Introduction

My artistic practice incorporates themes of popular culture and political fringe movements in a tradition derived from filmic collage, digital sampling and the use of found media toward iconographic recontextualization. I characterize my most recent interactive and/or generative media projects as experimental investigations into the politics and aesthetics of networked digital media systems, specifically within the context of their past, present, and future conditions of corporate oligarchic control. In accordance with this focus, I am particularly interested in file sharing networks and their relationship to the realm of more traditional domestic entertainment distribution.

I first present a cultural and historical background for discussion of my work as it relates to these networked media systems, examining the media distribution structure of the Internet as it is currently being co-opted in accordance with the corporate mass-media modus operandi of television. Considering both television and the new hyperdistribution formats of file sharing networks, this composite media distribution system is examined as an emergent ecological information system, or "ideosphere." This ideosphere is discussed as it facilitates cultural battles in the information age, with foreign and domestic underground network movements as central examples. The discussion concludes with an analysis of peer-to-peer file sharing networks as distribution vectors for these and other counter-cultural movements.

I then present my work and its relation to this background through a chronological account of the methodologies behind each project's development. Considerations of source content selection, processing, and interactivity are explained, including an in-depth presentation of the speech-generation process employed in my most recent piece, *De-Generative Politricks*. To place these systems in further perspective, I develop an artistic background for my work by discussing a variety of prior examples in both traditional and more contemporary artistic disciplines. This

artistic background centers on montage theory and related practices of algorithmically constrained composition, where these elements combine to create new possibilities for strategies of detournement and the development of hyper-narratives.

Finally, I conclude with a general, postmortem assessment of my approach in building these media mixing systems, examining their successes and failures in terms of interactivity and thematic coherence. I attempt to identify the key problematics that emerged throughout the process, presenting a strategic road map for anticipating and managing these issues in future endeavors.

1. Characterizing the Ideosphere

Networked digital media systems are easily identified as one of the early twenty-first century's most paradigmatic technologies. Digital telecommunication networks (comprised of, and mediated by, an extremely wide variety of computing systems) are now globally connected to an unprecedented degree, and these connections continue to increase at an exponential rate. As infrastructures are extended and bandwidth increases, with more and more nodes on the global telecommunications network, the possibilities for media consumption, interaction, and real-time communication all increase at a corresponding rate.

The emergence of this information system has its roots in an extremely complex web of social, technological, and economic developments, and though it may be impossible to catalogue or track them all within a reasonably digestible discourse on the matter, there have been a number of heroic attempts – most notably that of Manuel Castells in his trilogy *The Information Age: Economy, Society, and Culture*. Using a chapter of the first volume of this trilogy as well as the work of Armand Mattelart and Brian Winston[1] as guides to discuss the historical trajectory of networked media, this section will then elaborate on the notion of the global networked media system as an emergent ecological information system – otherwise known as an "ideosphere." Throughout the discussion, this chapter will present the argument that the ideosphere in question is one which has been elaborately constructed within a limited cultural context, primarily according to the interests of corporate media oligarchies.

[1] Castells (2000), Mattelart (2000), Winston (1998).

1.1 Mass Media

In order to place the contemporary global telecommunication and media network in perspective, it is necessary to first present a brief survey of television's transition toward networked media, considering a few surrounding theories and their intertwined sociological, technological, and economic developments. For the purposes of this exposition, the discussion begins with the theories of Marshall McLuhan during the widespread industrial and cultural adoption of television in the early 1960s.

In 1962 McLuhan described a cultural paradigm shift engendered by the standardization of print media production and dissemination methods.[2] This form of "mass media" was characterized as a hegemonic cultural force, imposing a consolidation of power and a standardized form on all aspects of global communication that flowed from the relatively few authors of the printed word to the general (literate) public. Within the expression of this sentiment (expressed in a book, one might note), there was hope at the time that with television and other newly emerging forms of electronic communication, the new audiovisual format would embody a diversity of messages that had been ignored or constrained hitherto within the limitations and exclusions of print media. Of course, television quickly became the next dominant cultural media form, and this optimism was quickly deflated, as Castells discusses:

> The TV-dominated system could be easily characterized as mass media. A similar message was simultaneously emitted from a few centralized senders to an audience of millions of receivers. Thus, the content and format of messages were tailored to the lowest common denominator... The audience was seen as largely homogeneous, or susceptible to being made homogeneous. The notion of mass culture, arising from mass society, was a direct expression of the media system resulting from the control of new electronic communication technology by governments and corporate oligopolies.[3]

---

[2] McLuhan (1962).

[3] Castells (2000), p.331.

Thus, with television production and dissemination capabilities firmly in the hands of governments and corporate entities, and with broadcast-reception sets rapidly appearing in consumers' homes, the hegemonic nature of this new mass media form was quickly established, arguably making television *the* paradigmatic technology of the era. In stark contrast to the McLuhan-esque optimism surrounding the beginnings of the medium, theorists have been quick to offer pessimistic and intellectually derisive justifications for its eventual ascendancy. Where print media is often characterized as favoring sophisticated, delicate sentiments, placing a high valuation on deductive reasoning and systematic exposition, television is largely scorned. The media theorist Neil Postman states, "entertainment is the supra-ideology of all discourse on television. No matter what is depicted or from what point of view, the overarching presumption is that it is there for our amusement and pleasure."[4] Castells sums up this view by saying, "the diagnoses converge toward two fundamental points: a few years after its development television became the cultural epicenter of our societies; and the television modality of communication is a fundamentally new medium, characterized by its seductiveness, its sensorial simulation of reality, and its easy communicability along the lines of least psychological effort."[5] This diagnosis neatly reaffirms the colloquial typification of television as the "idiot box."

1.2 Trajectories of Government and Corporate Control

While noting the fact that television has become the "cultural epicenter" of western societies, it is important to also note the trajectory of government and corporate control over the medium.[6]

---

[4] Manuel Castells (Castells, 2000, p.332) referencing Neil Postman in *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*, New York: Penguin Books, 1985.

[5] Castells (2000), p.332-333.

[6] Much of the historical background in this section is derived from Armand Mattelart's *Networking the World, 1794 – 2000* (Mattelart, 2000).

In the beginning, and largely up until the 1980s, most television broadcasting networks remained under the supervision (if not under the outright control) of government entities around the world. Although there were typically few broadcasting networks in contrast to the present situation, a significant share of attention was paid toward employing the medium in the public interest. Many governments established commissions to manage the use, access, and content of the airwaves, operating on a philosophy which held that the portion of the electromagnetic spectrum through which media broadcast signals are communicated constitutes a public resource, and therefore it should be regulated in order to serve the public interest. Often this management structure was extended from preexisting initiatives governing radio, so the general case of government control over media broadcasting remained much the same in a paradigmatic sense with the transition from print and radio media into the richer audiovisual language of television. With the advent of the VCR, cable TV networks, satellite TV, and massive corporate consolidation of entertainment business holdings, however, the situation changed rapidly.

First there was the explosion of content offerings in the form of Betamax, VHS, and Laserdisc recordings, later to be eclipsed by DVD. In addition to self- and pre-recorded video, there were simply more channels available to consumers as cable networks and then satellite networks emerged. Even the traditional broadcast network structure underwent substantial changes, with the new public network FOX going on the air in the US in 1986 as an example.[7] With more channels came more content variety, aimed at as many different audiences as could be

[7] This event was particularly significant for a number of reasons: first, it immediately followed the FCC's abolishment of "minimal non-entertainment programming" and "maximum advertising per hour" regulations in 1985. FOX has always been known for its minimal commitment to non-entertainment programming. Second, FOX embodied an entirely new approach to mass-marketing sensational, prurient content under the shameless *laissez faire* rubric of "FOX attitude," which had a direct and widespread cascading effect on other media outlets who adopted a similar stance in attempts to maintain audience shares.

shown to be watching television in statistically significant numbers, with corporate profit as a central motive behind this expansion.

So toward the end of the twentieth century, television consumers had an ever-increasing variety of entertainment options to pick and choose from. The free public airwaves no longer held a monopoly on the ability to instantly reach large and significant numbers of people along the lines of this "least psychological effort" as described above. Audience shares for public broadcast networks declined, taking advertising revenues with them. The corporate model of producing mediocre shows for a mass audience in return for easy advertising revenue was in crisis, while at the same time the governing entities encountered increasing difficulties in their attempts to manage the new diversity of programming and transmission methods.[8] Enter the age of corporate media conglomerates.

With the wider reach of media transmissions and the greater complexity and diversity of the production and transmission systems, it made perfect sense that corporate structures would adapt accordingly. Media corporations increased their holdings across the board, consolidating radio, print, TV broadcast, and cable operations under gigantic parent corporations (who often held stakes in a staggering array of other industries as well). Much of this consolidation was actively enabled in the US by the relaxation or elimination of government regulations in the 1980s and 90s, including the 1987 elimination of the "Fairness Doctrine"[9] and the lifting of station

---

[8] Cable television programming might have proven somewhat difficult to regulate, but due to its terrestrial nature it could at least be constrained and held to the standards governing traditional broadcast media, making it possible to enforce local public access mandates and culturally determined content standards. Satellite networks, on the other hand, are a different issue entirely, where the best any government can do is attempt to economically leverage the network operators, or ban possession of satellite dishes and receivers. Many fundamentalist governments attempted to exert this latter sort of control with minimal success. (Mattelart, 2000)

[9] See a history of the Fairness Doctrine at http://www.museum.tv/archives/etv/F/htmlF/fairnessdoct/fairnessdoct.htm (accessed 11/2004), which held that stations had an "obligation to afford reasonable opportunity for discussion of contrasting points of view on controversial issues of public importance."

ownership caps.[10] Ostensibly, the US Federal Communications Commission either recommended or directly took these actions in the interests of promoting competition between service and programming content providers, and the results of this competition did extend greater access to media across the nation – making many corporations a great deal of money in the process, and spawning the mergers that led to the current state of corporate media conglomeration. While the general position of the FCC holds that competition leads to more choice, better services, higher quality, and greater technological innovation, however, even today they avoid making official determinations as to the amount of source or viewpoint diversity available.[11]

Without diverging at this point into the true past or present status of media diversity, it is significant that a large-scale trend did begin to emerge with the glut of programming and new transmission channels (perhaps what one might consider to be a critical mass of content and transmission capability) – television clearly began to feed on itself as a source for more content, with new show formats essentially constituting metashows. Television events became significant general interest news items, and the very process of producing content became the legitimate subject for more self-reflexive content. Each thematic vignette (music videos, reality shows, sporting events, etc.) could be expanded into an entire unique network of highly aestheticized and demographically targeted programming. The larger theory holds that as television d/evolves, its nature as a medium of "mass communication" begins to fade as it restructures itself toward ever-increasing micro-audiences and specific modes of communication. As Castells states:

> Thus, because of the diversity of media and the possibility of targeting the audience, we can say that in the new media system, the message is the medium. That is, the characteristics of the message will shape the characteristics of the medium. For instance, if feeding the musical environment of teenagers is the message (a very explicit one), MTV will be tailored to the

---

[10] See the "Big Media – Regulations Timeline" at http://www.pbs.org/now/politics/mediatimeline.html.(accessed 11/2004)

[11] See the 10th Annual FCC report, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: MB Docket No. 03-172," released January 28, 2004.

> rites and language of this audience, not only in the content but in the whole organization of the station and in the technology and design of image production/broadcasting. Or, again, to produce a 24-hour world news service requires a different setting, programming, and broadcasting, such as weather report shows of global and continental scope. This is indeed the present and future of television: decentralization, diversification, and customization. Within the broader parameters of the McLuhanian language, the message of the medium (still operating as such) is shaping different media for different messages.[12]

1.3 Decentralization, Diversification, and Customization

The terms "decentralization, diversification, and customization" as employed above immediately bring to mind the contemporary conception of the Internet, and rightly so, as it is now the general structure through which different media are indeed being shaped for different messages. As traditional mass media forms begin to break down, tending toward decentralization, personalization, instant access, and instant choice in regard to information and communication through all forms of mixed media, they begin to approximate the decentralized, general-purpose communication structure set in place by ARPANET so many years ago. In many cases, they are using the same infrastructures – in fact, one of the biggest reasons for the current proliferation of high-bandwidth Internet connections (specifically over cable TV transmission lines) in the US and many other countries is due to the investment of media conglomerates in their rush to provide this diversity of media consumption offerings. Their investment in this infrastructure certainly paved the way for more flexible, on-demand services in the more typical television content delivery scheme of things. But it also had a much larger effect in that *it effectively co-opted the structure of the Internet for the fundamental modus operandi of television*. It was a strategic and synergetic transitional scheme for the mass media and telecommunications industries (old and new) to merge, literally and figuratively.

---

[12] Castells (2000), p.340.

This point requires some elaboration. There are indeed vast differences between digital cable systems, instant pay-per-view systems, dumbed-down Internet interfaces like WebTV, slightly smarter but still extremely limiting Internet interfaces like AOL, and full-bore no-holds-barred Internet access. If all those systems are delivered through the same cable, however, and if the delivered media is consumed via the same equipment (loosely considering a TV and computer monitor with severely limited interactive possibilities to be more or less the same equipment), the difference is not in the infrastructure, and therefore one might say the medium is effectively the same. Audio, video, and text are all delivered in digital form through the same pipe to the same equipment. Additionally, they are marketed and delivered to the majority of consumers for the exact same purposes – primarily for entertainment, but augmented by occasional informational content. When bandwidth and compression technologies develop further, the current conventional conception of downloading video might be seen as essentially the same thing as picking a pay-per-view movie or watching a program on Tivo (one of the first consumer digital recording devices), with the instant ability to fast-forward, rewind, etc.

So there will be an effectively infinite array of choices for entertainment programming, delivered via the same infrastructure through which many consumers already experience cable TV and the Internet. However, the emphasis from a media content delivery standpoint has always been (and by all appearances will always be) on consumption, with a much lower focus on interaction (social or otherwise, save low-bandwidth activities like emailing and chatting), and an extremely minimal focus on individual production of media. Where many people seem to view the Internet as an idealistic egalitarian structure, this is not quite how it works today. Aside from the basic computing systems knowledge and economic resources required for someone to produce meaningful or substantial content (meaning content beyond the realm of family photo albums or even iMovie-grade digital videos) and make it widely available on the Internet, there is also the fact that high-bandwidth consumer connections such as cable modems and ADSL are

only optimized for downloading, and in some cases service providers actually punish those who upload large amounts of data or try to maintain their own servers, presenting large financial challenges to those who would make their content available to others.

This is how the modus operandi of television (that of passive, complacent consumption) has been co-opted through the structure of the Internet – it is simply being reconfigured by media conglomerates as a more convenient means of targeting and delivering content, while making it extremely easy for providers to harvest detailed data about the consumption habits of individual consumers for future marketing efforts.

As a brief aside, it is important to note here that this process of assimilation is nothing new. In the encyclopedic historical account, *Media, Technology, and Society*, Brian Winston outlines a recurring process which he terms the 'law' of suppression of radical potential. In the most basic terms, this theory holds that:

> Constraints operate to slow the rate of diffusion [of a new technology] so that the social fabric in general can absorb the new machine and essential formations such as business entities and other institutions can be protected and preserved. Such a pattern, far from atrophying in the face of supposed revolutionary change, persists. If anything, there has been a significant diminution in the cut-throat nature of the market place because the desire for stable trading circumstances, coupled with external restrictions and monopolistic tendencies, works to contain the crudest manifestations of the profit motive.[13]

Applying this 'law' to the merger of mass-media television with on-demand interactive media puts a number of the previously discussed issues in perspective. Simply put, where the audiences and market share flow, established corporate interests follow – but not before they have shoehorned the technology into a viable business model.

The AOL/TimeWarner merger is perhaps the most salient example of this mass-media/Internet co-option effect today, though there are many, many others at the time of this writing. Safe but perhaps sad to say, it is now the case for an increasing number of Internet and

---

[13] Winston (1998), p.11.

cable TV consumers that the parent corporation who owns the physical communication infrastructure is the same corporation producing and/or delivering media content to the consumer – while tracking and aggregating data regarding that consumer's media consumption habits wherever possible. Furthermore, this same corporation often lumps it all into one competitively priced bill, which is often easily paid through an electronic transaction via the Internet connection provided by said corporation.

To elaborate, then: as media transmission becomes less centralized, more interactive, and more selective, but still ultimately coordinated through one massive organization (or a number of coordinated organizations, in any case), what is really going on? The central issue would seem to be that a number of communication modes are then being conflated in the McLuhanian sense:

> The communication of all kinds of messages in the same system, even if the system is interactive and selective (in fact, precisely because of this), induces an integration of all messages in a common cognitive pattern. Accessing audiovisual news, education, and shows on the same medium, even from different sources, takes one step further the blurring of contents that was already taking place in mass television. From the perspective of the medium, different communication modes tend to borrow codes from each other: interactive educational programs look like video-games; newscasts are constructed as audio-visual shows; trial cases are broadcast as soap operas; pop music is composed for MTV; sports games are choreographed for their distant viewers, so that their messages become less and less distinguishable from action movies; and the like. From the perspective of the user (both as receiver and sender, in an interactive system), the choice of various messages under the same communication mode, with easy switching from one to the other, reduces the mental distance between various sources of cognitive and sensorial involvement. The issue at stake is not that the medium is the message: messages are messages. And because they keep their distinctiveness as messages, while being mixed in their symbolic communication process, they blur their codes in this process, creating a multifaceted semantic context made of a random mixture of various meanings.[14]

This further develops the concept of the path of least psychological resistance toward ready cultural acceptance. Not only is the medium the same throughout, making for easy navigation and selection, but the messages become so mixed through the communication process that all so-called traditional categories of media begin to blur or break down. In this sense, though Castells

[14] Castells (2000), p.371.

asserts that messages "keep their distinctiveness," I would argue otherwise. In a sense this is meant to invoke a cautionary tone; to wit, where in such a system does the entertainment, education, or news differ from the coercive advertisement or strategic omissions or misrepresentations of facts, and how could or should one be able to tell? Furthermore, to paraphrase the paradoxical cliché of a tree falling in the forest: if news of, say, a corporate subsidiary's wrongdoing isn't reported, and therefore few people ever find out about it, was it ever really news to begin with? Another related issue with regard to diverse media environments is that of audience self-selection, where many people may never be exposed to the news or other information they don't want to encounter, simply because there are so many other choices offering the sort of media they would rather consume. As the media environment becomes more targeted, more diverse, and more invested in a multifaceted semantic context, the signal-to-noise ratio for any particularly meaningful signal tends to decrease – making it easier for audiences to miss unpleasant or undesired signals altogether.[15]

> In sum, new media determine a segmented, differentiated audience that, although massive in terms of numbers, is no longer a mass audience in terms of simultaneity and uniformity of the message it receives. The new media are no longer mass media in the traditional sense of sending a limited number of messages to a homogeneous mass audience. Because of the multiplicity of messages and sources, the audience itself becomes more selective. The targeted audience tends to choose its messages, so deepening its segmentation, enhancing the individual relationship between sender and receiver.[16]

Thus in the new media system, the media feeds on itself, and through an ever more rapid feedback loop with an increasingly diverse audience, the system produces and organizes its messages almost instantaneously and automatically, incorporating all elements of previous media in its mix. On a larger societal scale, one might relate this to neural architecture and the notion of

---

[15] The danger being, of course, that those individual audience members may not explicitly recognize the fact that their worldview may differ greatly from any or everyone else's, with all worldviews being derived from subjective composites of media exposure.

[16] Castells (2000), p.340.

neural plasticity, with communication patterns becoming selectively enhanced and reinforced between particular senders and receivers. Note that these patterns are not necessarily of the egalitarian "one-to-one" or "anyone-to-many" sort. They are not always reinforced through explicitly social means,[17] and they are not always implemented in the public interest. As described above, many of the communication characteristics of the current global networked media systems have been inscribed by the owners of the infrastructure, who are also in most cases the very same producers and marketers targeting, designing, and delivering the media content. This view provides a convenient analytical framework to discuss the contemporary state of networked media affairs by framing media systems as an active ecology or "ideosphere."

This conception of the ideosphere can best be envisioned as a realm of conceptual evolution through media transmission, where signifiers are shaped and employed according to specific cultural contexts. Clearly, in this sense the global networked media system is the ultimate ideosphere to date. In terms of information ecology and diversity, it is the most robust system currently imaginable – but again, in light of the history of its development, it must be recognized that this ideosphere has been constructed for the purposes of media conglomerates, that their operations perpetuate it, and this structure itself determines the ideological ecology of the system to a large degree. Certain kinds of messages will be prioritized and privileged in their transmission and distribution, and this will have a direct correlation on their success in propagating throughout the ideosphere.

As commercial enterprises perpetuating the ideosphere, corporations invest much of their time and resources in devising strategies for mass-media message proliferation. As noted earlier,

---

[17] That is to say, the general will or intent of the people doing the communicating (or more to the point, of the people who would like to do the communicating) is not always the determining factor in terms of how particular messages get communicated – the structure of the medium itself (and the metastructure of control over that medium) still governs this.

television is currently the dominant transmission vector due to its past hegemony and current evolutionary trajectory:

> Television frames the language of societal communication... Once a message is on television, it can be changed, transformed, or even subverted. But in a society organized around mass media, the existence of messages that are outside the media is restricted to interpersonal networks, thus disappearing from the collective mind. However, the price to be paid for a message to be on television is not just money or power. It is to accept being mixed in a multisemantic text whose syntax is extremely lax. Thus, information and entertainment, education and propaganda, relaxation and hypnosis are all blurred in the language of television.[18]

These sentiments allude to the transmission strategies employed through ambiguity; taking advantage of the signal-to-noise ratio, advertising and other forms of marketing blur the lines between valid, required, requested, and trusted information, largely because of the "least psychological effort" insertion effect of these mixed messages.

One might then consider the state of this global ideosphere in relation to the culture (or diversity of cultures) it envelops. Culture – defined as the totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought – is largely transmitted through media, through this ideosphere. Communication and social transmission comprise the very essence of culture, and now these transmission capabilities of media networks have an unprecedented global reach. The architecture of this system, however, is one of a specific corporate design, directed toward the specific purposes and profits of those media conglomerates who operate, perpetuate, and endeavor to extend the system. By appropriating the decentralized structure of the Internet in accordance with the communicative avenues of television, the current networked media system has elevated its status as an active ideosphere, almost as an entity in and of itself.

---

[18] Castells (2000), p.336.

Within this ideosphere, characterized by these large nodes of asymmetric corporate influence, the politics of cultural transmission take on a new significance. Through both active and passive manipulations of this new media system, new dynamics are emerging between these systems of oligarchic control and a number of marginalized underground movements who would oppose them. The next section takes this as a central point of discussion, first examining two examples of networked movements whose organization and political orientation are essentially defined by their activities in relation to the ideosphere. It then examines peer-to-peer filesharing networks as a new kind of sub-ideosphere, one which offsets the dynamics of cultural communication as previously described in the corporate mass-media sphere.

2. Cultural Battles in the Ideosphere

> Cultural battles are the power battles of the Information Age. They are primarily fought in and by the media, but the media are not the power holders. Power, as the capacity to impose behavior, lies in the networks of information exchange and symbol manipulation, which relate actors, institutions, and cultural movements, through icons, spokespersons, and intellectual amplifiers.
>
> – Manuel Castells, *End of Millennium*[19]

2.1 Oligarchic Control vs. Underground Network Movements

As they currently exist, then, globally networked media systems exhibit three critically distinguishing characteristics. First, they comprise the worldwide informational ecology of the ideosphere, encompassing the realm of cultural transmission within which the public *weltanschauung* is formed and informed. Second, they are increasingly falling under the horizontal and vertical ownership of corporate oligarchies, who are currently undertaking a massive effort to co-opt the interactive nature of the Internet in order to employ it according to the anachronistic mass-media *modus operandi* of television. Third, as a point closely related to the second, the role of nation-states in governing the reach and content of these new corporate networked media systems is increasingly being relegated to one of marginalized reaction and negotiation with these multinational oligarchies.[20] These developments in turn affect the nation-state's ability to exert effective control not only over these oligarchies, but also over underground movements which operate via alternative networked communication structures and which often utilize media politics as their fundamental munitions. Specifically, the movements to be

---

[19] Castells (1998).

[20] Castells (2004), Lyon (2003).

discussed as examples in this section include Islamic fundamentalist terrorism and the American Nationalist movement.

While the nation-state's influence and control over these decentralized underground movements may seem somewhat dubious at present, it might also be incorrect to assume that corporate oligarchies are necessarily gaining power over such groups as a result. Among other things, this chapter will present the argument that the controls applicable to these groups increasingly reside throughout the logistical components of the networks themselves,[21] and the influence resides largely within the ideosphere's characteristic space of flows as put forth in Manuel Castells' description of *real virtuality*:

> ...by real virtuality I mean a system in which reality itself (that is, people's material/symbolic existence) is fully immersed in a virtual image setting, in the world of make-believe, in which symbols are not just metaphors, but comprise the actual experience. This is not the consequence of electronic media, although they are the indispensable instruments of expression in the new culture. The material basis that explains why real virtuality is able to take over people's imagination and systems of representation is their livelihood in the space of flows and timeless time. On the one hand, dominant functions and values in society are organized in simultaneity without contiguity; that is, in flows of information that escape from the experience embodied in any locale. On the other hand, dominant values and interests are constructed without reference to either past or future, in the timeless landscape of computer networks and electronic media, where all expressions are either instantaneous, or without predictable sequencing. All expressions from all times and from all places are mixed in the same hypertext, constantly rearranged, and communicated at any time, anywhere, depending on the interests of the senders and the moods of receivers. This virtuality is our reality because it is within the framework of these timeless, placeless, symbolic systems that we construct the categories, and evoke the images, that shape behavior, induce politics, nurture dreams, and trigger nightmares.[22]

Thus it would seem that the extent to which underground and/or control movements will succeed in the future social sphere depends on the extent to which those movements develop and maintain networked communication structures with the capacity to dynamically reconfigure themselves at will to match “the moods of the receivers.” The extent to which they successfully

---

[21] Castells (1998), (2004); Galloway (2004); Lyon (2003).

[22] Castells (1998), p.350.

propagate their messages depends on the orientation of their tactics toward the sort of media spectacle that resonates well within the ideosphere characterized by this notion of real virtuality. This sort of capability for mobility and rapid reconfiguration is not unlike the underlying rationale of Hakim Bey's Temporary Autonomous Zone, but without the pre-emptively defeatist political overtones.[23]

For the projects and movements in question, the ultimate commonality seems to be their self-identification as network (or networked) movements with definitive political orientations against trends of hegemonic globalization. In addition, they all exhibit methodologies and practices wherein they use the electronic media systems constructed and enabled by corporate oligarchies to wage their various ideological campaigns. Ultimately, this presents an interesting reflexive paradox wherein these underground movements use their opponents' systems against them, while the movements are defined precisely through their use of these systems. That is to say, practitioners or supporters of these movements use (and are in many ways defined by) precisely those networks which have resulted from the forms of globalization they struggle against. This apparent dichotomy will provide the basic framework for a more in-depth look at these

[23] Bey states that, "The TAZ is like an uprising which does not engage directly with the State, a guerrilla operation which liberates an area (of land, of time, of imagination) and then dissolves itself to re-form elsewhere/elsewhen, *before* the State can crush it." (Bey, 1991). I refer to this as "pre-emptively defeatist" because it promotes the sense that such operations can only exist in opposition to the State by maintaining a quality of ontological flux; many of the movements and operations which will be discussed in this paper have existed in definite time-enduring forms, engaging consistently and directly with "the State," showing little if any sign of the future possibility of being crushed by it (although admittedly they have had their setbacks). This section will primarily consider Islamic Fundamentalist terrorism, the American Nationalist movement(s), and P2P file sharing networks as examples.

underground projects in their relation to the control of the nation-state[24] and corporate oligarchies versus their use of electronic media for communication and large-scale social influence.

2.2 A Global Underground Movement: Islamic Fundamentalist Terrorism

The first and most obvious contemporary example of a networked underground movement would be al-Qaeda, the current figurehead of loosely aligned Islamic fundamentalist terrorist organizations. This group is very obviously at odds with the nation-state (particularly the western Judeo-Christian ones, and those deriving power from them) largely due to its foundations in fundamentalist Islam, which defines its community as the global constituency of believers within "the domain of God, not the space of the state."[25] There is also no doubt as to its status as a network movement, with its explicitly decentralized semi-autonomous cell structures directed via back channels and coded messages. This is where its relationship to networked electronic media is slightly more subtle than one might think at first glance, since it doesn't always necessarily or directly operate via lines of electronic media communication structures.[26] Where governments publicly claim that this is the case, it has been argued that they are simply emphasizing the importance of the Internet and sensational news media broadcasts as communication vectors for terrorist networks as a thinly veiled pretext to establish greater control over free transnational

---

[24] A note here about my usage of the term "nation-state": in most cases, this refers to governmental entities which assert power over a bounded, autonomous territory. Since in many cases I will be using the term to refer to the United States, I readily acknowledge that it might be more accurately characterized as more of an empire or a new brand of network-state. The latter would be even more appropriate in the case of the European Union. Within the scope of my arguments, I still use the term "nation-state" to refer to governmental attempts to assert control (primarily) within their recognized territorial boundaries.

[25] Castells (2004), p.112.

[26] McGeary, Waller (2002).

communication.[27] Furthermore, much is often made of the group's potential to directly attack infrastructure (such as transportation or power grids) through means of network communication, although this possibility is also seen as being an unlikely scenario compared to direct physical violence.[28] This is certainly not meant to say that al-Qaeda doesn't use the Internet for organization and communications – it does[29] – but there is also no question that this use is being politically exploited by governmental entities.

Indeed, this line of argument is an obvious leverage point through which governments have often eroded free communication with minimal opposition – yet this argument seems to work brilliantly for al-Qaeda as well. In reality, it doesn't matter how much al-Qaeda actually uses the Internet for coordination, planning, or active intervention; what matters most for their purpose is that the targeted public simply believes this is the case, as Timothy Thomas points out in *Al Qaeda and the Internet: The Danger of "Cyberplanning"*:

> *The Internet produces an atmosphere of virtual fear or virtual life*. People are afraid of things that are invisible and things they don't understand. The virtual threat of computer attacks appears to be one of those things. Cyber-fear is generated by the fact that what a computer attack *could* do (bring down airliners, ruin critical infrastructure, destroy the stock market, reveal Pentagon planning secrets, etc.) is too often associated with what *will* happen. News reports would lead one to believe that hundreds or thousands of people are still active in the al Qaeda network on a daily basis just because al Qaeda says so. It is clear that the Internet empowers small groups and makes them appear much more capable than they might actually be, even turning bluster into a type of virtual fear. The net allows terrorists to amplify the consequences of their activities with follow-on messages and threats directly to the population at large, even though the terrorist group may be totally impotent. In effect, the Internet allows a person or group to appear to be larger or more important or threatening than they really are.
>
> The Internet can be used to spread disinformation, frightening personal messages, or horrific images of recent activities (one is reminded of the use of the net to replay the murder of reporter Daniel Pearl by his Pakistani captors). Virtually, it appears as though attacks are well planned and controlled, and capabilities are genuine. Messages are usually one-sided,

---

[27] Castells (2004).

[28] Arquilla, Ronfeldt (2001).

[29] Ibid.

> however, and reflect a particular political slant. There is often little chance to check the story and find out if it is mere bravado or fact. The Internet can thus spread rumors and false reports that many people, until further examination, regard as facts.[30]

As the last paragraph points out, the greatest value of networked media systems to an organization like al-Qaeda is their ability to transform the group's acts into easily transmitted media spectacles, where the ideology of terror can be neatly packaged for visceral effect. [31] These spectacles resonate throughout the echo chamber of the ideosphere, forcing themselves into the public consciousness. In the aforementioned sense of using a system against itself, this is a calculated technique with roots that might ultimately be traced to the origins of corporate media practices, as Manuel Castells explains in an analysis of al-Qaeda's tactics of media politics:

> Ultimately, the action is geared toward human minds, toward transforming consciousness. The media, local and global, are the means of communication through which the public mind is transformed. Therefore, action has to be media oriented, it has to be spectacular, provide good footage, so that the whole world can see it: like a Hollywood movie because this is what has trained the human mind in our times.[32]

The media spectacle, then, seems to be good business for all parties involved. For governments, it provides a rationale for curbing the sort of free transnational communication which undermines their sovereignty. For corporate media oligarchies, it provides spectacularly compelling material which translates into captivated audiences and market share. For the resistance movement itself, it provides a sensational call to action as well as an enduring historical landmark of its ideology translated into action.

---

[30] Thomas (2003). Italics in original.

[31] As an aside, it should be noted that this use of the internet by terrorist organizations is not new; if anything, the use of mass media spectacles as ideological munitions has been a defining characteristic of terrorist organizations since the 1970s and beyond. The point here, however, is to highlight the new phenomenon of the organization's presence in networked media systems as the simultaneous spectacle *and* threat. They use the medium to actively coordinate, communicate their messages throughout society, and possibly to directly attack the infrastructure of their targets, all at the same time.

[32] Castells (2004), p.139.

2.3 An Intra-national movement: the American Nationalists

In many ways, the cultural phenomenon of the loosely affiliated groups known collectively as the American Nationalist (or Patriot) movement offers a strangely similar example to that of al-Qaeda. This movement can largely be described as a vague network of radical libertarians and constitutional fundamentalists, white supremacist sympathizers, survivalist gun-enthusiasts, and other ideologically aligned constituents who gravitate toward shadowy conspiracy theories. The primary unifying thread for all these groups is a conviction that the United States government has been engaged in a shadowy and systematic plan to bring about a One World government (referred to as the New World Order) in coalition with the United Nations and all major nodes of economic influence around the world.[33] The current economic and political trends toward globalization (heralded and enabled through mainstream media networks) are seen as evidence of progression toward this New World Order. In relating similarities to al-Qaeda, it is also important to note that a distinct form of Protestant Christian theology serves to tie these groups together as a unified movement. Specifically, the coming of the New World Order is largely viewed as a fulfillment of prophesy straight from the Book of Revelations, where a global economic system requiring individual tracking and identification mechanisms is likened to the "mark of the beast" which becomes a requirement for citizens to buy, sell, travel, or otherwise function within the system.

Thus, the main similarity between the Nationalist movements and al-Qaeda would be globalization and economic hegemony as their common theological enemy, identified mainly through the actions and policies of the US government.[34] This collective movement is also largely oriented toward and around media events, deriving motivation and legitimacy for their

---

[33] Castells (2004).

struggle from government standoffs that became major media spectacles, such as the 1992 incident at Ruby Ridge, Idaho, or the Waco standoff in 1993. Of course, the largest act of violence-cum-spectacle associated with this movement occurred in 1995 with the Oklahoma City Federal Building bombing, in which 168 people died "in the worst terrorist attack on US soil"[35] prior to September 11, 2001. It is important to point out a distinction here in that the American Nationalist movement is not necessarily oriented around the production of media events, but they have exhibited the tendency to rally around them as *causes célèbres*.

Due to the movement's strong distrust of mainstream media outlets, however, the majority of its consumed information about these events circulates through the Internet, where commentary, ideology, and objective reporting of facts come together in numerous uncertain combinations.[36] This is a critical point: the movement produces its own media for its own consumption, thereby establishing an internal sub-ideosphere which amplifies and distorts its own *weltanschauung* – often in a regressive pattern toward conspiracy theories and paranoia, as Kenneth Stern explains:

---

[34] For a blatant example of this common enemy defined, consider this prominent statement on the "official Aryan Nations website" (http://www.aryan-nations.org/, accessed March 2005):

> Amerika cries Peace as it make's [sic] and supports War and Terrorism across the globe in the name of Democracy, invading and occupying sovereign Islamic countries at will. And with this it wonders why terrorism against Amerika and it's interests are being targeted? You want someone to put the blame on, blame those occupying Amerika's government! Hold them accountable for the loss of your sons and daughters in these Godforsaken wars!
>
> STOP Amerika's support for the Terrorist State of Israeli, pull ALL troops out of Islamic lands and there could be Peace! Unless this becomes reality we will continue to remain targets all across Amerika and the world as reprisal for the arrogance and actions of ZOG [Zionist Occupation Government]!

[35] http://www.cnn.com/US/OKC/bombing.html, accessed March 2005.

[36] It can be argued that these combinations are not so fundamentally different in style (and sometimes substance) from those of mainstream corporate information outlets, but at least it should be recognized that these particular combinations arise from within the various groups comprising the movement.

> The Internet was the perfect culture in which to grow the virus of conspiracy theory. Messages appeared on the screen with no easy way to separate junk from credible... For conspiracy enthusiasts like militia members, unverified statements from cyberspace reaffirmed their set conclusions by providing an endless stream of additional 'evidence.'[37]

With this in mind, the American Patriot movement could be viewed as having boot-strapped itself up to its present state of membership, conviction, and unity via its own internally developed communication networks.

Of course, in retrospect the simultaneity of the movement's most galvanizing events occurring in conjunction with the increasingly widespread use of the Internet in the US during the 1990s also presents a correlation that is difficult to miss. This again presents the irony where the movement's emergence seems to have been enabled by the very socioeconomic system which it fundamentally projects itself against. Information about the New World Order and its purported backing coalition of corporate oligarchies is produced and disseminated by the movement through the systems enabled by those oligarchies – presenting a markedly symbiotic relationship.

Also as an interesting side effect of this symbiotically oriented, distributed information network, the movement seems to have made itself almost impossible to identify as a whole, much to the consternation of those who would attempt to analyze or oppose it:

> ... While the FBI looks in vain for proof of an organized conspiracy to overturn the government by force, the actual conspiracy, with no names (or multiple names), and with no organization (or hundreds of them), flows in the information networks, feeding paranoia, connecting anger, and maybe spilling blood.[38]

Because it has no defined structure, only nodes of ideologically aligned organizations, it becomes impossible to tell where the movement's center lies. More to the point, it becomes

---

[37] Stern, Kenneth S. (1996) *A Force Upon the Plain: The American Militia Movement and the Politics of Hate*. New York: Simon and Schuster; pg. 228; referenced in Castells (2004), p.94.

[38] Castells (2004), p.95.

extremely difficult to tell at what point sympathizers or consumers of such information become radicalized active participants. This kind of uncertainty again helps to create conditions of media spectacle ripe for exploitation.

2.4 Peer-to-peer File Sharing and Hyperdistribution

Moving away from organizations defined by violent spectacles and eschatological theology, the discussion now turns to another networked movement that seems much less subversive or political on the surface – the ad-hoc community of millions of Internet users around the world who constitute peer-to-peer (p2p) file sharing networks. After introducing this network community as a phenomenon of alternative media distribution, this section will then discuss file sharing networks as propagation vectors for the aforementioned movements. The intent here is not to portray file sharing networks as active political spheres, necessarily, but instead to discuss their potential as active, worldwide sub-ideospheres where alternative messages proliferate with the ebbs and flows of community interest outside of corporate oligarchic nodes of influence.

It is first important to distinguish why file sharing networks are uniquely positioned apart from the web and other means of Internet communication. Most importantly, they provide the most efficient means for the transfer of large file formats such as audio and video, enabling high-resolution, high-bandwidth media to be distributed throughout the network without relying on centralized storage points. This distribution structure comes much closer than other Internet technologies in its affordance of egalitarian publishing possibilities. This is not meant to discount the extraordinary communicative functions of email, instant messaging, and web publishing, but rather to simply underscore the potential for p2p networks to create the conditions for what Mark Pesce terms the *hyperdistribution* of audiovisual media. The "swarming" distribution logic of a file sharing network such as BitTorrent "transforms the creaky and unreliable technology of

audiovisual distribution, making it fast and hyper-efficient ... even more efficient than broadcasting."[39]

In fact, p2p has already succeeded so radically in this paradigm of hyperdistribution that it now consumes the majority of consumer bandwidth.[40] This has led to such a disruption of infrastructure models and broadcast-based intellectual property concerns that these networks are actively being driven underground due to corporate and government inability or reluctance to conform them according to existing business models, again in accordance with Winston's 'law' of the suppression of radical potential.

File sharing communities are easily characterized as willfully illicit and conspicuously apolitical, to the extent that they seem content to remain underground even while paying lip service to the notion that theirs is (or should be) a noble public cause. This is slowly changing as political advocacy groups form to represent the communities in the face of legal challenges.[41] For the most part, however, by exhibiting a wanton disregard for national copyright and censorship laws as well as for the corporate media's claims to media ownership and profit rights, this is a community that seems to have few friends at present. Here the politics of free transnational communication seem to run afoul of the nation-state and the corporate media structure in ways that the previously discussed movements do not.

One possible reason for this is that the worldwide file-sharing community fails to engage the media by providing a direct sensational spectacle of violent resistance to capture the public mind, providing nothing for corporate oligarchies to exploit in order to recoup any perceived

---

[39] Pesce (2005).

[40] Glasner (2005).

[41] http://www.p2punited.org, http://www.eff.org/share/, both accessed March 2005.

damages.[42] Indeed, to most if not all of the mainstream media, file sharing is only vilified as a direct threat to their corporate profits, in spite of (or directly because of) the many opportunities it offers for free media transmission outside that scope. In their present semi-anarchistic state, file sharing communities offer nothing at all to hegemonic interests, while seeming only to undermine them by sidestepping national laws and traditionally controlled profitable communication structures.[43] In fact, one of file sharing's biggest enemies at present is the spectre of depravity and insecurity (child pornography, bomb-making manuals, spyware, viruses, and all other kinds of illicit or harmful digital material) so often presented as the rationale for its control – where this spectacle provides governments and corporations with a means to further vilify the networks' primary function as engines of copyright infringement. With nothing to counter this vilification, save the abstract allusions to free speech and information principles presented by groups like the Electronic Frontier Foundation, file sharing communities find themselves at a loss.

So while file sharing networks do in fact provide access to illicit and other material with no respect to copyright or censorship regulations – they are functioning as networks of unparalleled worldwide cultural exchange, free from the previous control structures of media dissemination. What they offer is something that national governments and corporate media oligarchies only endeavor to prevent, by their definition and constitution. Not only that, but this free information exchange offers a compelling incentive for even the most apolitical citizens and consumers to

---

[42] Where most other movements at the very least offer sensational images for easy corporate media packaging, which allows the oligarchies to engage in a sort of symbiotic relationship. File-sharing offers no spectacles of riots or exploding buildings for corporate news organizations to exploit via market shares and advertising revenue.

[43] Once a viable business model can be developed for the exploitation of this content distribution scheme, the situation will no doubt change. In the case of large corporations such as Sony, it presents an interesting internal paradox where the electronics division (makers of CD/DVD burners, MP3 players, and other media-replicating/copyright-infringing devices) is at continuous odds with the entertainment division (film and music publishing) over issues of file sharing and consumer digital-rights management.

join the community, making it in effect a large-scale, emergent, passive, worldwide underground media distribution movement. Those who join these communities may not even be aware of the political implications of their actions. In this way, file sharing communities may in fact pose the greatest alternative globalization threat to national governments and corporate oligarchies, above and beyond the previous examples – with no violent spectacle required.

This function of file sharing networks serves to illustrate the subtle ways in which it enables the mass-communicative purposes of the previously discussed underground movements. Within file sharing networks, the communications of these movements are on equal (or better) footing in respect to corporate oligarchic communication. For a militia training video, conspiracy talk show, independent news report, or uncensored terrorist beheading video, file sharing networks are the absolute best source – and this, in addition to the lure of free music and movies, is their most popularizing appeal. Any type of officially unapproved propaganda or seditionary material is guaranteed to thrive, including that material which is most critical and damaging toward established interests.

When this content is placed in the network in equal availability with mainstream media, the system becomes a distorting mirror (or perhaps a clarifying mirror, depending on one's perspective) of traditionally packaged and controlled media consumption. Implicitly or explicitly, this network combines with underground movements in undermining the corporate media oligarchies that engender the current state of globalization through their dominant influence within the ideosphere. This technocultural phenomenon, in an ironic reflexive turn, was itself enabled by those national governments and corporate media oligarchies that the movements align themselves against. Thus, from a systems analysis perspective, the network, the underground movements and their corporate opponents all function as part of the same higher-order system, competing for influence within the ideosphere's characteristic space of flows and timeless time.

In this sense, it becomes more evident that the mechanisms of control in this system do in fact reside throughout the myriad components of the network, which are themselves networks, and so on and so on – down to viscosity, as they say. It is this composite system of information exchange and symbol manipulation which relates actors, institutions, and cultural movements, through icons, spokespersons, and intellectual amplifiers, that presents the larger spectacle of cultural battles in the information age.

3. Media Mixing Systems as Artistic Metacommentary

These cultural battles, as enacted through the information exchanges of networked media systems, present the context in which I characterize my work. In the media mixing systems I have developed over the past two years, I draw on these networks of ideological conflict to extract aesthetic undercurrents from found media through digital signal processing techniques.

This kind of practice is one I could not have undertaken even a few years ago – in my view, a critical mass of content and availability within file sharing networks has only just emerged. Now, with the increased availability of diverse cultural content, coupled with the proliferation of (often free) desktop PC media manipulation tools, independent media artists such as myself now have a greater ability to access and recombine media as an active, real-time computational practice. The infrastructural support of the editing studio or footage archive becomes less crucial, and the limitations of physical linear media and its distribution disappear. The instruments of production are cultural software products operating on ubiquitous personal computer hardware, and the "archive" is an ethereal distributed network. Artistic media mixing systems can draw from a greater variety of sources, exploiting the content's cultural significance through new structural forms and presentation methods that mirror new contexts of media distribution and consumption. In one sense, the artistic practice becomes one of channeling information flows, where the meaning lies within the manipulation of the media processing system itself. The issue of agency within the system is then central to this kind of practice.

Obviously, the artist manifests agency most directly through the architecture of the system and the deliberate choices of content and presentation. In a media mixing practice, this sort of agency relates to the long tradition of montage and bricolage, reflected recently in approaches to sampling and appropriation through the practice of "culture-jamming" and the subversion of

mainstream media elements. These tactics can be viewed as a modern continuation of situationist detournement, the method through which cultural materials are integrated into a superior milieu. Then, to the extent that the system exhibits autonomous behavior, the artist's agency is reflected in a more active manner than that of traditionally linear media presentation. The structural issues surrounding the construction and presentation of non-linear time-based media lend themselves to an analysis concerning the aesthetics of behavior, drawing on theories of database structure and algorithmic construction as hypertextual narrative strategies. Finally, within the realm of presentation there exists the possibility of extending interaction (and hence, agency) to the viewer as an active user of the system. In all of these cases there often exists a marked ambiguity in the direction or construction of experience – the artist provides a framework for interaction, which the user then explores. It is no longer clear who guides or controls the experience, or whether the experience in fact manifests itself as an emergent property of the system's ontological arc.

As such a powerful phenomenological aspect of this practice, the management of this agency and resultant ambiguity constitutes the most problematic essence of my work. This chapter will frame and discuss my work in developing media mixing systems in this sense, using two of my pieces as central examples – *Channel Zero: Aggravision* (2004) and *De-Generative Politricks* (2005). Throughout a discussion of their artistic traditions and the design methodologies behind their construction, this chapter will relate my projects to the technocultural background established in the previous sections.

3.1 *Channel Zero* and *De-Generative Politricks*

Channel Zero: Aggravision, developed in 2004, represents a first attempt at developing a mixing system based on the cultural detritus of media distribution networks. In this system,

described as a "multimodal media mashup mixing milieu," users manipulate and navigate through two concurrent streams of audiovisual material using an array of PC game controllers – an 8-button joystick, an 8-button steering wheel, and two foot pedals. An audio/video processing system developed in Max/MSP/Jitter takes the input from these controllers to process the source material in real time, giving users immediate feedback as they explore the interface.

The majority of the video content consists of sensational video clips downloaded from file sharing networks, collected through a thematic process of keyword searching. Keywords such as "riot," "fight," "crash," "explosion," or other terms related to trauma and sensational or anxiety-provoking phenomena were entered into a file sharing search client[44], then the most widely available clips resulting from those searches were downloaded. This resulted in an amazing collection including verité camcorder footage, international news clips, and odd archival propaganda pieces. There was little consistency in the quality of these clips, but all of them exhibited the characteristic artifacts of digital video compression. In some cases I was forced to re-render or re-format the clips to make them compatible with the software processing system, but apart from these simple operations the clips were not adulterated in any way. Then, in an attempt to ground this collection in the American domestic entertainment vernacular, clips from local Los Angeles / Orange County terrestrial broadcast television were also captured. Notable contributions here included infomercials, televangelists, and the pre-eminent Southern California reality spectacle of the freeway police chase as viewed from TV network helicopters. As a whole, this media collection represented a strange composite of tastes, trends, and fixations, ranging from the simply inane to the nauseatingly macabre. This collection also established the beginnings of a found-media bricolage production mode which I feel suits my personal style and practice well.

---

[44] The main client used in this case was Emule (http://www.emule-project.net), a popular client for the E-donkey 2000 (aka ED2K) file sharing network.

These clips were then temporally organized into bins according to their approximate length: 1, 3, 5, 10, 15, and 30 seconds. The 1,3, and 5 second bins constitute one audiovisual stream (the "A" feed), while the 10, 15, and 30 second bins constitute the "B" feed. The steering wheel allows the user to cross-fade between the feeds, using the buttons to select among the bins. The pedals control the playback speed of the video. Moving the joystick "smears" and moves the video in the corresponding direction, and twisting the handle distorts the saturation and color values. The joystick's main trigger button randomly toggles through the individual clips in the selected bins, and the other buttons toggle variations on an abstract informational "diagnostic mode" that displays the video frame rate and the numeric values being reported by each controller. Appendix 1 at the end of this paper presents the "instruction manual" which was presented to users during the project's installation to guide them in exploring these various interface components.

If the system receives no active user input, it cycles through the material automatically. As the source material changes, either automatically or due to user input, a variable delay for both the audio and video preserves traces of previous elements that decay over time, lending a hypnotic, rhythmic element to the temporal blend. The visual output of the system often takes on an abstract expressionist feel, with rapid bursts of color and pattern that allude to the film-painted works of Stan Brakhage. In experiential terms, the result of this system is a highly aestheticized mix of barely recognizable source material, manipulated through a complex, repurposed interface with an explorative component.

Figure 1. The Channel Zero mixing system with the diagnostic mode on, showing the frame rate and various panning parameters.

Figure 2. A screenshot from Channel Zero with diagnostic mode off, showing effects of saturation blending and the 2-second visual delay.

Figure 3. Another screenshot from Channel Zero showing the two A/B feeds partially blended.

While this interface neglected to provide an immediately understood one-to-one cause and effect relationship, it seemed to succeed quite well in contributing to the vaguely disorienting atmosphere of the piece without overtly frustrating users. As an interesting side-effect of the ambiguous user control structure, a number of participants reported feeling as if they were somehow implicated in the process of selecting and navigating through the content. Even though the clips are randomly selected when a user toggles the control buttons, most people made the inference that they had explicitly selected the clip, rather than assuming it to be random. In actuality, users had no control over this selection, though they could actively avoid clips by either toggling to a new clip or moving the steering wheel to the other content stream. I found this to be a definitively positive effect of the interface component within the overall aim of the piece as an unsettling, disorienting experience.

Altogether, these strategies proved to be well received and generally successful in creating a nebulous metacommentary on information flows as filtered through a media mixing system. Taking this as a starting point to explore alternative directions for a new version of such a system, I began to focus on the issues of content and process that seemed to resonate most with users. I was interested in finding a way to relate the cultural and political underpinnings of the source content to the processing and delivery mechanisms in a more direct way. The intent was to create a media system which could actively subvert and/or transcend the ideological underpinnings of its source content, hopefully without descending into artistic didacticism. There was no desire to make a political statement with this work; quite the opposite. A quasi-nihilistic non-statement was more the goal, to develop a system where all cultural and/or political voices would blend into absurdity, resulting in an emergent metacommentary. For these reasons I focused on the structural possibilities of algorithmic processing apart from interaction; my observations regarding the interactive elements of *Channel Zero* led to the concern that such an

interface in a more culturally or politically oriented piece might confuse the viewing relationship with the processed content. I wanted to avoid the perception of user-implication as noted above, and so to this end the intent was to eliminate any possible ambiguity regarding agency on the part of the user. All of these considerations led to the development of what I consider to be a divergent sequel to *Channel Zero*.

This next project, *De-Generative Politricks*, took its premise from the wealth of American political content available on file sharing networks, where mainstream political ideologies seem to compete on equal or perhaps even lesser footing with representative content from fringe groups of all flavors. While this project has mutated through various forms and might still not be said to exist in a fully finished or encapsulated state, the central thrust of the project concerns the rhetorical dissection of politically-oriented cultural signifiers, rendering them as disembodied ideological entities within a larger compositional system.

The initial proposal for the project was to collect a variety of political speeches, edit and chop them up into individual video-word segments (creating a separate video file for each word spoken), and then create an automated system which would pull from these video-word databases to recreate one long speech – an infinite, absurdist amalgamation of the constituent parts. I was particularly interested to see if I could design a system which was capable of recombining the video-word fragments according to the grammatical rules of the English language, to ultimately produce speech which was grammatically (if not semantically or contextually) correct. My goal and central interest in this project was to explore the speech generation process itself; I viewed the resultant aesthetic outcome as a by-product of this process. I certainly never expected the algorithmically generated speech to make sense, yet I was curious to explore ways in which the system might produce semantically significant results.

The first content used in developing the system came from a downloaded video of George Bush's speech to the 2004 Republican National Convention. This speech was chosen mainly for its conservative, stereotypically patriotic emphasis on the justification of American foreign intervention in the name of combating terrorism, with bits of banal (yet still emotionally charged) domestic policy agenda interspersed throughout. I felt this would provide an interesting collection of rhetorical material to remix and re-juxtapose within my proposed system. In one sense this speech constituted "found" footage; it had been present in a dark corner of one of my hard drives for months, though I had forgotten about it. Upon rediscovering the clip, its iconic value immediately appealed to me, as did the fact that it was an instance of Bush in an extremely polished mode of prepared speaking. Unlike his unscripted speaking appearances, in this speech he enunciated more clearly, complete with isolated words and scripted pauses for effect. This made it much easier to edit the speech into discrete word segments, though there were still many difficulties with the coarticulation[45] effects of his lingering Texas accent.

[45] Coarticulation is an effect of normal speech production where the phonemes of individual syllables in a word (or between words) are blended in pronunciation. This effect makes it extremely difficult to cleanly separate the acoustic signal of a speaker into discrete words or phonetic segments (Medin, Ross, Markman [2001]).

Figure 4. Screenshot from De-Generative Politricks using clips from President George W. Bush's speech to the 2004 Republican National Convention.

The speech was edited down to a collection of approximately 500 words which were then categorized according to their function as parts of speech – nouns, verbs, adjectives, adverbs, pronouns, conjunctions, determiners, and so on. A prototype of what I term a "microediting system" was developed in Max/MSP/Jitter to successively play pseudo-randomly selected video-words from the database. These video segments were selected through a loose implementation of a tree-adjoining grammar[46] in attempts to derive grammatically correct sentences. In simple

[46] For a more detailed description of generative, context-free, and tree-adjoining grammar and their implementation in this piece, please see the next subsection, 3.2: The Grammar Implementation in *De-Generative Politricks*.

terms, this grammatical algorithm constructs a string of words in real time, following a set of rules which govern the next possible selection of words that might follow from the one currently being played. For example, a sentence-string might begin with a determiner such as “the.” Following this, the system would select from either plural or singular nouns, where the next possible options following the noun might include a verb, or an adverb (which would then be followed by a verb), then another noun phrase (determiner, then noun), and so on. Throughout this process, attempts are made to match the plural or singular case between nouns and verbs within a sentence. When a word has the possibility of being the last one in a sentence, one of the next possible options includes a “pause” video segment (a clip taken from a point in the speech where the subject pauses between sentences). Following the pause, the system selects from the possible options for starting a new sentence-string. This process repeats indefinitely to produce an endless stream of (re)generated dialogue.

The use of a single source presented an interesting study in this method of video speech remixing, but it failed to provide any readily apparent metacommentary on the source itself, other than making George Bush look like an idiot (which isn't an extraordinarily difficult thing to do through much simpler means, as was often pointed out to me). While the simplicity of an immediately recognizable single-character approach seemed appealing, there was an almost unavoidable tendency for viewers to read political commentary in the work which I didn't necessarily intend. Because of the grammar implementation's inability to produce semantically significant sentences on a reliable basis, the system spewed a torrent of quasi-sensical utterances, which tended to make a single character appear simply as a target for derision. In hopes of mitigating this effect, I considered options for additional content which could balance or at least serve to ambiguate the powerful iconographic weight of the 43rd American president. This way, even if the system appeared to be presenting a mockery of its source material, at least this mockery would be extended beyond the connotations of a single figure. An obvious choice for a

second character would have been John Kerry as Bush's political opponent in the 2004 presidential race, but this would have confined the symbolic milieu to that of political representation in mainstream American media. I wanted the thematic range to be more extensive and less prone to immediate characterization as a system which simply "dumbed-down" mainstream American political posturing.

For these reasons I chose to incorporate Noam Chomsky as a second character, providing both a balancing ideological voice as well as an internal reference to the speech generation system itself. The specific video source was a 2003 speech at Harvard University, entitled "Distorted Morality," where Chomsky examines definitions of "state-sponsored terrorism" in the context of the American government's foreign policy interventions. With this choice of juxtaposition I felt Bush would represent the crude, emotionally manipulative rhetorical machinations of mainstream American politics, with Chomsky serving as a representation of marginalized intellectual dissent from a more detached, international perspective. I hoped that some sense of thematic unity would be apparent, because the specific lexicon of Chomsky's speech provided a symmetric compliment to Bush's lexical repertoire – many of the same words are employed in both speeches, even though the context of their usage is diametrically opposed in most cases.

Figure 5. Screenshot from De-Generative Politricks with clips of Noam Chomsky's 2003 speech at Harvard University entitled "Distorted Morality."

Within the scope of the speech generation system, I felt that these characters' notable facilities with the English language represented an interesting juxtaposition as well. Over the past six years, Bush's down-home Texas twang and lexical confusions have become something of a cottage industry for comedians and web pundits.[47] The regularity and specificity of Bush's misstatements have even prompted comparisons to the symptoms of apraxia, a serious speech disorder which causes difficulty in selecting, timing, and ordering sounds (although this is seen

[47] See "The Complete Bushisms, Updated Frequently" by Jacob Wiesberg at http://politics.slate.msn.com/id/76886/ (Accessed May 2005).

as coincidence, rather than evidence for an actual diagnosis of the disorder).[48] This provided an interesting theoretical basis for the creative remixing of his disembodied words in a generative speech system, where the confusion of syntax and semantics plays a central role.

Chomsky, on the other hand, is well known for his seminal contributions to the empirical study of language production and usage. One of his earliest contributions to the field of linguistics includes the theory of generative grammar, which is "the study of linguistic syntax using formal grammars that can in some sense 'generate' the well-formed expressions of a natural language."[49] This work in generative linguistics contributed significantly to the advancement of cognitive and information sciences by proposing models for symbol string generation according to formal rules. These models can be used to describe the syntax of natural languages as well as that of most programming languages.[50] Since the speech generation system in *De-Generative Politricks* effectively conflates these two language paradigms (attempting to re-constitute an approximation of natural language through algorithmic means), using the originator of these formal models as a content source seemed undeniably apropos.

As an interesting side note, the coarticulation effects in Chomsky's speech presented a much greater editing problem than in Bush's speech. This seemed due to a number of issues – Chomsky's voice and accent produced particularly muddled, low tones, as opposed to Bush's rather shrill treble range. Chomsky's off-the-cuff, written-note delivery style was also much more conversational than Bush's formal, teleprompter podium presentation. In any case, I was still able to extract a comparable vocabulary from Chomsky's speech by exploiting moments of what I will

---

[48] Milbank (2000).

[49] http://en.wikipedia.org/wiki/Generative_grammar (Accessed May 2005).

[50] Again, more detail on generative, context-free, and tree-adjoining grammars can be found in the next subsection.

term “coarticulation-free” clarity in his delivery, where I could isolate and extract individual words.

Through these thematic and linguistic references, the choices of Bush and Chomsky presented a number of simultaneous dialectics that the second instantiation of the project set out to explore. After extracting and organizing a “vocabulary” of video-words from Chomsky's speech, two main approaches were taken in combining the material. The first approach alternated words between the two sources, resulting in a single, quick back-and-forth composite dialogue. The second approach had one source complete a sentence before switching to the next source – lending an oppositional sort of debate structure to the mix. Both of these approaches offered mixed results. The word-alternation method had the effect of producing a single dialogue stream, conflating the iconographic and lexical properties of each source. This seemed to propose a metacommentary of singularity, blending both characters into one absurd, quasi-sensical torrent of rhetoric. This was an interesting effect, but to maximize the value of this approach I came to the conclusion that it would require more than just two characters – in fact, the more the better.

While still searching for further sources to add to this mix, I presented the project in the “debate” format. Bush would utter one sentence and pause for effect, then Chomsky would do the same, and the system then alternated in this order indefinitely. This back-and-forth conversational style produced some interesting perceptual variations. Depending on the words selected by the system, the dialogue between the characters would sometimes seem oppositional, then complimentary at other times. This phenomenon seemed to manifest itself periodically with increasing frequency the longer one paid attention to the output. A major problem with this phenomenon is that it didn't seem to manifest in passing; for those who observed the system for only a brief period of time, many seemed to perceive no relationships in this sense. This presented a catch-22 in the project's ability to engage viewers, where such subtle, emergent

perceptual effects wouldn't be noticed unless some immediately captivating aspect of the piece could entice them to stay long enough for those effects to be perceived.

To address this issue, I attempted to add yet more layers of complexity to the piece, beginning with the addition of more characters (as I had originally intended to do). In choosing these new characters, I tried to keep within a few established themes. First, the new additions should iconically represent an American political slant, either implicitly or explicitly. Second, they should fit within the established aesthetic criteria of authoritative, older white male talking-heads, preferably standing at a podium. Third, I thought it preferable to keep within the established lexicon of the first two characters, if possible, so any kind of speech that could be conceptually tied to American domestic or foreign policy was prioritized. Fourth, in keeping with my bricolage production mode, I reasoned that the sources should be readily available in my environment. To adhere to this theme I could only consider downloads or terrestrial broadcast television as possible content sources. While these self-imposed criteria limited my options somewhat, they still didn't define exactly what I should be looking for.

To further refine my scope, I also prioritized the possibilities for new content to destabilize potential misreadings of the piece as it had been presented in its previous form. The first of these misreadings was the tendency for provocational critics to hypothetically remark, “well, I know who Bush is, but who's this other guy?” These critics knew who Chomsky was, of course, and in fact of all the people I talked to, they all knew who Chomsky was. However, I had to readily admit that this was most likely due to the piece being shown in a university environment. Even for those who recognized him (in whatever context, either as a professor of linguistics or as a political activist), another question is whether these viewers understood the multiple references I was attempting to invoke by including him as one of two main characters. The answer to this question is that the majority of them probably did not. I reasoned that by diluting the content

even further with more characters, no matter what contextual references the new additions might add, they might serve to offset this criticism as a central problem with the work. This way, if viewers couldn't get the Chomsky references, at least there would be much more beyond that for them not to get, hopefully prompting enough interest to capture their attention.

Taking all these issues into consideration, I settled on two new candidates for inclusion. The first new clip came from an extremely popular BitTorrent video entitled “MKULTRA: Mind Control Out of Control.” In this video, an alleged ex-CIA agent by the name of Mark Philips elaborates on conspiracy theories surrounding the CIA mind-control program known as MKULTRA. This mind-control program is a prominent issue among American Nationalists who believe it is an active covert research initiative with the ultimate purpose of enslaving the world population under the New World Order. In his presentation, Philips provides an odd collection of highly circumstantial evidence and grand unsubstantiated claims in an attempt to prove that the program is widespread and currently ongoing. On the surface, I considered this to be a rather ridiculous example of American Nationalist propaganda – but I was particularly captivated by two aspects of this video. First, its overwhelming popularity and presence on the network seemed to suggest that it possessed some kind of unique political resonance within this sphere. Second, it fit every one of the criteria I had established for selecting new content, although in ways I hadn't originally expected. It represented a distinctively American political slant, delivered by an authoritative older white male at a podium, and it contained a lexicon which fit within the realm of American foreign and domestic policy. As an added feature of its inclusion, the lexicon also added a new element of neuro-linguistic commentary (from discussion of the alleged mechanisms of mind-control) which I felt would provide an interesting referential component to the speech generation system. While I didn't necessarily expect any of the video's original

connotations to be recognizable to viewers of my system, I did feel that its lexical contributions might help to make the parodic-serious nature of the piece more apparent.[51]

Figure 6. Screenshot from De-Generative Politricks showing alleged ex-CIA agent Mark Philips from the video "MKULTRA: Mind Control Out of Control."

The next candidate chosen for inclusion came from a captured terrestrial television broadcast on local Los Angeles channel 18, KSCI. Shepherd's Chapel is a "glorious bible study program"[52] broadcast on this channel from 2:00 to 6:00 AM, Monday through Friday. Produced

[51] The "parodic-serious" approach is discussed in more detail in the next section.

[52] As quoted in the KSCI Programming Schedule: http://kscitv.com/goout.asp?=programlineup.asp (Accessed May 2005).

in Gravette, Arkansas, the program features Pastor Arnold Murray delivering convoluted interpretations of biblical scripture interspersed with folksy, eschatological commentary. While it may not seem obvious at first, in my view this choice fit in with the previous content in a number of ways. As a representative element of the fundamentalist Christian right, it relates to an American political orientation that is known to be an influential force in shaping the domestic and foreign policy of the Bush administration.[53] In the context of an authoritarian white male on television, it is difficult to find a better example than a gravelly-voiced septuagenarian claiming to deliver the word of god from behind a desk with an American flag in the background. The lexicon of biblical discourse also fit within my established themes, as it dealt with themes of law, responsibility, good and evil, and finally, politics both domestically and in the Middle East. This is not meant to be facetious – many elements of the lexicon were, in fact, exactly the same as the previous sources. Finally, I was drawn to this program because of its strange position in the ideosphere. In Los Angeles and Orange County, KSCI is a multi-lingual public channel, primarily serving the Asian ethnic communities in the area. Its daytime content consists of Mandarin dramas, Filipino game shows, and Korean news, among other similar programming. In the nighttime hours of the insomniac viewer, however, the channel becomes a pulpit for a bizarre brand of fundamentalist Christian propaganda.[54] The question of this program's intended audience perplexed me to no end, making it a curiosity that warranted my artistic exploration in the same parodic-serious sense as the previous example of the MKULTRA speech. This context is almost certainly lost in its application in a larger media mixing system, but in some sense I felt

---

[53] Theocracy Watch: The Rise of the Religious Right in the Republican Party: Bush; http://www.theocracywatch.org/bush2.htm (Accessed May 2005).

[54] To underscore the characterization of this program as bizarre, I present this quote of biblical commentary from Pastor Arnold Murray, which was among those sampled for inclusion in the system: “If you got frogs in your dough, that's a lot of frog worship!”

that the odd ideological positioning of this program would translate well when mixed with the other three components of the system.

Figure 7. Pastor Arnold Murray in the "Shepherd's Chapel" bible study program on Los Angeles / Orange County broadcast television network KSCI, channel 18.

As anticipated, the multiplicity of voices presented by this collection created a much more interesting mix. To refine this mix and lend it a more cohesive perceptual feel, I added a few final touches to address minor issues. Bush's shrill treble range still seemed to overpower the other speakers, especially at low volumes, so an equalizing filter was added to the audio processing system in order to smooth out the abrupt changes in acoustic range as the clips changed. The abrupt changes between clips also seemed to present too much of a visual

distraction, so I experimented with quick fades and dissolve techniques to smooth these changes. The most comfortable transition method emerged when I applied a quick burst of television static (video and audio) between clips. This approximated a channel-switching experience which seemed to work well in merging the clips into a continuous progression. The effect became one akin to watching a television automatically switching between four channels.

From this point, I experimented with thematic extensions of the speech generation component by layering additional footage clips on top of the original speech mix. This was undertaken to see if I could ground the commentary with additional signifiers, to complement or contextualize the generated speech. I tried to incorporate themes related to the lexicon: domestic agenda, foreign agenda, American nationalists and domestic terrorism, and Islamic fundamentalist terrorism. Clips of underground conspiracy video, recent war footage, and Islamic terrorist propaganda were merged together into a second layer that could be mixed in with the speech generation feed. In this second layer, I focused on creating an unsettling blend of violence, conspiracy-fringe dogma, and paranoia, in some senses revisiting the total mash-up strategy of *Channel Zero*. Also to this end, I experimented once again with the extension of interactivity by adding a joystick controller.

The addition of this second content layer did help to contextualize the commentary of the speech layer, and in addition it mitigated some of the previously mentioned problematic expectations concerning the intelligibility of the speech. With more audiovisual material to comprehend, the speech layer's burden of significance was reduced. For these reasons I considered the addition of the second layer to be a step in a positive direction.

The interactivity, however, only complicated matters. Because I had not planned its integration from the beginning of the project's construction, it was unclear what function it should serve. I implemented it as a method of navigation between the two layers, where the

joystick would allow users to mix and fade in and out between the speech and related footage, but the connection between this control and any related meaning in the piece was vague at best. A common inference was that the interaction should allow for control over some aspect of the speech generation – that it should afford control over what the characters "talk about." I agree that this would be an interesting vector of user control over the system, but there were a few problems with this approach. First, it would have required a massive reorganization of the content's database structure and generative rule system. The system as originally conceived was content-agnostic – where my theoretical interest lay in the emergent results of precisely this approach. To reconstruct the system to account for specific content, to "direct" the speech, would have been taking a step away from this content-agnostic approach. Still, this could have been undertaken, but ultimately I was not convinced that this kind of content direction would even be apparent to users. Since most people tended to perceive the results of the speech generation system as random gibberish (or in the best case, technically and grammatically correct random gibberish), it was doubtful that anyone would perceive the subtle distinctions afforded by this kind of content control.

Another problem with the interactivity came with the cultural baggage of the controller itself. Using a game controller in such a system proposed a cultural entertainment paradigm which didn't necessarily fit within the project's theoretical milieu. In *Channel Zero*, this was quite the opposite; that system had been constructed as a creative, entertaining interactive experience, matching the dominant cultural conception of what a "game" might be. In *De-Generative Politricks*, however, this was not the goal. In this sense it was somewhat irresponsible to choose a joystick as a controller simply as a matter of convenience. A future controller would have to be chosen much more judiciously, taking care to avoid these cultural associations. Alternatively, if a game controller were to be used, the project would have to be re-envisioned as an interactive experience with some sort of goal-oriented explorative component.

Because of all these considerations, the status of interactivity as an asset or detriment within this system remains unclear. With more refinement and a clearer vision as to its purpose, I have no doubt that interactivity would be beneficial to this system, as it was in the case of *Channel Zero*. With or without an interactive component, however, I am still confident in the original vision of the piece as a rhetorical blender of politically-oriented cultural signifiers. No matter how it may have been received by audiences in particular or at large, the construction of this piece has proven invaluable to me as an experiment in pseudo-lingustics, politically-charged aesthetics, and their complex interplay through the practice of digital media mixing. The following subsection goes into greater detail on this mixing practice as inspired by elements of linguistic theory, explicitly describing the system's construction in Max/MSP/Jitter.

3.2 The Grammar Implementation In *De-Generative Politricks*

The speech generation system in De-Generative Politricks is loosely inspired by a number of theories from linguistics and cognitive science. In no way is it meant to be a fully-applied representation of these theories in practice; while I have some limited experience studying in these fields, I would never claim expertise, and I do not claim to fully understand the background or implications of these theories in their native academic contexts. What I present here is simply a chronicle of my research in these fields as I attempted to better inform my approach in creating an interpretive, generative video-speech system. Where I provide references in this subsection, I do so mainly to illustrate their contribution to my efforts, with no intention of expanding upon their original context.

In a certain sense this disclaimer provides a central insight to my project and the process behind it. My intent was never to produce a perfect natural-language generation system. I

recognized from the outset that this would have been extraordinarily difficult, if not impossible, within the constraints of the project. Yet the primary reason why I eschewed perfection in the language system is because I felt that this wouldn't have been sufficiently representative of the complex sociotechnical issues that comprised its conceptual milieu. Indeed, this is my basic thesis: the fragmented media landscape of multisemantic cultural context is beyond any kind of easy comprehension or simplistic codification, beyond that offered by recent variations of network theory as discussed in the first chapter of this text. Trends and themes may emerge momentarily, but they are quickly lost in the ether.

This is strangely similar to the way I view contemporary research in linguistics. In its efforts to define the structure and usage of language across numerous disciplines, linguistics has become an extremely broad yet esoteric, indecipherable meta-discourse. I am certainly not alone in this view. As author and journalist Russ Rymer states, "Linguistics is arguably the most hotly contested property in the academic realm. It is soaked with the blood of poets, theologians, philosophers, philologists, psychologists, biologists, and neurologists, along with whatever blood can be got out of grammarians."[55] I would add to this that it more recently includes the highly technical contributions of computer scientists and engineers as well. This complex mix of traditions and divergent research goals lends a great deal of disciplinary ambiguity to any given collection of linguistics literature, much to my chagrin when I first began looking into the field for ideas in constructing my project. Still, a number of basic themes did seem prominent, even if their applied functions in the literature remained somewhat obscure from my uninitiated perspective.

To begin my odyssey into the world of linguistics I started with generative grammar, which is “the study of linguistic syntax using formal grammars that can in some sense 'generate' the

[55] (Rymer, 1992).

well-formed expressions of a natural language... In most cases, a generative grammar is capable of generating an infinite number of strings from a finite set of rules."[56] This definition appealed to me because I was looking for precisely such a method to generate an infinite number of relatively well-formed strings within my video-word "microediting" system. I wanted the character(s) to speak indefinitely by drawing on their lexical database in a semi-ordered fashion, presenting a loose approximation of a natural-language generation system. To apply the concept of generative grammar to my particular purpose, I investigated computer science perspectives on formal grammar, where a generative grammar is seen as "a set of rules by which all possible strings in the language to be described can be generated by successively rewriting strings starting from a designated start symbol."[57] A particular kind of formal generative grammar known as context-free grammar (CFG) immediately seemed as if it would provide a good model for my system.

A context-free grammar "is a formal grammar in which every production rule is of the form ($V \rightarrow w$) where V is a non-terminal symbol and w is a string consisting of terminals and/or non-terminals. The term 'context-free' comes from the fact that the non-terminal V can always be replaced by w, regardless of the context in which it occurs."[58] Thus, a context-free grammar provides a powerful method of generating potentially indeterminate strings through well-defined

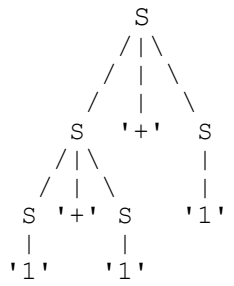
---

[56] Wikipedia: Generative grammar; http://en.wikipedia.org/wiki/Generative_grammar (Accessed May 2005).

A brief note about my sources here: in most cases I quote definitions and entries from Wikipedia because it provides the most thorough and centralized overview of linguistic theory and its complex interrelations, largely due to its Wiki presentation format. I did a significant amount of research in library collections, but most of these volumes focused on esoteric research aspects of generative grammar, intended for graduate-level linguistic specialists, and so in most cases I was not able to derive much useful information from them. What useful information I did gather from these volumes (most notably [Kolb, Monnich: 1999] and [Abeille, Rambow: 2000]) was reflected much more clearly and straightforwardly in the Wikipedia entries – which also served to reinforce my confidence in the accuracy of Wikipedia's collection.

[57] Wikipedia: Formal grammar; http://en.wikipedia.org/wiki/Formal_grammar (Accessed May 2005).

production rules. The derivation of such strings imposes in some sense a hierarchical structure which can be represented as a tree. For example, the string result of a system defined by two grammatical rules, (1) $S \rightarrow S + S$ and (2) $S \rightarrow 1$, can be represented by a tree hierarchy like so:



As one might infer, an incredibly complex array of ordered strings can be generated through such a system simply by constructing a well-defined rule set. This notion of CFG rule sets as visualized by tree structures is quite similar to another grammar formalism known as Tree-adjoining grammar (TAG). The main difference between CFG and TAG is that the elementary unit of rewriting in TAG is seen as a new node of the tree, rather than a symbol. Where CFG has rules for rewriting symbols as strings of other symbols, TAG presents rules for rewriting the nodes of trees as other trees.[59] From the nodes of a main tree, auxiliary trees can be adjoined in various ways according to the rule set, which makes TAG slightly more powerful than CFG in terms of context-sensitive generative capacity.

The CFG and TAG approaches seemed particularly compelling toward my purposes because of the tree structure's similarity to the Max/MSP/Jitter visual programming paradigm. In Max/MSP/Jitter, one creates programs by visually linking the inputs and outputs of black-boxed objects using patch cords. In visual terms, the result becomes an active informational or signal

---

[58] Wikipedia: Context-free grammar; http://en.wikipedia.org/wiki/Context_free_grammar (Accessed May 2005).

[59] Wikipedia: Tree-adjoining grammar: http://en.wikipedia.org/wiki/Tree-adjoining_grammar (Accessed May 2005).

flow chart that often resembles a tree structure similar to that used to describe CFG or TAG. Because of this, it seemed as if Max/MSP/Jitter was particularly well suited for the task of sequentially playing my video-word fragments according to a tree-like grammatical algorithm. In fact, in Max/MSP/Jitter it may have been difficult to organize the system any other way.

The first iteration of the system was not necessarily constructed as a straightforward TAG implementation, but as a series of sentence templates that closely resembled the Oulipian technique of homosyntaxism as discussed later in this section. In a sense this could be viewed as a "canned" TAG approach which was implemented in order to test the overall feasibility of the approach to get quick results. The sentence templates essentially served as hard-coded tree-adjoinment rules, producing a limited range of grammatical structures. Figure 8 at the end of this subsection shows an example of one of the Max/MSP/Jitter sentence templates, where the parts of speech are hard-coded in order. This example consists of an article-noun-adverb-verb-adjective-preposition-noun-pause template, which when filled as shown in the example produces the sentence, "the aggression must arrive constantly toward associates." Each word is played in order, then when the word is finished, it triggers the next. After the final pause video is played, the system jumps to another template. When the system begins playing a template, new words are generated for each component in the template.

This preliminary approach had significant drawbacks in that it produced language patterns which ultimately became mundane. Even though the words that filled the templates were different each time, the overall language structure seemed static, running its course rather quickly through each of the templates. In addition, the system didn't offer any amount of sophisticated control over the selected content, so its results often lacked any sense of grammatical correctness. There was no differentiation or synchronization in terms of subject-verb agreements or other grammatical issues between the selected words in a given sentence. To remedy this, the

system was completely reconstructed, and the data was reorganized in further detail according to the parts of speech for each lexicon. Figure 9 shows the new lexical database structure, with parts of speech differentiated to allow for better agreement and more control in selecting words. Figure 10 shows the new "sentence tree" structure, which is explained in further detail below.

This new system comes much closer to implementing a true TAG structure. Each "node" in the tree structure offers a variety of choices for the next word selection, according to the grammatically-constrained possibilities for a following word. For example, if the system chooses a plural noun (see Figure 11 for the interior of the "noun node"), the next word following that noun is chosen from a limited array of possibilities: a plural or transitive verb, a conjunction, a preposition, a pause, or an adverb (corresponding to the number boxes in Figure 11, which set the choice for the next part of speech to be chosen in Figure 10). For any of these chosen possibilities, the system then chooses from that word's following possibilities to select a subsequent word that grammatically follows its precedent. So if the original plural noun is chosen, then a conjunction, the next possibility will be the conjunction's constrained range of following choices: a determiner, a gerund, a noun, or a preposition. Then these new choices select from their constrained range of following possibilities, and so on. The sentence finally ends when a pause is chosen. In this way, the system dynamically generates speech through a series of relatively context-free grammatical rules. This system approximates a TAG approach because each time a new part of speech is chosen, the system effectively adjoins a new node to the generated tree, which is finally terminated when a "pause" video segment is selected.

The rules embedded in this system still fail in many cases to produce perfectly grammatical speech, but the results are interesting nonetheless. At the very least, it avoids the patterned regularities that plagued the homosyntaxism implementation of the first approach, since the results of this system are constantly changing due to the real-time selection process. In order to

further refine the system, a number of steps could be taken. First, the lexical database could be organized in greater detail, with more corresponding rules added to the system to ensure that proper agreement is maintained in following selections, as is the case with plural/singular noun-verb agreement in the present system. Second, the system could employ a "memory" to keep track of the words that have been generated in a given sentence tree, using this memory to ensure that following words stay in grammatical agreement with prior selections.

Even with further refinement, however, a fundamental conundrum of linguistic theory posits that such a grammatical rule-based system could never completely avoid nonsensical results. Figure 13 presents the tree structure of the sentence, "Colorless green ideas sleep furiously." This sentence was composed by Noam Chomsky in 1957 to illustrate the point that a well-formed grammatical sentence can still be essentially meaningless if its words are not employed in the proper semantic context. What this shows is that any collection of formal rules alone can never impart the conventional sense of "meaning" to a string of words – rather, meaning is inferred through vaguely defined cultural contexts.

From an artistic perspective, what I wish to point out through this example is that a system such as mine will always run the risk of producing nonsensical results, no matter how sophisticated its lexicon and rule set, without the proper management of cultural context. This then comes full-circle to relate to my original goal: representing the infinitely complex multisemantic context of media flows in the information age. In this sense, what I set out to do with this project was not to create meaning through the words themselves, but rather through the context of their delivery. This requires a much less literal reading of the system's technical underpinnings than most people have thus far seemed willing to give it, but even in this case, one can present a compelling argument. "Colorless green ideas sleep furiously" is an incredibly interesting, dense, poetic statement, and statements or sentiments such as these are rarely

produced through purely rational, rule-based means. Likewise, the ontology of my system as a whole should preferably be read in this way.

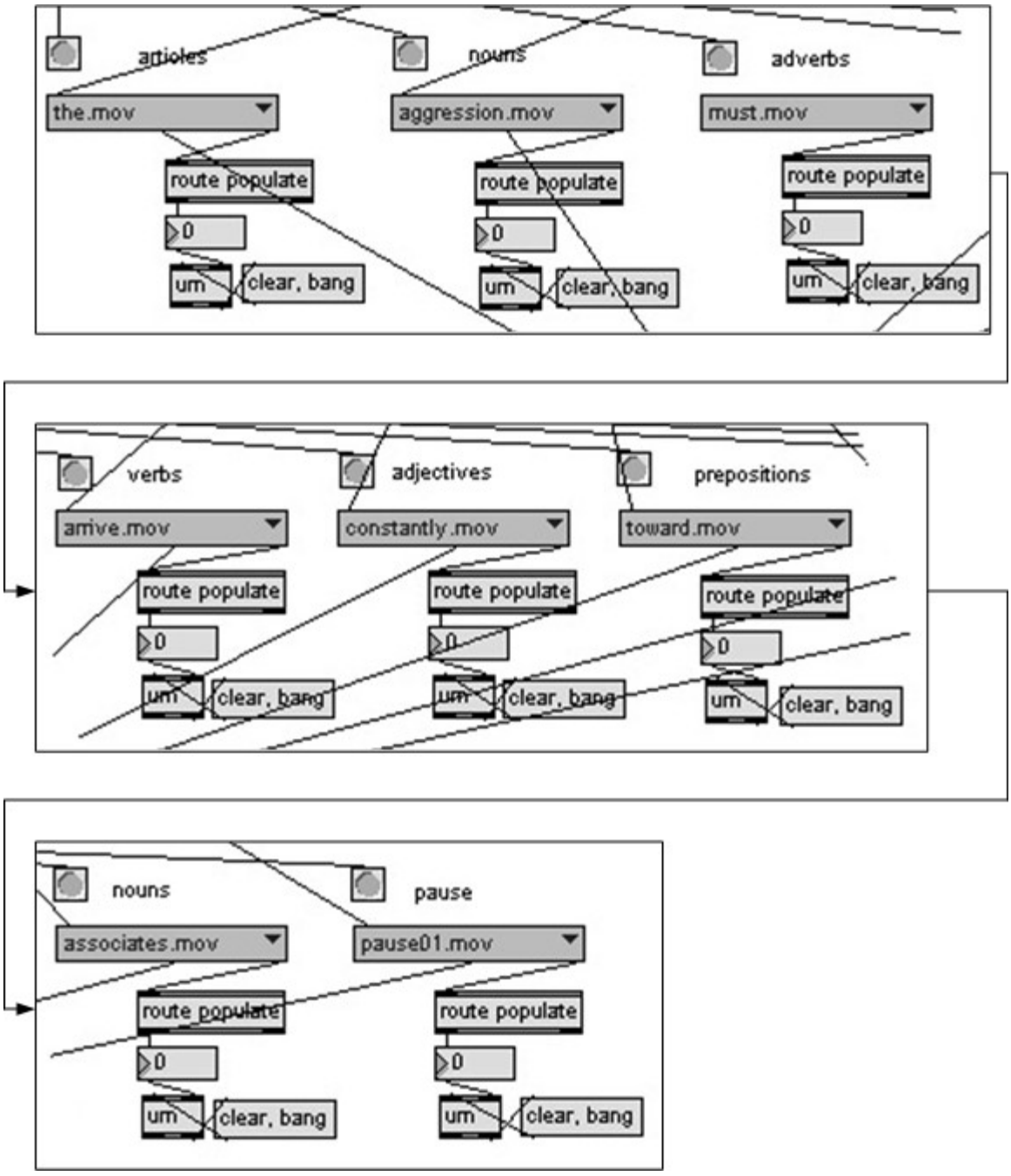


Figure 8. The homosyntaxism implementation in Max/MSP/Jitter (detail view). Parts of speech form a sentence template which is filled by random calls to the corresponding lexical database for each part of speech. The system plays each video-word in order. This template filled as shown would play, "the aggression must arrive constantly toward associates," then a pause video would be played before the system jumped to another template.

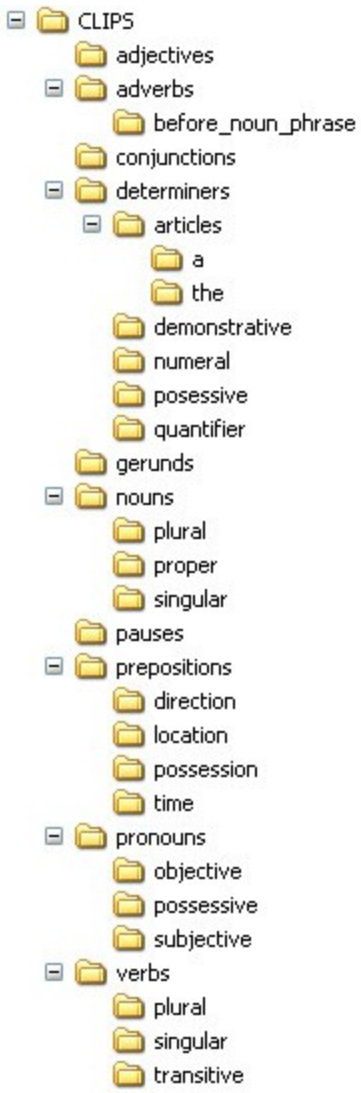


Figure 9. The lexical database has been organized into sub-folders to allow greater control over grammatical issues such as noun-verb case agreement. The previous database structure only differentiated among the main parts of speech (adjectives, adverbs, conjunctions, determiners, gerunds, nouns, prepositions, pronouns, and verbs), with no sub-categorization.

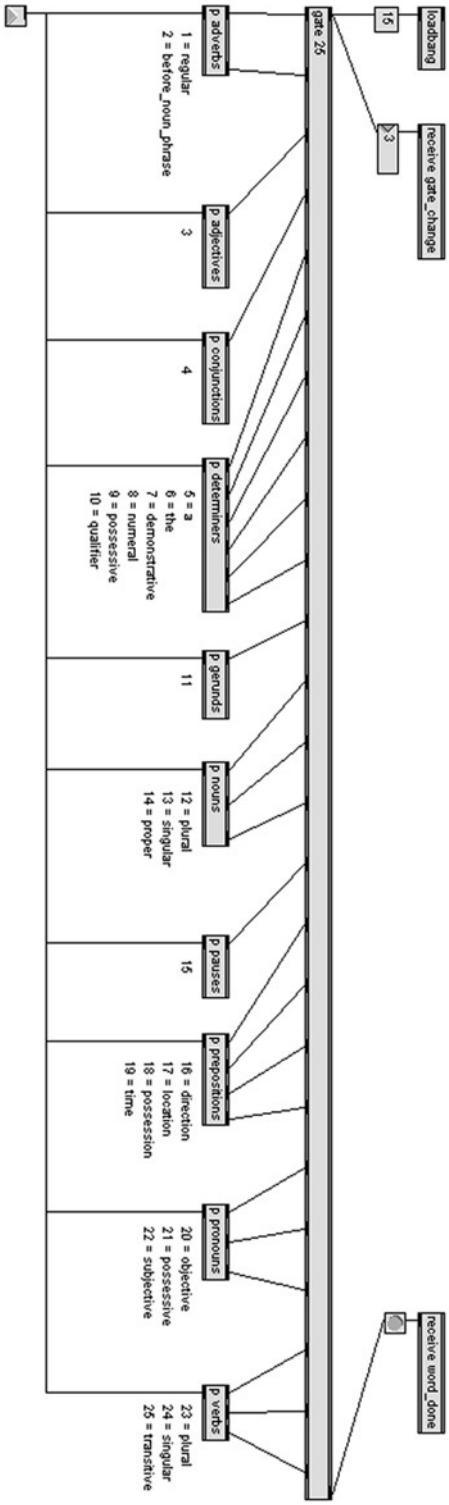


Figure 10. The new TAG sentence tree structure. By changing the gate, the system can select a new part of speech at any time according to rules specified from the last word played.

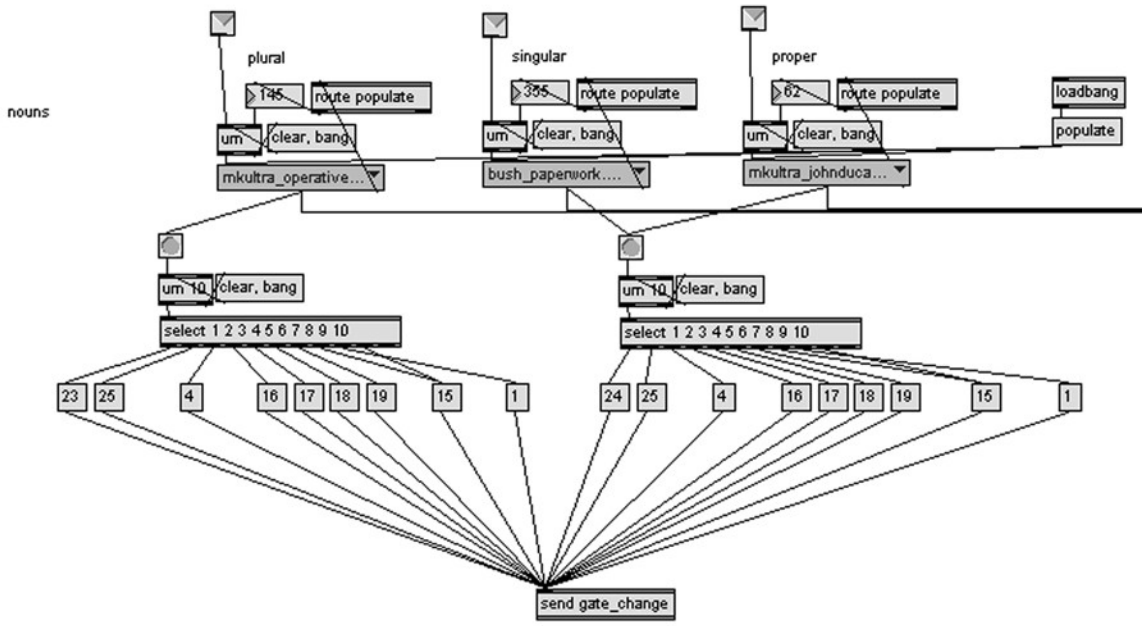


Figure 11. This shows the interior of the box labeled "p noun" in Figure 3. The numbers at the bottom of this figure correspond to the possible choices for a word to follow the noun. Note that the left, which represents the plural nouns, offers plural and transitive verbs as following choices (23 and 25, respectively, which correspond to the numbers listed in Figure 3) among the possible options. On the right, the singular and proper nouns offer singular and transitive verbs (24 and 25) among the possible options. This is an example of the greater grammatical control offered by rules governing this system; in this case it preserves the plural/singular agreement between nouns and verbs that follow. When one of the numbers is chosen at random (the "urn" object generates random numbers within a specified range), it sets the main "gate" object in Figure 3 to select the following choice after the current word has finished playing.

The other word objects in Figure 3 (objects starting with "p ...") have a similar internal structure, with similarly constrained choices for following words. Figure 5 (next page), for example, shows the rules governing the next choice following a conjunction.

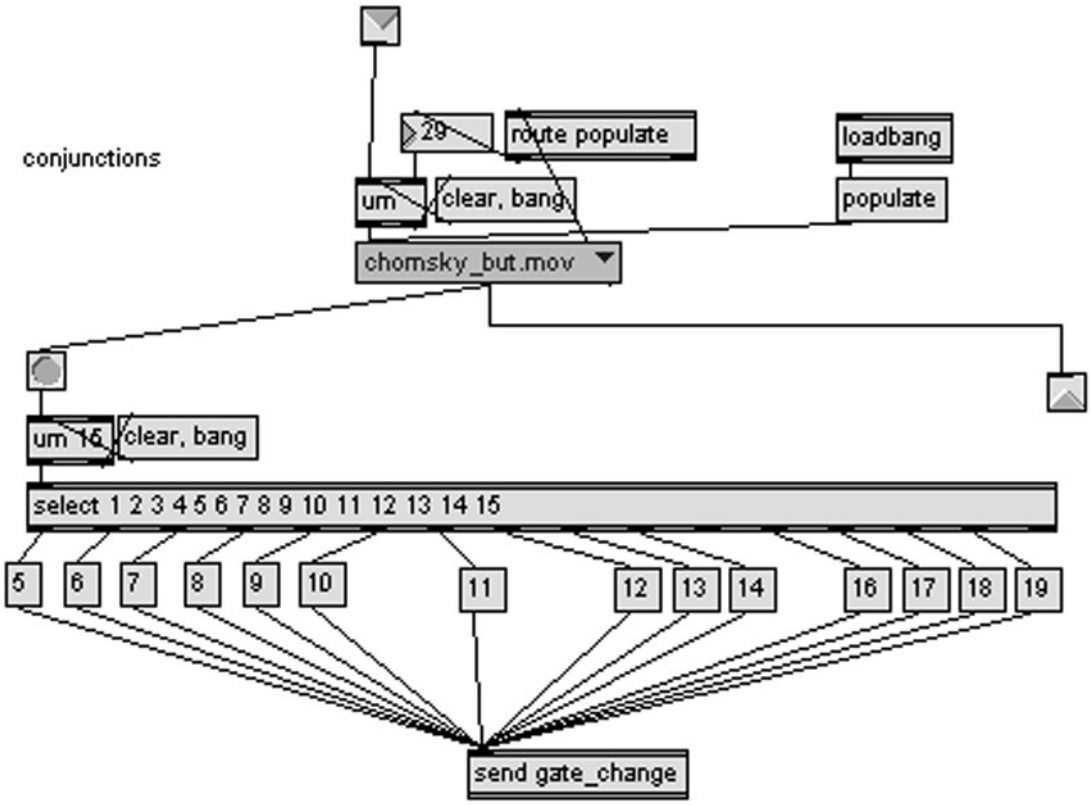


Figure 12. The interior of the "p conjunctions" object in Figure 3. Possible choices of 5,6,7,8,9,10,11,12,13,14,16,17,18, and 19 correspond to determiners, gerunds, nouns, and prepositions.

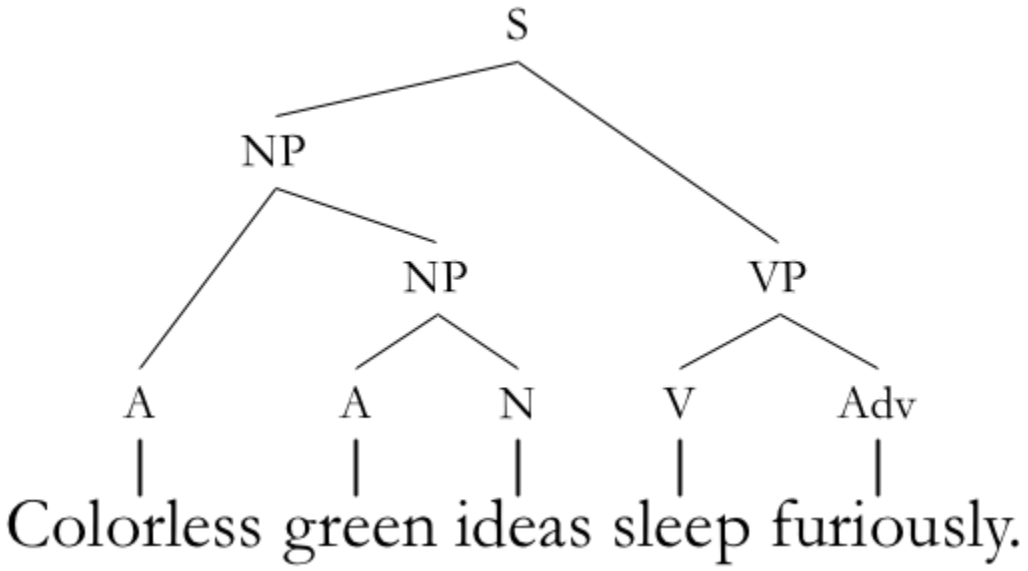


Figure 13. This image, available on Wikipedia under the GNU Free Documentation License[60], presents the sentence tree structure for the famous sentence "colorless green ideas sleep furiously." This grammatically correct, though essentially meaningless sentence was composed by Noam Chomsky in 1957 to demonstrate that meaning is not entirely dependent on the grammar of a localized language or culture.

[60] Wikipedia: Colorless green ideas sleep furiously; http://en.wikipedia.org/wiki/Colorless_green_ideas (Accessed May 2005).

3.3 Artistic traditions, inspirations, and related work

This section examines a collection of prior related work and theory, establishing the vignettes of tradition in which I view my most recent efforts. This conceptual background begins with the innovation of montage as a filmic technique, and the psychological phenomenon of creating meaning or inferred relationships through the juxtaposition of images over time. I then discuss practices of textual composition through systematic or algorithmic means. Following this, the situationist technique of detournement is introduced and discussed in the context of contemporary appropriation and sampling-based media art practices. Finally, I draw perspective from more contemporary theories of generative digital media systems as database-oriented experiences, considering agency within such systems and the possibilities afforded by paradigms of interaction.

3.3.1 Montage

In the simplest terms, I characterize my media mixing systems as real-time generative montages, thereby establishing a relationship with one of the earliest conceptual innovations in time-based visual media. The origins of mash-up or montage media practices can be traced back to the Russian filmmakers of the 1920s, including Sergei Eisenstein and Lev Kuleshov, the namesake of the Kuleshov effect.[61] The basic premise of the montage editing technique, of course, is the assemblage of short, discontinuous shots which are interpreted as a coherent

[61] The Kuleshov effect is derived from the Kuleshov experiment (1920), which established a theory that meaning is derived through the juxtaposition of shots; a man's face shown prior to a bowl of soup leads viewers to infer that the man is hungry. The same man's face shown prior to a shot of a casket leads to the inference that the man is sad. This effect is often used as an example of the psychological theory of "confirmation bias," where decision makers have been shown to notice more, assign more weight to, and actively seek out evidence that confirms their claims, while tending to ignore and not seek out evidence that might discount their claims. For more on this effect see the Wikipedia entry on confirmation bias: http://en.wikipedia.org/wiki/Confirmation_bias (accessed May 2005).

sequence. This basic technique was expanded by Eisenstein into a theory of "intellectual montage," where a concept or idea is developed from a sequence of shots, none of which individually contain the essence of the larger concept. In this sense, conceptual inferences are emergent properties of an assemblage, entirely dependent upon interpretation. The most crucial elements in this technique are then identifiable as the choice of cultural signifiers in the individual shots, and the order in which they are presented. These two elements of authorship provide the direction through which viewers infer meaning. Indeed, the "language" of film itself relies primarily on these elements, defining an aesthetic of structural formation which also relates to artistic practices in written (and spoken) language.

3.3.2 Oulipo

Within the scope of structurally-oriented artistic practices in language, the loose gathering of French speaking writers and mathematicians known as Oulipo (Ouvroir de littérature potentielle)presents a model which I feel is particularly pertinent to my work in the speech generation system of *De-Generative Politricks*. The constrained writing techniques explored by Oulipian authors use algorithmic compositional means to seek new structures, ideas, and inspiration. In some cases this involves employing a content-agnostic process which is concerned more with the creation of a "creative system" and less with its ultimate results – even though these results are typically quite interesting in themselves. Some Oulipian works even take a generative, interactive approach, such as Raymond Queneau's *Cent Mille Milliards de Poèmes* (One Hundred Million Million Poems). In this work the lines of ten sonnets, all with the same rhyme scheme, are separated as strips in a book allowing each to be turned independently. Any lines from one sonnet can be combined with any of the other nine, creating the possibility for

10^{14} different poems. Estimates hold that it would take around 200,000,000 years to read them all, even if reading 24 hours a day.[62]

It is important to note a subtle distinction that Oulipian procedures, though algorithmic, are "as remote as possible from 'automatic writing,' and, more generally, from the notion of any kind of literature whose strategic foundation is chance."[63] Instead, the strategic foundation is the potentiality of constraints:

> Oulipian constraints provide the rules of a language game (in the Wittgensteinian sense) whose "innings" (texts composed according to its rules) are virtually unlimited and represent linguistic combinations developed from a small number of necessarily interdependent elements. That is where a constraint's potentiality is initially to be found.[64]

This is analogous to my interpretation of the speech generation system in *De-Generative Politricks*. The output is not determined by mere chance (no matter how haphazard it may seem to be), but by the constraints I impose on the system. The first constraint is the content collection, or the video-words that comprise the system's lexicon, carefully chosen, edited, and categorized. The second constraint is the rule system, modeled after theories of generative grammar. Together, these "necessarily interdependent elements" present the potential for virtually unlimited linguistic combinations within the system of constraints I have devised.

To further draw out the relationship of my system to Oulipian techniques, the compositional model of "homosyntaxism"[65] provides a perfect example. Homosyntaxism proposes a method of translation that preserves only the syntactic order of original words in a text. As a rudimentary example, if D=determiner, N=noun, V=verb, and A=adjective, the template DNVA could yield

---

[62] Mathews, Brotchie (1998), 14.

[63] Ibid, 41.

[64] Ibid, 40.

[65] Ibid, 155.

output such as “the day turned cold” or “a violet is blue.” In early versions of my system, I used syntactic templates where each word slot was filled by pulling from databases for each part of speech, achieving the same compositional result. So, for example, in one iteration a template might yield “Bureaucrats must constantly unleash terror in the Middle East,” while the next iteration might produce something like “OBGYNs should never promote bigotry against the citizens.”[66] The order of the parts of speech stays the same, while the semantic effect changes dramatically each time the template is filled. In the later versions of my system, the syntactic templates themselves are generated and simultaneously filled in real time.[67]

3.3.3 Situationist Detournement

The theoretical, structuralist filmmaking approaches of the Situationist International present another view toward my work, less confined to a purely artistic milieu. The political posturing of the Situationist International tends to characterize much of their individual or collective film work as agitprop, with artistic trajectories that deliberately relate it to the intellectual montage practices of early Russian filmmakers as noted above. A key element in the Situationist approach involves the subversion of material produced by a society innundated by spectacle, where everyday life is mediated by commodified images. This subversion is manifested through the theory of detournement:

> **Detournement:** Short for: detournement of preexisting aesthetic elements. The integration of past or present artistic production into a superior construction of a milieu. In this sense there can be no situationist painting or music, but only a situationist use of these means. In a more primitive sense, detournement within the old cultural spheres is a method of propaganda, a method which testifies to the wearing out and loss of importance of those spheres.[68]

---

[66] These are actual examples of the system's output. It did not *always* produce sentences that made this much sense, but it often did.

[67] See section 3.2 for further details.

Hence detournement encompasses all artistic practices which incorporate preexisting aesthetic elements in this way. Its use becomes clear more as a conceptual framework, rather than an applied technique, in defining a situationist approach toward any artistic medium. In this way, montage obviously serves as the foundation for detournement as carried out in film or video. Within the employment of detournement, there exist four basic principles which are related and discussed here in turn. The first:

> *It is the most distant detourned element which contributes most sharply to the overall impression, and not the elements that directly determine the nature of this impression.*[69]

That is, the recognizability or cultural significance of an element is valued in a larger collection due to the amount of cognitive dissonance it provokes. The sensation that "one (or more) of these things doesn't belong" leads to the overall impression or implication of meaning as expressed by the collection. A homogeneous collection of elements therefore produces a far less effective detournement effect. On the other hand, of course, the collection of elements must be targeted with some cohesion to avoid an impression of sheer compositional chaos; the management of this conceptual balance is clearly a key problematic with no easily defined resolution.

> *The distortions introduced in the detourned elements must be as simplified as possible, since the main force of a detournement is directly related to the conscious or vague recollection of the original contexts of the elements.*

This principle at least points toward a strategy for managing the previous problematic. It identifies the original contexts of the elements as the main catalyst in detournement, suggesting that the power of the technique results from letting the elements speak for themselves. Still, to

---

[68] Knabb (1981), 45.

[69] Knabb (1981), 10.

achieve full effect, the theory of detournement posits that one shouldn't be too straightforward in the manipulation and presentation of these elements:

Detournement is less effective the more it approaches a rational reply.

One way to view this principle might be as an acknowledgment of the limiting nature of the "one-liner." To the extent that a media artwork employs detournement in the formulation of a single, simplistic argument, it does so at the peril of discarding a majority of the interpretive possibilities offered by its constituent cultural signifiers. In the words of Guy Debord: "The more the rational character of the reply is apparent, the more indistinguishable it becomes from the ordinary spirit of repartee, which similarly uses the opponent's words against him."[70] This often presents problems when presenting work to an audience whose tastes and attention spans demand "rational" arguments – which would in fact seem to be most audiences, albeit to differing degrees.

Finally, the fourth principle states:

Detournement by simple reversal is always the most direct and the least effective.

As this suggests, the inversion of a message is often the simplest and most obvious approach, invoking this "ordinary spirit of repartee" which is easily apprehended and dismissed by audiences without prompting further consideration. The simple inversion method is used so extensively, in fact, that it is often difficult to escape this as an immediate reading of work which would attempt to present a deeper, more deceptive detournement.

To elaborate, then, and to relate this framework to structural approaches in language and time-based media manipulation, one might consider the following passage from situationist literature:

---

[70] Ibid.

> Any elements, no matter where they are taken from, can serve in making new combinations. The discoveries of modern poetry regarding the analogical structure of images demonstrate that when two objects are brought together, no matter how far apart their original contexts may be, a relationship is always formed. Restricting oneself to a personal arrangement of words is mere convention. The mutual interference of two worlds of feeling, or the bringing together of two independent expressions, supersedes the original elements and produces a synthetic organization of greater efficacy. Anything can be used.
>
> It goes without saying that one is not limited to correcting a work or to integrating diverse fragments of out-of-date works into a new one; one can also alter the meaning of those fragments in any appropriate way, leaving the imbeciles to their slavish preservation of "citations."
>
> Such parodical methods have often been used to obtain comical effects. But such humor is the result of contradictions within a contradiction whose existence is taken for granted. Since the world of literature seems to us almost as distant as the Stone Age, such contradictions don't make us laugh. It is therefore necessary to conceive of a parodic-serious stage where the accumulation of detourned elements, far from aiming at arousing indignation or laughter by alluding to some original work, will express our indifference toward a meaningless and forgotten original, and concern itself with rendering a certain sublimity.[71]

The conception of this sublime, parodic-serious approach can be seen as a reaction to the potentially problematic aspects of detournement as outlined above. This approach is admittedly subtle, however, relying on a complex interplay of careful manipulation and sophisticated interpretation. Because of this, it can never fully guarantee the successful avoidance of simplistic readings, and hence the practice of detournement is bound to remain as a fleeting endeavor. In reference to my work, the use of detournement (and this parodic-serious approach) often becomes an uphill battle against people's codified expectations of media, where these expectations have been shaped via the mass-media ideosphere characterized in the first chapter of this text.

3.3.4 Culture-jamming, Appropriation and Sampling Practices

Where the situationist use of detournement in my work represents the subtle, theoretical undercurrent, the traditions of sampling and culture-jamming represent the not-so-subtle

---

[71] Guy Debord & Gil J. Wolman, *Methods of Detournement*; From *Les Lèvres Nues* #8, May 1956 (Knabb [1981]).

contemporary lineage. I still view these traditions in the context of detournement, but the relationship is not necessarily a direct one in all cases.

As a first example of what I mean by this, consider the culture-jamming techniques of Adbusters, the "global network of artists, activists, writers, pranksters, students, educators and entrepreneurs who want to advance the new social activist movement of the information age."[72] Adbusters appropriates the language of corporate advertising, attacking it within its native milieu. Thus, the Adbusters approach can largely be characterized as a weak detournement by simple reversal – inverting a message, using it against itself. However, the primary purpose of the Adbusters culture-jamming practice is not to effect a lofty theoretical detournement, but simply to propagate the messages of a resistance movement against the perceived hegemony of popular culture. This practical function sets this mode of culture-jamming apart from artistic appropriation, where the motive is more about the production of art for art's sake. Still, the ultimate results of both these approaches are not always distinguishable.

The early 1990s video works of the Emergency Broadcast Network (EBN) serve as a case in point here. Through their politically-oriented archival montages, EBN appropriates the language of cable television sound bites, recontextualizing them within the cultural tradition of sampling as practiced in hiphop and electronic music. Because of this recontextualization in a new cultural sphere, their approach resembles a deeper detournement than that of a simple culture-jamming message reversal. While manipulating video samples of George Bush (the first, not W.) to make him say "I've instructed our military commander to totally rock America"[73] over a booming hiphop beat is certainly more parodic than serious, it is also clearly much more than a

---

[72] Adbusters: About Us; http://www.adbusters.org/network/about_us.html (Accessed May 2005).

[73] EBN: Commercial Entertainment Product Video, Track #6: Behavior Modification/We Will Rock You (TVT Records: http://www.tvtrecords.com/artists/?art_id=58, Accessed May 2005).

straightforward inversion of the source material. This, in turn, makes it more entertaining and more effective as sublime detournement, where preexisting elements are combined into the construction of a superior milieu. However, this aspect of parody still has the tendency to provoke simplistic readings of this kind of work as ironic music-video gimmickry.

Finally, perhaps the best example of media appropriation as parodic-serious detournement can be found in the work of filmmaker Craig Baldwin. He often refers to his work as following a found footage junk-film tradition known as "cinema povera" (the cinema of poverty),[74] a bricolage production method of adapting any and all available materials at minimal cost. This style represents a turning away from the offerings of mainstream in favor of the forgotten and marginalized works of the past. In the 48-minute film collage, *Tribulation 99: Alien Anomalies Under America*, Baldwin combines an incredible number of disparate sources into a cohesive metacommentary on conspiracy thinking and American foreign policy:

> With its dryly narrated, whispering soundtrack told through 90 per cent "found" footage, Baldwin's *Tribulation 99* lets the audience in on a National Enquirer-type conspiracy, in which invading aliens called Quetzals have come to take over the minds of US decision makers in a battle for control of both Central America and the Earth's core. Watching the film, you will recognize bits of *Earth vs the Flying Saucers*, *Dr No*, various Mexican B-grade movies, *The Creature From the Black Lagoon* and *War of the Worlds*. There are strange out-takes from 1960s documentaries on plutonium waste-disposal and magnetism. There are video clips from news coverage of the invasion of Grenada. Viewing this wealth of material, one imagines the feelings that went into its creation - ecstatic delirium mixed with moral panic and political outrage.[75]

The filmmaker elaborates,

> *It was curious the way that certain ideas were between the official, political history and the very unofficial paranoiac version of things. There were often these weird alignments. Sometimes it was easier to believe the UFO stuff than it was to believe the CIA story that was used to justify our intervention in some country. So I lined them up, superimposed them in a way. I tore out bits of paper and taped them together. The material organized itself. I took real, political material and retrofitted it with the fantastic, wacko literature. I was continuing my projects against US intervention in Latin America.*

---

[74] Cox (1997).

[75] Ibid.

> *My other films have been a criticism of US foreign policy. What came to a head here was the whole Iran-Contra Affair, Oliver North's trial, it was the whole milieu - the center of the times. I wanted to make a statement that was critical of the CIA and our meddling in foreign countries, and it seemed to be a new use of this creative material, these paranoiac rants. "I saw the CIA as being truly a conspiracy. I wanted to make a black comedy instead of a Noam Chomsky kind of thing which is fine and great, but I didn't want to duplicate. Instead of making that kind of attack, I wanted to make one that was satirical - one that would lacerate, tear apart, shred the CIA by burlesquing them, by using these great materials.*[76]

As Baldwin states, the film's premise is deadly serious in many ways, and extremely political in its intended commentary. By attempting to construct a black comedy out of his chosen elements, however, his superior constructed milieu confounds attempts to view or analyze the work from any single angle. Without a doubt, this constitutes an elaborate, skillful detournement – but even this presents a problematic issue of audience interpretation. If a work simultaneously defies all the readily applicable labels one might be prompted to give it, either in whole or in part, it often ends up with less desirable ones. These include labels like “confusing,” “obscure,” “incoherent,” or “ambivalent,” which are all descriptive terms that have been applied to Baldwin's work.[77]

3.3.5 Database as Symbolic Form, Algorithmic Structure, and User Interaction

The careful organization of large volumes of archived content takes on new significance in the realm of digital media, where this kind of montage format presents possibilties for real-time manipulation. Within the rubrics of computation, the archives become databases and the manipulation strategies become algorithms. To extend this technical conceptual framework into a useful model for cultural and artistic applications, the discourse must be expanded to address the aesthetics of these computational practices.

---

[76] Ibid.

[77] Zyrd (2003).

In his essay “Database as Symbolic Form,” Lev Manovich begins a discussion of database structures as defined in computer science, describing the primary variations of hierarchical, network, relational, and object-oriented structures according to their function as models in organizing data. He then expands this view in order to develop a new media theory of databases in a cultural and artistic sense:

> New media objects may or may not employ these highly structured database models; however, from the point of view of user's experience a large proportion of them are databases in a more basic sense. They appear as a collections of items on which the user can perform various operations: view, navigate, search. The user experience of such computerized collections is therefore quite distinct from reading a narrative or watching a film or navigating an architectural site. Similarly, literary or cinematic narrative, an architectural plan and database each present a different model of what a world is like. It is this sense of database as a cultural form of its own which I want to address here. Following art historian Ervin Panofsky's analysis of linear perspective as a "symbolic form" of the modern age, we may even call database a new symbolic form of a computer age (or, as philosopher Jean-Francois Lyotard called it in his famous 1979 book Postmodern Condition, "computerized society"), a new way to structure our experience of ourselves and of the world.[78]

In this sense, databases represent structured collections of cultural material, or structured collections of experience. Manovich then identifies algorithms as defining the order in which these databases are navigated, constituting a new conception of narrative in new media. Thus, this algorithmic approach to database navigation is seen as a model for characterizing the user experience:

> The "user" of a narrative is traversing a database, following links between its records as established by the database's creator. An interactive narrative (which can be also called "hyper-narrative" in an analogy with hypertext) can then be understood as the sum of multiple trajectories through a database. A traditional linear narrative is one, among many other possible trajectories; i.e. a particular choice made within a hyper-narrative. Just as a traditional cultural object can now be seen as a particular case of a new media object (i.e., a new media object which only has one interface), traditional linear narrative can be seen as a particular case of a hyper-narrative.

As an excellent examples of this new media hyper-narrative, one might consider the *Consensual Fantasy Engine*, produced in 1995 by Paul Vanouse and Peter Weyhrauch, or the

---

[78] Manovich (1998).

Terminal Time project produced by Vanouse, Steffi Domike, Michael Mateas, and Patrick Lichty in 1999. Both projects can be understood as the sum of multiple trajectories through databases of experientially-defining media.

In the *Consensual Fantasy Engine*, the creators set out to explore the O.J. Simpson chase as a new kind of relationship between television broadcasts and the viewing society. The system is comprised of a video collection which is presented piece by piece to the audience, beginning with the O.J. Simpson chase as the point of departure for the narrative. Every five minutes, the system allows the audience to transform the narrative by presenting them with questions which they answer by applauding for their preference. Through this participation, the audience can shape the story "into a Bonnie and Clyde style road adventure, an intriguing, Film Noir search for the real villain, a suspenseful trial, or any of millions of intricate variations."[79]

The *Terminal Time* project takes a similar approach to this kind of hyper-narrative construction, examining the subjective biases of historical presentation:

> Terminal Time is a history "engine:" a machine which combines historical events, ideological rhetoric, familiar forms of TV documentary, consumer polls and artificial intelligence algorithms to create hybrid cinematic experiences for mass audiences that are different every single time.[80]

Using the same model of audience interaction, the system employs "ideological goal trees" to transform the audience's input into an elaborately generated revision of human history. This history is constructed in real time by pulling information from a massive historical knowledge base, then rendering that information into a final narration.

---

[79] The Consensual Fantasy Engine: http://www.contrib.andrew.cmu.edu/usr/pv28/cfe.html (Accessed May 2005).

[80] Terminal Time: http://www.terminaltime.com/ (Accessed May 2005).

These principles of real time hyper-narrative construction are a central element in my work as well, though they are implemented quite differently, and require a different conception of "narrative" as opposed to the ultimately finite constructions in the previous examples. The user-guided hyper-narrative in *Channel Zero* presents a limited-choice trajectory through the time-based clip database, offering false impressions of choice where content is concerned. *De-Generative Politricks* offers no choice at all, instead presenting an automatic hyper-narrative through a structured collection of speech fragments. In both systems, the hyper-narrative continues indefinitely, with an ever-increasing sum of trajectories through the database.

4. Conclusions: Difficulties in Theory and Practice

The previous examples form a collective tradition which frames my work through many different conceptual lenses. In attempting to represent the integration of endless, recycled media flows through algorithmic means in my media mixing projects, I reconstitute all these practices in my own form of digital media bricolage. In this discussion of my work and the theory and tradition surrounding it, I have attempted to simultaneously justify and critique my process. What follows is a summary of the problematics identified throughout this analysis.

First and foremost, targeting sociotechnical commentary when remixing heavily loaded cultural content is an extremely difficult proposition. The scope, scale, and processed usage of such content demands careful anticipation in regard to the context and expectations of one's audience. This is perhaps a universal consideration in all media art practices, but in this case seemingly more than others, it necessitates the ex-ante establishment of a critical discourse between content, process, and interaction. In structural terms, the approaches of Oulipo and Manovich's theories of database as a symbolic form help to facilitate this discourse. Correspondingly, the situationist theory of detournement establishes a useful framework for analysis where issues of conceptual relationships and communicative intent are concerned.

At every step in developing such systems, it is crucial to anticipate potential mischaracterizations of the work (in so much as it is possible to anticipate these issues), and address them immediately, before they become lost in the system's ontological complexity. If the work approaches the thematic realm of culture-jamming, through content or application, special care should be taken to avoid the appearance of “art gallery activism.” By this, I mean that if the work's intent doesn't include the presentation of a definitive political statement, this should be generally communicated in some way. Otherwise, audiences will tend to resolve this ambiguity

by dismissing the work as an impotent political gesture executed within the safe ideological confines of an art gallery. Detournement offers one possible technique to manage this, either through obfuscation of source content (rather than simple inversion), or the inclusion of more thematically distant material to destabilize dominant assumptions. When attempting to employ detournement in this manner, however, maintaining a balance between simplicity and incoherence presents the biggest challenge.

In psychological terms, addressing this challenge requires the careful anticipation and management of cognitive dissonance. It can usually be assumed that traditional mass-media has shaped the expectations of an audience in terms of narrative structures, paradigms of interaction, and the employment of cultural signifiers. Therefore, when diverging from these expectations, the best strategy seems to be a middle path: first, choose signifiers carefully, and constrain them within a thematic range as much as possible for the sake of simplicity. Second, when employing abstractions, make sure to communicate the essence of that abstraction as explicitly as possible. When working in a multisemantic context, this kind of explicit communication is often difficult, if not impossible. The extent to which this difficulty can be overcome then emerges as the most quantifiable criterion for determining whether one's efforts have succeeded.

References

Abeille, Anne; Rambow, Owen. (2000). Tree-adjoining grammars: formalisms, linguistic analysis and processing. Stanford: CSLI Publications.

Arquilla, John; Ronfeldt, David. (2001). Networks and Netwars: The Future of Terror, Crime, and Militancy. Rand Corporation Publications.

Bey, Hakim. (1991). THE TEMPORARY AUTONOMOUS ZONE. http://www.hermetic.com/bey/taz3.html; Accessed March 2005.

Castells, Manuel. (1998). End of Millennium. Malden, MA: Blackwell.

Castells, Manuel. (2004). The Power of Identity. Malden, MA: Blackwell, 2nd ed.

Castells, Manuel. (2000). The Rise of the Network Society. Malden, MA: Blackwell, 2nd ed.

Cox, David. (1997). Media Meltdown. *Senses of Cinema*; http://www.sensesofcinema.com/contents/01/13/baldwin-meltdown.html. Accessed May 2005.

Galloway, Alex. (2004). Protocol: How Control Exists after Decentralization. Cambridge, MA: Leonardo.

Glasner, Joanna. (2005). P2P Fuels Global Bandwidth Binge. *Wired News*; April 14, 2005. http://www.wired.com/news/business/0,1367,67202,00.html; Accessed May 2005.

Knabb, Ken (ed.). (1981). Situationist International Anthology. Berkeley, CA: Bureau of Public Secrets.

Kolb, Hans-Peter; Monnich, Uwe. (1999). The Mathematics of Syntactic Structure: Trees and their Logics. Studies in Generative Grammar; 44. Berlin: Walter de Gruyer.

Lateiner, Joshua S. (1996). Ars Electronica 1996 Catalog, "Memesis"; http://www.aec.at/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=8542# Accessed November 2004.

Lyon, David. (2003). Surveillance as Social Sorting. New York, NY: Routledge.

Manovich, Lev. (1998). Database as a Symbolic Form. http://manovich.net/DOCS/database.rtf; Accessed May 2005.

Mathews, Harry (ed.); Brotchie, Alastair (ed.). (1998). Oulipo Compendium. London: Atlas Press.

Mattelart, Armand. (2000). Networking the World, 1794-2000. Translated by Liz-Carrey Libbrecht and James A. Cohen. Minneapolis, MN: University of Minnesota Press.

McGeary, Johanna; Waller, Douglas. (2002). Why Can't We Find bin Laden? *TIME Magazine*, November 25, 2002. http://www.time.com/time/archive/preview/0,10987,1; Accessed March 2005.

McLuhan, Marshall. (1962). The Gutenberg Galaxy: The Making of Typographic Man. Toronto: University of Toronto Press.

Medin, Douglas; Ross, Brian; Markman, Arthur. (2001). Cognitive Psychology. Orlando, FL: Harcourt Inc., 3rd ed.

Milbank, Dana (2000). Bushisms: Tangled Tongues and Scrambled Syntax. *St. Petersburg Times*, May 9, 2000. http://www.sptimes.com/News/050900/Floridian/Bushisms__Tangled_ton.shtml. Accessed May 2005.

Pesce, Mark (2005). Piracy is Good? *Mindjack*, May 13, 2005. http://www.mindjack.com/feature/piracy051305.html. Accessed May 2005.

Pesce, Mark. (2004). Open Source Television: Liberte! Facilite!! Egalite!!!. *Disinformation*; July 14, 2004. http://www.disinfo.com/site/printarticle4565.html. Accessed May 2005.

Pesce, Mark. (2004). Redefining Television. *Mindjack*; May 17, 2004. http://www.mindjack.com/feature/redefiningtv.html. Accessed May 2005.

Rymer, Russ (1992). A*nnals of Science* in "The New Yorker (*http://newyorker.com/*)". April 13, 1992.

Thomas, Timothy L. (2003). Al Qaeda and the Internet: The Danger of "Cyberplanning". *Parameters*; Spring 2003. pp 112-23. http://www.iwar.org.uk/cyberterror/resources/cyberplanning/al-qaeda.htm. Accessed March 2005.

Winston, Brian. (1998). Media Technology and Society: A History: From the Telegraph to the Internet. New York, NY: Routledge.

Ziegler, Henning. (2004). Dissent on the Net: Cultures of Electronic Resistance in the United States. *Journal of Hyper(+)drome.Manifestation*, number 1. http://journal.hyperdrome.net/issues/issue1/ziegler.html. Accessed November 2004.

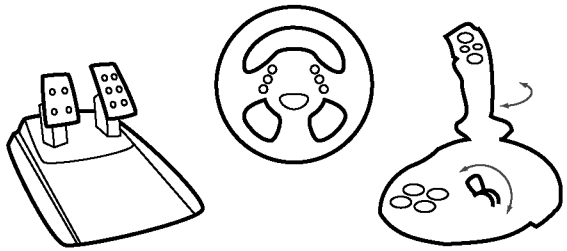
Zyrd, Michael. (2003). “Found Footage Film as Discursive Metahistory: Craig Baldwin's Tribulation 99.” *The Moving Image* 3.2, 2003, 40-61.

Channel Zero

Cultural Entertainment System (CES)
Multimodal Media Mashup Mixing Milieu /
Home VJ Console Model CDP/CBL-VJ1-0504

INSTRUCTION MANUAL

content collection vol.1:
Aggravision



WARNING: READ BEFORE USING YOUR CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504:

A very small percentage of individuals may experience epileptic seizures when exposed to certain light patterns of flashing lights. Exposure to certain patters or backgrounds on a screen or while using interactive video systems, including the CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504, may induce an epileptic seizure in these individuals. Certain conditions my induce previously undetected epileptic symptoms even in persons who have no history of prior seizures or epilepsy. If you, or anyone in your family, has an epileptic condition, consult your physician prior to using the system. If you experience any of the following symptoms while using the system -- dizziness, altered vision, eye or muscle twitches, loss of awareness, disorientation, any involuntary movement, or convulsions -- IMMEDIATELY discontinue use and consult your physician.

PLEASE NOTE: The information in this manual was correct at the time of going to print, but some minor changes may have been made in the system's development.

ABOUT THIS COLLECTION

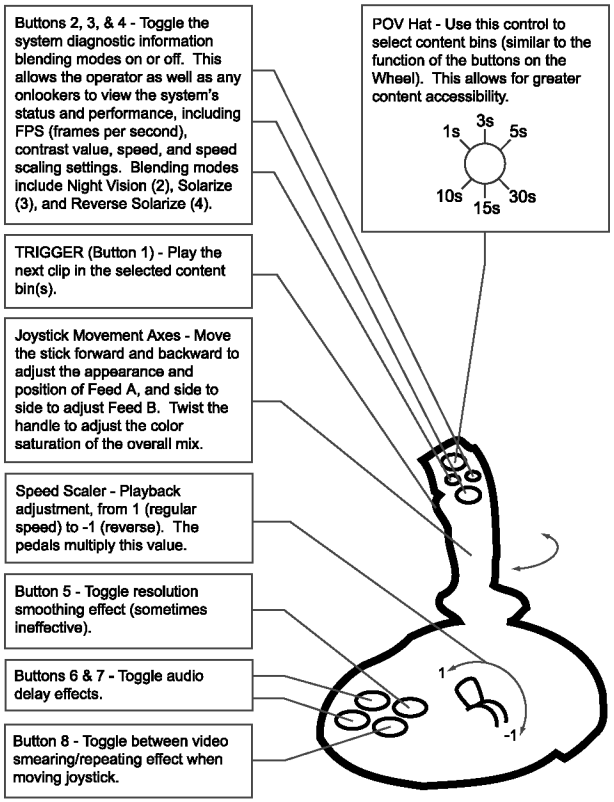
Volume 1: Aggravision culls the majority of its content from a video database collection harvested from worldwide peer-to-peer filesharing networks, where the most salient and sensational clips inevitably rise to the top of the download queue. Selected exerpts from regional media broadcasts are also included in an attempt to ground the collection in the American domestic entertainment vernacular.

Through Channel Zero's joystick, steering wheel, and pedal interface, the participant is invited to mix, explore, and sometimes avoid material that ranges from the simply inane to the nauseatingly macabre. No matter what the individual subject or effect, the images in the collection ultimately blend to represent a small cross section of the tastes, trends, and fixations that drive these unregulated and decentralized media networks, juxtaposed against the aforementioned vernacular.

It is hoped that the overall result of this first installment will present a jarring, unsettling, cacophonous media mess, delivering a full-bore assault on the senses and sensibilities of those who would attempt to behold and/or navigate its depths.

3. Joystick

The Joystick offers the greatest range of Audiovisual content mixing control. Although the many options may seem confusing at first, studies have shown that operators are typically able to develop a sophisticated sense of control within a very short period of time.



Troubleshooting

This section addresses common problems you may encounter with the CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504. Please consult this section before contacting Technical Support.

Problem 1: The CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504 is leading me to experience severe symptoms of disorientation, disaffectation, and/or outrage/desensitization in reaction to its culturally (in)sensitive content. I find it to be completely tasteless, wholly inappropriate, and generally irresponsible and inexcusable.

Solution: These symptoms and reactions are not problems.*

Problem 2: I am unable to tell exactly what the CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504 is doing in response to my actions. In addition, it is making me dizzy and somewhat sick to my stomach. This is like the remote control from Hell.

Solution: These are also not problems.* See problem 1.

Problem 3: The CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504 does not appear to be responding to my actions in the manner suggested in this manual -- it responds intermittently, and sometimes the controls seem to move by themselves.

Solution: Again, not problems.* See problem 2. Please note that this manual is intended more as an interpretive guide than as an authoritative blueprint for interaction. One-to-one input/reaction ratios are not neccessarily intended, and certainly not guaranteed.

Problem 4: The CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504 is simply not functioning at all. The system displays a frozen image and does not respond to any user input.

Solution: This is indeed a problem. The CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504 may have crashed. Please contact a gallery attendant to restart the system. Apologies for the inconvenience.

* These issues have been extensively evaluated and they are not viewed by the design team as being problems with the CZ CES MMMMM / Home VJ Console Model CDP/CBL-VJ1-0504.

Notes

Notes