



STILL FIGHTING “the BEAST”: *GUERRILLA TELEVISION* and the LIMITS of YOUTUBE

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ABSTRACT This critical reflection on the work of the Raindance Corporation and Michael Shamberg and their manifesto, *Guerrilla Television* (1971), considers their video activism as a precursor to both YouTube and contemporary “participatory culture” and offers an important critique of these later forms. The essay traces the history of the Raindance Corporation and then considers Shamberg’s media-ecological critique of broadcasting and defense of democratized video making, his later attempts at mainstream production, and his contemporary views on the rise of YouTube. It argues for the continuing relevance of Shamberg’s ecological critique, suggesting that his concern for ecological diversity and grassroots control serve as an important warning against the uncritical valorization of sites such as YouTube. *Guerrilla Television* serves as a reminder that it is called YouTube, not YourTube.

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Growing up in America on television is like learning how to read but being denied the chance to write.

—Shamberg and Raindance Corporation, *Guerrilla Television*



YouTube's success has been astonishing. It has risen from nothing to become, in a few years (in its own words), "the largest worldwide video-sharing community" (accessed October 31, 2011): the leading site and center of online video production and sharing. Founded in February 2005, it was receiving more than 100 million views a day by July 2006 (BBC 2006), rising to more than 1 billion views by October 2009 (Hurley 2009), 2 billion by May 2010 (BBC 2010), and 3 billion by May 2011 (Waters 2011). The majority of these videos were placed there by individuals, whose collective efforts have achieved staggering results: by November 2010, YouTube was reporting that more than thirty-five hours of video were being uploaded every minute, up from twenty-four hours a minute in March 2010 (YouTube 2010a). As YouTube itself explains, putting the broadcast era into context, "more video is uploaded to YouTube in 60 days than the 3 major US networks created in 60 years," the equivalent of putting more than 150,000 new "full-length movies in theaters every week" (2010a). While much of the content is professionally produced, and legally or illegally uploaded, the volume of nonprofessional material remains huge.

Web video is only one example of a broader phenomenon transforming the existing media ecology: that of "user-generated content." The nineteenth and twentieth centuries were dominated by "the broadcast model" of media production, distribution, and consumption, in which large-scale, highly capitalized industries mass-produced identical information, messages, and services for mass distribution along a small number of dominant channels for mass consumption by mass audiences. This was a top-down, one-to-many, hub-and-spoke mode of macro production and delivery in which the audience's role was primarily limited to consumption (Benkler 2006: 179).

What caused this change was the ongoing development and success of digital technologies. The increasing capacities of personal computers, the popular takeoff of networked computing, the digitalization of the major media forms, and the commercial success of personal, connected, digital devices transformed broadcasting. These technologies not only allowed us to consume broadcast product, but they also served as media creation tools and personal communication devices, enabling us to produce, distribute, and share content among our peers and linked audiences and taking us into a much more complex, "post-broadcast" media ecology (Merrin 2008).

Over the past few years, a body of academic work has grown to explore this shift to a “participatory culture” (Jenkins 2006; see also Anderson 2006; Benkler 2006; Bruns 2007, 2008; Gillmor 2006; Howe 2008; Leadbeater 2008; O’Reilly 2005; Rosen 2006; Shirky 2008; Tapscott and Williams 2007). Although this literature captures contemporary changes well, where it is weak is in the history of these developments. Technological histories of the invention of computing, software, and the Internet are common, but as Henry Jenkins points out, we need to understand the history of our use of digital media and the cultural practices that surround it. YouTube, for example, “may represent the epicenter of today’s participatory culture but it doesn’t represent its origin point for any of the cultural practices people associate with it” (Burgess and Green 2009: 110).

Jenkins’s own attempt to trace this predigital history of YouTube and user participation is brief (2009: 109–25) and cannot begin to trace the range of behavioral and theoretical traditions that come together in contemporary participatory culture. I want to focus here on one particular precursor, the video-activist tradition, and one particular case study, that of the Raindance Corporation and its 1971 manifesto, *Guerrilla Television*, published by Michael Shamberg, to consider their ideas and activities and their relationship with contemporary web video. This case study not only sheds light on the complex roots of user-generated content but also carries lessons about its contemporary forms, fulfilling Jenkins’s hope that “by reclaiming what happened before YouTube, we may have a basis for judging how well YouTube really is serving the cause of participatory culture” (2009: 125). In particular, I argue, Shamberg’s concerns for media diversity and personal and grassroots control contain important lessons for how we understand YouTube and other emerging “beasts” of the digital media era. While YouTube fulfills many of the video activist’s hopes for a democratic, user-created, and shared mode of video expression, Shamberg’s ecological critique poses important questions for the dominant video-sharing model and organization.

THE RAINDANCE CORPORATION

The Raindance Corporation, founded in October 1969 by Frank Gillette, Michael Shamberg, Louis Jaffe, and Marco Vassi, was a collection of artists and video activists who were emerging out of the countercultural scene and early experiments with video. Nam June Paik is considered the pioneer of the use of video, having purchased one of the first portable video cameras and recorders in 1965 (Boyle 1997: 4), but it took until 1967 and the commercial availability of the portapak video camera for a video underground to develop, through exploring this new medium’s properties. Paul Ryan, a research assistant to Marshall McLuhan during his 1967–68 residency at Fordham University, was among this group. He borrowed the university’s equipment in summer 1968 and met Frank Gillette, who borrowed it for his own experiments, including video portraits of street life. By the

end of 1968, Gillette united with David Cort, Ken Marsh, and Howard Gutstadt to form the first video group, Commediation. Attracted to the portability and affordability of video and its instant playback and rerecordability, the early scene was united in its recognition of the medium's potential to involve ordinary people and to break the monolithic viewpoint of mainstream TV by offering a variety of perspectives (Boyle 1997: 6).

Commediation only lasted a few months. By early 1969, Gillette met Ira Schneider, and their collaboration for the exhibition *TV as a Creative Medium*—a piece of video art called *Wipe Cycle*—brought them to the attention of Shamberg, a *Time* journalist. It was Gillette who conceived the idea for “an alternative media think tank” called the Raindance Corporation to complement the scene's productions and provide “a theoretical basis for implementing communication tools in the project of social change” (Gigliotti 2003). Raindance was registered as a Delaware corporation in October 1969 and leased a loft at 24 East Twenty-Second Street.

When Schneider joined Raindance he brought with him a newsletter his friends Beryl Korot and Phyllis Gershuny were working on. It became the basis for *Radical Software*, whose first volume ran from spring 1970 to spring 1972 (*Radical Software* 2003). Though the journal made Raindance the most famous video group, it was part of a thriving scene that also included Global Village and the Videofreex (both founded in 1969), the People's Video Theater and the Media Access Center (both founded in 1970), and the Alternate Media Center at New York University (founded in 1971) (Boyle 1997; Shamberg and Raindance Corporation 1971b: 16–19).

Raindance was renamed the Raindance Foundation in June 1971 and became a tax-exempt cultural institution to qualify for New York State Council on the Arts grants. To reach a wider audience Shamberg turned their key ideas into a book, *Guerrilla Television*, published in November 1971 (Shamberg and Raindance Corporation 1971a, 1971b).¹ This proved the high-water mark of the movement. Raindance moved upstate in 1972 to Ulster County, where Schneider and Korot oversaw the publication of *Radical Software*, from the second volume until the journal folded in 1974, and of the influential collection *Video Art: An Anthology*. By the time of Raindance's official end in 1993, its principal figures had long moved on to other careers.

Raindance was notable for eschewing a left-wing political agenda, with Shamberg pointedly dissociating the group from the revolutionary idea of guerrilla warfare and redefining *radical* to avoid leftist connotations: “We...believe in post-political solutions to cultural problems which are *radical* in their discontinuity with the past” (Shamberg and Raindance Corporation 1971a: ix). While many on the left were suspicious of technology, the video activists embraced it, finding inspiration in another philosophy, pioneered by Stewart Brand and developed by Gillette, Ryan, and Shamberg and best described as “cybernetic McLuhanism.” Emerging out of the counter-

culture, it synthesized McLuhan's ideas on electronic media, the futurist ideas of Buckminster Fuller, and a cybernetics rooted in the formulations of Norbert Wiener and reinterpreted through Gregory Bateson's systems-theory ecological approach.

Despite its influence, this philosophy has been almost entirely written out of mainstream media theory textbooks. Its most extensive coverage comes in the work of Fred Turner (2006), in which he traces the interrelated development of postwar American military-industrial research culture and the counterculture. Turner explores how the counterculture produced a "new communalist" movement that came to valorize individual self-sufficiency and personally controlled technology as the key to producing new modes of consciousness and social organization. He highlights Brand's role in drawing together this cybernetic McLuhanist philosophy and acting as a link between different scientific and countercultural groups through his connections and influential publication the *Whole Earth Catalog* (1968–71). From there, Turner traces the path of this philosophy through the development of personal computing, Brand and Larry Brilliant's creation of the online bulletin-board system "the WELL" (Whole Earth 'Lectronic Link) in 1985, and the popular spread of its ideas about "cyberspace," the "wired world," and the "new economy." What is missing from Turner's account, however, is the wider take-up of this cybernetic McLuhanism, especially among the video-activist community. As well as Raindance, this philosophy also inspired many of the contributors to *Radical Software* and related media manifestos such as Gene Youngblood's 1970 *Expanded Cinema* and Ryan's 1973 *Birth, Death, and Cybernation*. To date, this tradition has received little or no attention within media studies.

Though written by Shamberg, *Guerrilla Television* was intended as a summative statement of Raindance's vision and provides the best overview of its philosophy. Echoing the style of the *Whole Earth Catalog*, it was designed by Ant Farm, which used a collage-like effect by including drawings, handwriting, printed text, photographs, and advertisements. It is divided into two separately paginated sections, the theoretical "meta-manual" and the tactical and activist "manual" (Shamberg and Raindance Corporation 1971a, 1971b). Its theoretical content rests on four elements: a philosophy of media ecology, a critique of "Media-America" and broadcasting, a belief in video as a remedy to this system, and a tentative understanding of how computing might influence the future of video.

GUERRILLA TELEVISION

Guerrilla Television begins with an overview of a media-ecological vision derived from Wiener, Bateson, and McLuhan. Wiener's cybernetics was inspired by biology and the observation of the organism's relationship with its environment. From this he posited a similarity in the fundamental processes of communication and control in both animal and machine, explaining how both use "feedback" to change

their state in relation to new information to reestablish a “homeostatic” environmental relationship (Wiener 1961). Shamberg takes from this the idea “that machines could be understood in the context of animal or biological processes” and thus that “we can best understand and manage technology in a biological context” (Shamberg and Rainsance Corporation 1971a: 5).

Shamberg combines Wiener’s biological perspective with Bateson’s systems-based ecological approach (Bateson 2000) and McLuhan’s idea of media forming a specific “environment” with an “ecological” impact (Gordon 1997: 175; McLuhan 1994: 199) to treat technologies like organisms in an environment, existing in a symbiotic relationship with each other and with us. “Media and the man evolve together,” Shamberg says, with our technologies acting as recording, storage, and playback devices for our knowledge and “cultural DNA” (Shamberg and Rainsance Corporation 1971a: 7). Following Bateson, he thinks of this process as creating a complete “system”—a “media-ecology” or “information environment” formed by the interaction, competition, and evolution of technologies and the “information structures” they create (1971a: 9).

All media have their own “bias,” Shamberg says, meaning that they differ in their effects and consequences (1971a: 2, 15, 29). In particular, “some enhance life more than others” (1971a: 2). What all “healthy systems” share, he argues, is an ecological “diversity” and support of “a high variety of forms,” a complexity, a minimization of redundancy (limiting loss), symbiotic relationships between forms, and a decentralization and heterogeneity. An unhealthy system, in contrast, is characterized by a simpler, more homogeneous and uniform ecology, dominated by a smaller number of forms (1971a: 32).

Echoing cybernetic concerns for homeostatic balance, Shamberg argues that our very “survival” is at stake in an unhealthy system (1971a: 2). As Bateson’s systems theory makes clear, individual adaptation to an antisurvival ecology is not an option: the restoration of a life-enhancing balance requires a transformation of the entire system. “Because we are in an information environment, no social change can take place without new designs in information architecture” (1971a: 9). This requires the embrace of technology (1971a: 1; 1971b: 21): “If we can understand how to orchestrate these technologies, we can work directly on the level where Media-America is shaped,” Shamberg argues, and restore a “media-ecological balance” (1971a: 2, 9).

For the Rainsance Corporation, the broadcast ecology is a paradigmatic example of an unbalanced, unhealthy system. Shamberg describes broadcast television as “beast television” or “the beast,” playing on satanic connotations and the ecological idea of an aggressive, environmentally dominant organism (1971a: 32). Broadcast television, he says, is “highly simplistic and extremely redundant” in its similarity of output, “overly-competitive” in its infighting for the same news and events, “over-centralized” in its organization and

decision making, and “wildly unstable” in dropping unsuccessful shows. “The beast... has to lust after huge numbers of people per program to stay alive” (1971a: 32), producing a crowd-pleasing mentality and a collective mass consciousness that reduces diversity (1971b: 9). As Shamberg says: “A standard of success that demands thirty to fifty million people can only trend toward homogenization. Yet homogeneity is entropic. Information survival demands a diversity of options, and they’re just not possible within the broadcast technology or context” (1971a: 32). Broadcasting, however, is incapable of change. “Anyone who thinks that broadcast-TV is capable of reform just doesn’t understand media,” Shamberg concludes. “Reforming broadcast television would be, as Frank Gillette says, like ‘building a healthy dinosaur’” (1971a: 32).

The main problem of broadcasting is its unilateral character: “In Media-America, our information structures are so designed as to minimize feedback. There is no feeding back to broadcast television” (1971a: 12). Its technology “has no capacity for feedback,” Shamberg says, its one-way transmitters helping to “condition passivity” (1971a: 9) and only allowing responses through tightly controlled avenues such as talk shows (1971a: 12). Just as cybernetics sees feedback as essential to a being’s health and survival, so Shamberg sees physical and psychological feedback as essential in a media ecology. Feedback is “a prerequisite for [the] verification of experience,” which is itself essential for “psychological balance,” he says, yet the “vast psychological environment” of our contemporary information structures is “precisely designed to deny feedback,” producing “an incredible cultural tension” (1971a: 12). Broadcasting’s unilaterality, therefore, is not only “the opposite of democracy” but, in stifling the voices of the people and verifying “essentially abnormal behavior,” is also anti-health and anti-life (1971a: 12), thus representing a “psychic genocide” (1971a: 33).

What we find in *Guerrilla Television*, therefore, is a radical, countercultural, and democratic manifesto for the overthrow of the entire broadcasting system and the liberation of the productive capacity and voices of the people in all their diversity; though it is a manifesto based not on a political critique but a cybernetic, biological conception of survival in a specific technological environment. “Unless we re-design our television structure our own capacity to survive as a species may be diminished,” Shamberg argues, as we succumb to the influence of its “biologically unviable characteristics” (1971a: 9). “Only through a radical re-design of its information structures to incorporate two-way, decentralized inputs can Media-America optimize the feedback it needs to come back to its senses,” he concludes (1971a: 12).

The system, however, opposes this participation, permitting “no one direct access to distribute their own material” (1971a: 33). Overly centralized hardware, complex technical standards, the cost of hardware, and the activities of unions and employers all limit who

can produce content (1971a: 32), ensuring that “all information must be filtered through a select, relatively homogeneous group of people” (1971a: 33). The public’s role is to watch: as Shamberg argues, “growing up in America on television is like learning how to read but being denied the chance to write” (1971a: 21).

For Shamberg, video can challenge this system. Whereas some see it as merely “a kind of ‘Polaroid home movies,’” he says, “those of us working in the medium believe its significance is much greater than that of a mere improvement on an old medium, that rather videotape can be a powerful cultural tool” (1971a: 26). The reason for this is because, he says, video, like computing and information technology, is “a general-purpose technology,” having the flexibility to do a variety of tasks (1971a: 31–32; 1971b: 60). In being used by anyone for whatever he or she wants to say, video is “the perfect tool for media-children who were raised on TV but never allowed to make their own” (1971b: 7). Video is “subversive” in opposing the dominant controlled, unilateral information structures of schools and broadcasting. It is decentralized, it makes high-speed feedback possible, and it gives people the power “to generate their own knowledge” and “to sculpt information-space” (1971a: 22; 1971b: 30).

Video, therefore, has a democratic potential. Whereas broadcast TV is run by people “who operate the cameras in their own interest,” and educational TV is run by liberals who operate the cameras “in the people’s interest,” guerrilla television “gets cameras to the people to let them do it themselves” (1971b: 37). The inspiration is the countercultural ideal of public participation and do-it-yourself (DIY) culture’s enabling role, hence its presentation as a “manual” explaining the technologies and strategies for ordinary people. Shamberg’s goal was the creation of a popular movement of “community video”: an “indigenous production” without professional mediation, in which local groups shoot, edit, and present their own footage, directly expressing their own concerns (1971b: 57). “Guerrilla Television is grassroots television,” Shamberg explains. “It works with people, not from up above them” (1971b: 8), helping to produce a new network, community consciousness, and an “information structure” (1971b: 75, 9).

Video also plays a role in developing individual consciousness. Following Ryan, Shamberg argues that “there is a unique cybernetics of self indigenous to an electronic culture” (1971b: 45). The mind exists in relation to and through feedback with its environment (a process Ryan calls “infolding information”), and video serves, therefore, as a means of “self-processing” (see Ryan 1973). As we relate not only to the world but to images of the world, we can use video to feed back our self-produced images of ourselves and our lives “to develop a sense of video self and video grammar” (1971a: 36). In contrast to broadcast TV, which devalues the self with ready-made images, video allows self-expression, self-control, and self-verification, enabling you “to assert your own value as information”

(1971b: 45). Making tapes about yourself is “a tool for knowing who you are and combating the superstar behavioral patterns of the media. With tape, being yourself has value in itself” (1971b: 45).

Video allows people to generate “relevant, experience-based information about themselves” (1971a: 36), functioning as a personal tool to “enhance their personal lives” and take control of their “psychological environment” (1971b: 31). Now “people can control information about themselves, rather than surrender that power to outsiders” (1971b: 9). The resulting explosion of personal voices and programming, Shamberg argues, will add to the ecological diversity and to the system’s balance and health. “In place of a mass consciousness of millions of people all plugged-in to the same ‘show,’ is a more flexible collective mind with the option of a high variety of available viewpoints” (1971b: 9).

Video and its feedback are psychologically healthier, therefore, for the individual and collectively healthier in producing a more diverse media ecology. This has democratic implications: for Shamberg, “the inherent potential of information technology can restore democracy in America if people will become skilled with information tools” (1971a: 30). Guerrilla television aims to help organize this process, establishing “survival centers” in the developing information environment (1971a: 36–37) and helping produce radical content—radical software—that can “media-ize” people against the products of broadcasting (1971b: 33). As in the “new communalist” philosophy of the *Whole Earth Catalog*, self-sufficiency is essential. Shamberg is clear: putting your message on the mainstream channels is not an option; “alternate information systems” are needed (1971a: 29). “Cybernetic guerrilla warfare means re-structuring communication channels, not capturing existing ones” (1971a: 29), but this is only successful if they have their own independent power base and do not depend on “outside support” (1971a: 37).

The spread of video cameras allows the democratization and decentralization of information production, but, Shamberg warns, an effective “generalized video system” also requires control of the means of distribution (1971a: 32). New means of distribution outside the broadcast system are required. The mail service—“the only true people’s network” (1971b: 67)—provides one opportunity, guaranteeing “total control of the information cycle,” but it suffers from “low-volume” individual distribution (1971a: 31). To compete with broadcasting, we would “need our own transmitters and ideally our own power supplies” (1971b: 67). Amateur radio is one example, “but decentralized transmission of information should be dominant, not fugitive. Each citizen of Media-America should be guaranteed as a birthright access to the means of distribution of information” (1971b: 67). For Shamberg, in surveying current technologies, only cable television had the potential for low-cost community-based production and distribution (1971b: 75).

In many ways *Guerrilla Television* is a boundary text. It is a book aimed at fighting analogue broadcasting with analogue videocassettes, yet it employs cybernetics and the language and concepts of computing (radical *software*) and develops a critique of broadcasting's features that is now common in commentaries on the digital ecology (Benkler 2006; Gillmor 2006; Leadbeater 2008; Shirky 2008). If Shamberg cannot foresee any new medium supplanting television, he does, tentatively, see the possible effects of developments in computing and grasps toward a future of media symbioses and the use of digital cable for an "'all-information-all-the-time' amalgam" (1971a: 13).

Shamberg recognizes that cable's digital signals "can carry all and any electronic information," acting as a "pipeline" for information. He foresees a future "broadband," "wired nation" with wireless and satellite connecting cable networks into one information system, presciently noting that since these digital cables are two-way they allow users to send information: "This might range all the way from transmitting your own videotape (thus making every home a potential decentralized studio) to simply pressing a button to vote electronically, or shopping by feeding back when you see an item you want delivered. Moreover the cable is capable of carrying computer data so that the system could automatically keep track of all transactions . . . (eg, a terminal for domestic bookkeeping and business chores)" (1971b: 76–77). Shamberg also sees computers as a solution to the problem of distribution. His idea for "alternate information systems" includes "video networks and computer data banks" (1971a: 29). His hopes for a decentralized "personal and public access video data bank," where people can access one another's work (1971a: 36), edges toward our contemporary experience.

At the book's end, he may even reach this point. Recognizing that "a cultural data bank" of videotape is being built up, he suggests that "the ultimate stage may be a national knowledge grid structure": "If we had a national information accessing system via computers, specific requests for skills and data could be serviced without geographical considerations. Feeding into this system would be grassroots television producers" (1971b: 95). Such a system has many uses, including holding authorities to account. Shamberg suggests videotaping police at events and undercover agents on the street (1971b: 8) or creating a data bank with "your own record of what people, especially politicians, have said" (1971b: 43). Schneider saw another possibility, using video to develop "a catalog of lifestyles," documenting the life of each community (Shamberg and Rainsance Corporation 1971b: 95).

In the end, however, it is not enough to have more "product." What is important for Shamberg is "the process"—the activity, work, and creativity this inspires: "When we develop super-sophisticated access models we'll be able to re-cycle all of man's past data to fit useful, contemporary contexts. At that point, the ability to re-cycle

information, we'll have a true information ecology" (1971b: 18). Appropriately for Shamberg's cybernetic McLuhanism, the point of media production, distribution, and access is not passive consumption but ongoing, participative feedback.

TOP VALUE TELEVISION

To date, the most detailed discussion of the American video-activist tradition is found in the work of Deirdre Boyle (1997), who traces this movement from the founding of Commediation and Raindance to its later activities, with a particular focus on Shamberg. Despite the success of *Radical Software* and *Guerrilla Television* in rallying the video community under one banner, it was always a divided scene, she claims, following more personal agendas: "Guerrilla television producers professed an interest in community video, but they were generally far more interested in developing the video medium and getting tapes aired than in serving a localized constituency" (Boyle 1997: 34). Shamberg's next project certainly moved away from community video as he joined with Allen Rucker and others in 1972 to found TVTV—Top Value Television—to take on broadcasting with their own documentaries.

TVTV's first two films, *The World's Largest TV Studio* and *Four More Years*, which surveyed the 1972 Democratic and Republican conventions, were praised for their innovative style, in placing themselves, the media coverage, and the convention participants center stage. Their difference from the highly packaged network coverage brought positive reviews and a perceived victory against the mainstream media. Cut into a ninety-minute film, the tapes were shown on broadcast TV in October 1972. For Boyle, however, "TVTV effectively abandoned all claims of being an alternate video group when they decided to re-edit the convention tapes for broadcast on Westinghouse television stations" (1997: 72). With cable television uninterested in funding video makers, she says, they were forced to rethink their identity as "television makers" (1997: 72).

Though their subsequent films, the 1973 *Lord of the Universe* and 1974 *Adland*, were also successful, their 1974 book *The Prime Time Survey*, Boyle argues, confirmed "their growing drift away from their roots" (1997: 93). It was here that they identified their own place within the contemporary video tradition as "video programming" (as producing nonfiction for broadcast) and here that they claimed, "We believe now that building an enclave within the existing system is a viable strategy for change" (quoted in Boyle 1997: 94). In a definitive break from *Guerrilla Television's* call for a new system, Boyle says, "the possibility of reforming broadcast television by example became TVTV's new, improved goal" (1997: 94).

Other groups tried different approaches. Ted Carpenter in Appalachia moved into cable television with Broadside TV, taking advantage of a local-programming stipulation imposed by the Federal Communications Commission (FCC) in 1969. Going on air in 1973,

Broadside at its peak provided up to twenty hours of programming a week to twelve thousand homes (Boyle 1997: 101), but the FCC's changing of the local-origination clause in 1974 led to financial difficulties and Broadside's eventual closure (1997: 96–104, 139–45). Another option was public television. At the University of Minnesota, University Community Video (UCV) broadcast its program *Changing Channels* on the PBS-affiliate KTCA beginning in October 1974, but by the early 1980s declining PBS support led to its shift away from program making toward video art.

With cable and public-access television unavailable, TVTV continued to produce for broadcast television. However, the networks' incorporation of their stylistic innovations and their own "drift into entertainment programming" meant the distinctiveness of TVTV began to be lost (Boyle 1997: 153–54, 160). Its 1976 film *TVTV Looks at the Oscars* mixed scripted, dramatic footage with documentary, and subsequent films, such as its drama *Super Vision* (1976–77) and its NBC comedy pilot *The TVTV Show* (1977), went further. NBC's rejection of TVTV's pilot marked its end as a media concern, and the company closed within a few years. Its drift into the mainstream seemed sealed with the subsequent Hollywood success of Shamberg as a film producer, whose credits include *A Fish Called Wanda* (1988), *Pulp Fiction* (1994), *Get Shorty* (1995), *Matilda* (1996), *Gattaca* (1997), *Man on the Moon* (1999), *Erin Brockovich* (2000), and *World Trade Center* (2006) and whose production companies include Jersey Films (with Danny DeVito) and Double Feature Films. The author of *Guerrilla Television* had become a key player in "the beast."

Boyle gives several reasons for TVTV's failure (1997: 190–208). She sees it as following the broader failure of the counterculture and its ideals and institutions when faced with reality and the more conservative climate of the 1970s. Its movement into broadcast production alienated its countercultural support, while the mainstream media's assimilation of its innovations saw a convergence toward a shared center. It also fell victim to a changing television landscape. The movement of cable away from public-access commitments, the rise of commercial cable services during the 1980s, and the increasing marketization and privatization of public television under Ronald Reagan meant the hoped-for cable-TV video revolution stalled. Finally, the movement's key figures were seduced by the industry they once opposed.

Boyle's account ends in 1997 with the incorporation of the movement's interest in ordinary people in "reality television." Though she argues that the 1980s saw a resurgence of community video making with the increasing availability of consumer video equipment, the examples she gives have had only a limited audience. She notes that the footage of the Rodney King beating in 1991 showed the medium's potential as a weapon against authority, but at the time

she was writing this too was only a limited possibility. Within a few years, however, all this would change.

"BROADCAST YOURSELF"

Sony's 1960s portapak revolution was extended with the launch of commercial "camcorders" in the 1980s, and by 1985 a number of companies were offering camcorders using full-size videocassettes. By 1995 Sony, JVC, Panasonic, and others helped launch digital video (DV), and within a few years a range of cheap digital cameras were available. The contemporary video revolution, however, owed more to developments in other technologies. The rise of cheap broadband made web-video watching easier; "third generation" wireless technology brought mobile phones with video cameras, multimedia capacity, and Internet connectivity; and new Web 2.0 platforms made the uploading, storage, and sharing of personal content easier.

Before YouTube's launch in November 2005, posting videos online was difficult. Its ease of uploading and easy interface attracted users, and it soon became the dominant provider of online video in the United States and the United Kingdom. Acquired by Google in November 2006 for \$1.65 billion, YouTube was rated by comScore in May 2011 to be the top online-video service, with 147.158 million unique US users that month compared to 60.369 million for VEVO, 55.482 million for Yahoo! sites, and 48.189 million for Facebook (Rao 2011). Nielsen's May 2011 ratings give YouTube a similar dominance, with 111.782 million unique US users against 36.384 million for VEVO, 29.218 million for Facebook, and 26.195 million for Yahoo! (Rick 2011). Alexa (2010b) ranks YouTube as the third most visited website on the Internet, behind Google and Facebook.

YouTube's tagline "broadcast yourself" succinctly explains its appeal and importance. Video production and sharing has become a central element of the new "participatory culture." This world of peer-to-peer me-casting, user-generated content, and sharing has attracted much commentary, divided primarily between liberal defenders of the empowered individual contributing toward culture (Benkler 2006; Gillmor 2006; Leadbeater 2008; Shirky 2008) and conservative critics of the quality of this participation (Keen 2008; Siegel 2008). What has not yet been considered is whether these developments fulfill the hopes of that cybernetic McLuhanism that agitated for this transformation.

In an e-mail interview with the author in 2009, Shamberg stood by *Guerrilla Television*: "I find the jargon of the book embarrassing now, but not the ideas, of which I'm proud." In particular, he recognizes a more complex contemporary media ecology:

The media is a parallel environment just like the physical one that grows and mutates on its own. I think you need to look no further than iPod apps, Facebook and Twitter to see that new media forms, like life forms, keep springing up organically. The

great thing is that, like Guerrilla TV, the corporations can't control it. What I saw correctly is that we were democratizing the means of production. What I didn't see was that you also had to democratize the means of distribution. I should have invented YouTube but there was no technology even to suggest it.

Shamberg is positive about digital media. "Facebook, Twitter, blogs, Flickr etc. is exactly what I was talking about in making media two way and empowering people ... only better." More information is available, and the capacity to respond politically is increased, but what is "more important" is the simple ability to produce: "The act of communicating is empowering whether or not people are being heard." Social media, he says, are an entertainment form "where just doing it has an intrinsic satisfaction. Everyone wants a stage." The impulse to make a movie, tweet, or blog is important: "It gives everyone a feeling that they have a place in the world." As *Guerrilla Television* argued, feedback is healthy, individually and collectively.

For Shamberg, this participation is the key. "Today's model is great because anyone can be seen. What's less clear is what the economic model is but that is irrelevant to the vibrancy of the medium." Economics is significant only in terms of facilitating participation: "The underlying factor for online isn't just the means of transmission but it is the increasing low cost of server capacity. Massive amounts of information can be stored and accessed at ever lower prices. So imagine that trend continues and there are more efficient and portable ways of displaying it." Overall, Shamberg's feeling about the takeoff of digital media is overwhelmingly positive: asked if the reality of everyone having his or her own video camera has lived up to what he hoped for, he replied, very simply, "It's better."

Shamberg's *Guerrilla Television* is one of the most important works of media theory of the 1970s, and its neglect highlights the limited vision of the mainstream discipline and its textbooks. Shamberg's significance lies first of all in his development of the most systematic media-ecological philosophy to date, and his use of it to ground a critique of the broadcast model has since become widespread in the key texts of the contemporary digital participatory culture. His emphasis on the need for and positive effects of feedback, his call for the democratic development of productive capacity, and his faith in ordinary people and their creative empowerment and self-expression not only presage later developments in digital media, but they are also one of the most significant theoretical bases for those developments. *Guerrilla Television* is the seminal text of the user-generated-content revolution.

It is, nevertheless, a text with limitations, remaining disinterested in political issues and more traditional sociological and economic analyses. Its analysis of broadcast media's power, effects, and unifying capabilities appears simplistic in the light of later audience

research, though it remains important at the level of form as an ecological analysis of the dominance and unilaterality of the broadcast model. More troubling, however, is the countercultural faith that video participation would inevitably follow its ideals of community expression.

In many ways Shamberg's past and present optimism is justified. Activists have employed cheap video and the ability to disseminate material globally to combat injustices. The Israeli human rights group B'Tselem began a project in January 2007 to distribute video cameras to Palestinians in the West Bank to document the daily abuses, and in July 2008 a seventeen-year-old resident's footage of an Israeli soldier shooting baton rounds point-blank at a blindfolded and cuffed Palestinian prisoner was picked up by the world's media (McCarthy 2008). Similarly, in June 2009 a video of the killing of Neda Agha-Soltan by Iranian security forces achieved global prominence when it was shared on the Internet, while in 2010 Mehdi Saharkhiz developed a one-man video channel collecting and broadcasting footage of Iranian demonstrations and their violent suppression, internationally embarrassing the government (Weaver 2010). On a smaller scale, in 2007 the residents of the Andover Estate in Islington, London, were able to respond to their portrayal in the ITV program *Ann vs. the Hoodies* by hiring a filmmaker to produce and post their YouTube film "Beyond the Hoodie" (Golding 2007).

Though many examples can be found of communities using video for self-expression, the reality of the democratization of video making is not always so positive. In Hartlepool, England, in July 2007, for example, disabled fifty-year-old Christine Lakinski fell ill and collapsed on her way home. She was assaulted by three men, one of whom "tried to rouse her by throwing a bucket of water over her, before urinating on her and covering her with shaving foam." He reportedly shouted "this is a YouTube moment" as the incident was filmed on a mobile phone (BBC 2007). Clearly, while positive community uses of video can be found, there is nothing in the medium that necessarily determines such a use.

Shamberg's communalist hopes may seem naive when faced with the use of video for frivolous ends, such as piano-playing cats, or more offensive purposes, such as child abuse or right-wing hate-mongering, but what remains defensible is his underlying cybernetic philosophy and its fundamental belief in the expressive potential and benefits video offers individuals traditionally denied this possibility. As such, it serves as a corrective to a debate polarized between liberal champions of participation in the "networked public sphere" (Benkler 2006: 242) and conservative critics of poor-quality contributions. For Shamberg, self-expression is intrinsically healthy: his is a philosophy prepared to defend the value of ordinary people's video productions and experiments. *Guerrilla Television*, however, does more than anticipate and justify later developments in video production and participation; it also helps us, as Jenkins suggests,

reflect on and evaluate their contemporary forms. In particular, Shamberg's arguments about the need for diversity and individual control have important implications for our understanding of the contemporary digital ecology.

Shamberg's ecological approach emphasizes the need for a diversity of producers and opinions, and YouTube's use as a platform for user-created content certainly seems to achieve this diversity. His contemporary enthusiasm for the service is understandable: in addition to its open access, it offers a broad range of voices. The variety of uses, ideas, opinions, and subject matter is far greater than anything offered by commercial broadcasters, whose content is demographically crafted, editorially controlled, and professionally created to adhere to accepted conventions of production style, genre, narrative, and so on. The problem arises instead at the level of form.

As Albert-László Barabási and Réka Albert's (1999) analysis of "preferential attachment" highlights, successful nodes on the Internet are favored more than unsuccessful ones, attracting more links in a circle that is vicious for their competitors. Hence it is possible for a small number of sites to dominate within their niche, with early competition falling away over time (who today remembers the auction site QXL or Amazon's own auction pages?). It is precisely this position that YouTube has achieved in English-language web video, with its spread through the web increased by the ease of linking and of embedding video on blogs and social network sites. The growth of the new information structures of the Internet, therefore, has seen the growth of new "beasts" that dominate the online ecology. While at the level of content YouTube and other Web 2.0 services constitute more democratic and publicly open information structures than those available to individuals in the broadcast era, at the level of form they remain private, controlled services whose self-reinforcing online success leads to a dominance that potentially goes further than that of the more geographically limited broadcast "beasts."

YouTube's position is obviously reinforced by its ownership by one of the most important multinational digital corporations, Google Inc. The US Google site is ranked by Alexa (2010a) as the most visited site in the world, while many of its subsidiaries rank in the global top hundred. Google is one of the strongest forces in the contemporary digital ecology, with first-quarter 2011 revenues of \$8.58 billion, up 27 percent on first-quarter 2010 figures. Sixty-nine percent of its total revenue (\$5.88 billion) comes from Google-owned sites, a rise of 32 percent over first-quarter 2010 figures (Google Investor Relations 2011). Separate figures for YouTube are not available, but it is accepted that it runs at a loss, though the estimate of this loss varies (Metz 2009) and the company publicly claims that it expects a profit soon (Waters 2010).

With pressure for a return on its investment, Google has significantly transformed YouTube, turning it away from its earlier emphasis on user-generated content to realign it with the broadcast

industries and adopt broadcast-era strategies of monetization. These include paid-for advertising and deals with film and television companies and the music industry to serve now as an online platform for professionally produced broadcast content (see Barnett 2009; Helft 2010; Stone and Barnes 2008; Sweeney 2009). Seen in this light—as the subsidiary of a global corporation, dominating web video and increasingly aligned with and delivering the products of broadcast media companies—YouTube has little in common with either the countercultural spirit of the video movement or the decentralized and diverse information structures it hoped would emerge and resembles more the very “beast” Shamberger attacked in 1971.

Alongside the issue of diversity, therefore, is the related issue of control. Shamberger was clear about the need for control over the means of production and distribution, and on one level, as he suggests today, the spread of cheap video cameras and the free hosting services of YouTube appear to more than fulfill his hopes for a grassroots information network. The reality, however, is more complex.

To understand why, we need to expand Shamberger’s cybernetic McLuhanism to take into account what might be called the *deep materiality* of the medium. Both the McLuhanist emphasis on the sensory relations established by the form and the cybernetic emphasis on its ecological relationships overlook key elements of the medium: in particular, its internal construction. Social constructionist approaches were perhaps the first to consider this, in their exploration of design decisions and the social values built into technologies (Bijker et al. 1987; MacKenzie and Wajcman 1985), but their opposition to technological determinism meant that they were unable to theorize technological efficacy. With the rise of digital media, whose form and user experience was more complex, commentators began to emphasize the role of the internal form and of “layers.”

Lawrence Lessig (1998), for example, emphasizes the significance of the underlying “architecture” of networked communication, arguing that just as real-world activity is limited by specific “constraints,” so online activity is limited by “code”—by the architecture of the software and hardware itself. Employing Yochai Benkler’s concept of “layers,” Lessig examines the architecture of communication systems, distinguishing the “physical” layer (e.g., the computer and wires), the “logical” or “code” layer (e.g., the code that makes the hardware run), and the “content” layer (the material that gets sent and consumed). “These three layers function together to define any particular communications system,” he argues, and “each of these layers in principle could be controlled or could be free” (Lessig 2001: 23). For example, whereas Speakers’ Corner in London is a noncontrolled physical space where the language (code) is open and the content is free, Madison Square Garden in New York City is a privately owned space, and so even if the code and content are free, the physical level remains controlled. With the telephone, the physical

and code layers are owned and controlled, though the content of one's speech is free, whereas with television, film, newspapers, and radio the physical, code, and content layers are all controlled by those who own the system (Lessig 2001: 23–25).

Following this model, YouTube is less free than ordinarily thought. The physical, hardware layers of video production and the computers we use for uploading are owned by us, but Internet service providers, or ISPs, own the network connections, and Google Inc. owns YouTube's server farms, so this layer remains controlled. Google Inc. also owns the code layer: the software running the site and the code stored in and running over its servers, the videos themselves. Even the content layer retains only a relative autonomy. Videos must adhere to technical standards such as length and also conform to social standards; copyrighted material or images "flagged as inappropriate" by the user community or by external authorities may be removed. YouTube's list of unacceptable content is detailed (YouTube 2010b) and, while defensible, nevertheless highlights the company's ultimate control over the layer.

Though YouTube presents a relatively benign public face, allowing most material on its site and currently serving as an effective host for many political and activist videos, this does not justify complacency. YouTube is not a static site: it has changed since its 2006 purchase, increasingly allying itself with broadcasting concerns, and it has changed its policies to serve this new partnership, massively stepping up its Content ID copyright scanning and boasting that it now "scans over 100 years of video every day" (YouTube 2010a).

On issues of direct economic concern to itself, therefore, YouTube readily asserts its control over its users and content, and one would expect all the digital "beasts" to operate similarly either to protect their own interests or to collude in broader actions against political threats. Hence on April 29, 2011, on the day of Prince William's wedding, and in the light of a wave of recent student protests in London that caused concern for the authorities, it was reported that Facebook had deleted dozens of profiles set up by anti-austerity campaigners such as UK Uncut trying to organize demonstrations in the capital against government plans. A Facebook spokesperson denied any political motivation, claiming instead that the sites "just hadn't been registered properly" (Malik 2011).

Perhaps the clearest example of how such control might be systematically applied was the December 2010 "cyberwar" against WikiLeaks in which, following its release of US diplomatic cables, the site came under sustained (possibly state-backed) distributed denial-of-service (DDOS) attacks, while US political pressure on private companies led to the withdrawal of cloud-hosting services by Amazon, the removal of its domain name by EveryDNS, and the decision by PayPal, MasterCard, and Visa to withdraw donation facilities (Leigh and Harding 2011). In this context, Amazon's collusion is most significant,

clearly demonstrating the lack of neutrality of private hosting “platforms.”

The question of how the problems of monopoly and control can be countered is beyond the scope of this essay, but the issue is fundamental. I have argued that Shamberg’s 1971 ecological critique of information structures and their health is central to understanding the operation of digital-era media and the ambiguous benefits of Web 2.0 services, but it can also help us understand how to defend against the new “beasts.” WikiLeaks’ own response to the attacks demonstrated an ecological perspective as it continually moved its location to other servers to remain active. WikiLeaks moved to Amazon’s EC2 servers since they were large enough to survive the DDOS attacks, and when it lost those servers, together with its domain name, it shifted to an alternative address, www.wikileaks.ch, registered in Switzerland but hosted in a Swedish bunker (Leigh and Harding 2011: 206). Similarly, the creation of hundreds (and later thousands) of “mirror” sites used the decentralized power of the network to create a multiplicity of sources, fighting attempts to remove the information by its proliferation within the media ecology. Diversity, therefore, became a defense against control.

Even these responses don’t solve all the problems, as we remain indebted to the existing infrastructure and to ISPs and their servers, but there might be ways of introducing more diversity even here. In a 2010 speech, Columbia University law professor Eben Moglen described the “architectural revolution” of online experience, from the original peer-to-peer network, through the dominance of a client-server architecture, to contemporary cloud computing, tracing the disempowerment of users and their loss of control over their own information:

So we built a network out of a communications architecture designed for peering which we defined in client-server style, which we then defined to be the dis-empowered client at the edge and the server in the middle. We aggregated processing and storage increasingly in the middle and we kept the logs—that is, info about the flows of info in the Net—in centralized places far from the human beings who controlled or thought they controlled the operation of the computers that increasingly dominated their lives. This was a recipe for disaster. (Moglen 2010)

The result, Moglen says, is a society based on services-for-spying: on “unfree services delivered in unfree ways really beginning to deteriorate the structure of human freedom,” sold to us on the basis of “perceived convenience,” given the complexity of controlling our own web experience. Hence his solution is one’s own computing infrastructure: “What do we need? We need a really good webserver you can put in your pocket and plug in any place.” This is, he says, “a

technical challenge incrementally attainable by extension from where we already are that makes the lives of the people around us and whom we care about immediately better.” “The direction in which to go,” he concludes, “is freedom using free software to make social justice.” In February 2011 Moglen formed the FreedomBox Foundation, organizing a community project to develop, design, and promote “a personal server running a free software operating system, with free applications designed to create and preserve personal privacy” (FreedomBox 2011).

If Moglen’s ideas seem familiar, that is because they are an extension of that same democratic and populist spirit that drove the video activists and alternative media practitioners of previous decades, updated now for a different technical and political terrain. They resonate well with Shamberg’s ideals in *Guerrilla Television* as an ecological response to the problem of diversity and individual control. They raise a hope that against the “beasts” of the digital era other information structures might survive and prosper; that a life-enhancing, healthy media system might be created; and that one day we might be talking about YourTube and not YouTube.

NOTE

1. *Guerrilla Television* was written by Michael Shamberg based on the ideas of the members of the Raindance Corporation, hence his joint attribution of authorship. It has two parts: the “Meta-manual” and the “Manual,” each of which has its own pagination, so I’ve referenced each part separately.

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