all.” These other forms of wealth include open air, wide oceans, deep forests, libraries, public spaces, scientific research, and creative works. *On the Commons* invites us to become “commoners.”

If projects like *The Samaras Project* and *The Commons* convene micropublics, then other projects convene funders through crowdsourcing. Amit and Naroop's *The Singh Project* (United Kingdom, 2014) is a collection of 35 images of British Sikh men celebrating their identity by emphasizing beards and turbans.⁹⁸ Beards and turbans are visible markers of Sikh men, perhaps more recognizable to non-Sikhs than the five traditional attributes—*kesh* (uncut hair), *kara* (bracelet), *kirpan* (short sword in a *gatra* strap), *kachehra* (cotton undergarment), and *kanga* (small wooden comb). Raised in Southall in West London, Amit and Naroop are commercial photographers, specializing in music-industry work. To realize this noncommercial project, they turned to social networking and crowdsourcing. The inspiration for the project also arose from seeing the popularity of “big” beards

on non-Sikh models in television and print advertising and on billboards. The subjects of their photos range from “doctors to boxers, temple volunteers to magicians and I.T professionals to fashion stylists,” as Amit and Naroop mention on the project’s Kickstarter and Facebook pages.⁹⁹ For the photographs, they want their subjects to be the focus, so they standardized the framing and background. The project counters the racial profiling of Sikhs, particularly in a post-7/7 United Kingdom or post-9/11 United States. In 2001 and 2002, Sikhs were frequent targets of violence. In August 2012, a white gunman attacked a gurdwara (temple), killing six people. *The Singh Project* reclaims Sikh diasporic identity from Hollywood’s cliché fantasy representation of Islamic terrorists with turbans tied in a Sikh style.

An interest in exploring our relationship with media also features in Geoffrey Pugen’s *Utopics* (Canada, 2004–2008; <http://geoffrey-pugen.com/utopics.html>), probing the notion of life in virtuality, whether in the form of avatars or at the prospect of human-machine interaction. The installation of digitally composited photographs and documentaries that promote a fictional online community is dedicated to helping people “super modify” their bodies in order to “transform [their] nature.” The promotional video *Aerobia!* (Canada, 2005; <http://vimeo.com/6922386>) satirizes early theories of cyberspace that heralded the Internet as a space free from the limitations of physical bodies by considering the current moment of ubiquitous avatars and visual personas. The portal introduces users to the fictional Institute of Utopics’s 16-step program for super-modification of the human body. It adopts the rhetorical and aesthetic devices of late-night infomercials. Virtual selves, composed in JPEGs and recognized by usernames, may be viewed on a web-application mashup that links a NASA satellite photograph of the earth with avatar biomes from Utopics. The program helps people overcome “intimidations, doubt, negative energies, guilt, hunger [or] weakness,” which are removed through the “intense modification program.”

The *Utopics Video Guide* (Canada, 2004) invites viewers to overcome their personal body issues to realize their “inner animal” through body modification. Before and after images show clients whose faces transform from human to animal. Elephant-headed figures enjoy an energizing aerobics class. The female voiceover calmly instructs listeners as a tribal beat of techno music plays in the background, its four-beat structure mimicking the human heartbeat. The program is an online community with a cultist appeal of striving for perfection by looking toward animals as a means to transcend the



Figure 4.4 *Utopics Video Guide*.

foibles of human imperfections, pandemics, and ecological crisis. The program is an inverse to the transformation in H. G. Wells's 1896 novel *The Island of Dr. Moreau* and the inverse of most interpretations of the hierarchies in Charles Darwin's theories of evolution.¹⁰⁰ The video also evokes the mass appeal of television workout series hosted by celebrities Richard Simmons and Jake Steinfeld during the 1980s. Intercut is a vintage interview footage of professional bodybuilder Arnold Schwarzenegger discussing the feeling of "coming" (sexual orgasm and ejaculation) as he works out, pumps up, or even goes home. Men and women discuss falling in love with people whose bodies they have never seen. In the photographs, Pugen layers the texture of animal "skins" atop human skin. *Utopics* engages with scholarship in Critical Animal Studies and the Post-humanities that examine forms of knowledge from a non-anthropocentric point of view. The project satirizes the dysfunctional and asymmetrical relationship of humans to nonhumans, particularly the everyday ways that humans project anxieties and fears to nonhuman animals as objects. The project is a tactical means to open thinking through digital media to other bases of knowledge.