DESIGNING POLITICS

Aware that small bits of code can undermine unwieldy systems, hackers of code and culture have breathed new life into political activism. 'Don't hate the media; become the media!' Jello Biafra advised a gathering of programmers.[89] 'Well, you may get an angry letter from your adopted organization,' advises the *Reamweaver* manual, 'but you can just say you were playing a funny surrealist game.'[90] These two positions span a range of activity, from creative forms of political expression to new virulent forms of art, from serious politics to irreverent play. The public discourse on Internet activism to date has blurred this distinction by referring to all online political activity with the generic term *hacktivism*, a portmanteau word suggesting a 'hacker-activist'. Armed with an arsenal of powerful new tools, hacktivists are disrupting World Trade Organization conferences and uploading biotech blueprints for home-grown tissue cultures. Yet while political designers and hacktivist artists work with the same tools and often produce similar results, it's critical to distinguish their long-term social functions. Politics attempts to change the world directly and with force; art seeks to question it, often with humor or irreverence. If politics seeks to destroy its enemies, art seeks to ridicule them. The former relies on strategies of power, the latter on strategies more like play. That power and play have become bedfellows in the flurry of online activity has rejuvenated both fields, but it would be unwise to confuse them.

When Patrick Ball, the **open-source** programmer-*cum*-human-rights activist, presented database evidence at the war-crimes trial of ex-Yugoslavia's leader Slobodan Milosevic, it was critical that his data be sound rather than surreal. On the other hand, when *Reamweaver* activists used spurious GATT (General Agreement on Tariffs and Trade) invitations to champion commerce blatantly over democracy, it was equally critical that their masquerade be hyperbolic enough to raise eyebrows.

While this distinction between hacktivist design and hacktivist art is fundamental, it is not always obvious, either to the current generation of hackers or to the institutions and operating systems they hack. If *Reamweaver*'s tactics are only part of a 'funny surrealist game', then why would the WTO try to shut it down? Apparently, some kinds of playful hacking can have serious, if indirect, consequences. This is because hacktivist art, like hacktivist design, wields a kind of power largely unavailable to artists before the advent of digital culture: it can be executed.

While *execute* is a term often used to describe the workings of computer programs, the same term also describes a biological antecedent in the immune system. When so-called helper T-cells, alerted to the presence of foreign agents, proliferate madly, disperse throughout the bloodstream, trigger the massive reproduction of so-called B-cells, and change the entire body environment in order to defend it against invasion, they are also executing code, albeit of a biological kind. 'To execute', in the world of code, means to turn the potential power of instructions into the actual power of behavior. 'To execute' means to enact the code.

But there are many codes at play in both the immunological and social bodies. The immune system executes its code when it recognizes invasion of the body by foreign code (e.g. a virus); digital art executes its code when it recognizes invasion of the social body by codes that appear foreign or harmful, whether they are cultural, legal, or social. DeCSS code both hacks DVD security code and challenges the legal basis of its operation; *Metamute*'s story contest proliferates (and thus renders useless) the 'suspicious

keywords' on ECHELON's spy list and calls its ethical status into question; *Carnivore* reverse-engineers FBI wiretapping technology to provide data streams for working artists, undermining the effectiveness of wiretapping; The Yes Men nab the domain name gatt.org to pose as official GATT representatives exposing and nullifying the egregious claims of global capital.

Executability has given hacktivists not only an arsenal of new tools but a much wider arena in which to exercise these new powers. Because computers are now linked via a global network, code that affects a single operating system can be redirected to execute on computers around the world. No longer confined to the sanctuaries of gallery and museum, digital work has been executed in government-agency databases, in corporate Web ad banners, and on the hard drives of private citizens. Although the Internet is its primary means of dispersal, digital work's effects are felt far beyond Web pages and e-mail lists. You're more likely to learn about it while sitting in a courtroom than in a museum. As *®™ark*'s 'Ray Thomas' has explained: 'If you're trying to be an activist, don't bother spending any time in the traditional art scene. It doesn't have any significant effect on the real world. No politicians look to the art world to see what to do. Artists who want to be activists should be spending their time on the world.'

With this wider range of powers and venues comes an increased responsibility to the social body in which hacktivism operates. While the goal of the immune system is to destroy foreign agents, artists are a bit more cautious. Code, of the immune or even the legal variety, can kill. Do digital artists want to wield the same power? Or would this undermine the very condition that makes art valuable: the preservation of a safe arena for experimentation and play? Politics without imagination often leads to violence and war. And while a 'toy war' between etoy.com and Etoys.com may help us to imagine a better society, a real war between these parties would destroy the social body that art is committed to keeping healthy. This enables us to clarify the distinction we made earlier between political design and hacktivist art. To the extent that a work operates in the field of power, trying to destroy its enemy, it veers toward political design; to the extent that a work operates in the field of play, pointing to the emperor's nakedness rather than plotting his assassination, it veers toward hacktivist art.

[[subA1]] **Political Design or Hacktivist Art?**
The Barbie voice-box switch, the *Simcopter* hack, the Biennial redirect, and even the 'mutual funds' on *®™ark*'s Web site could all be considered executable culture, since they consist of instructions to be carried out by people or machines. What defines hacktivism is less a particular political stance or mode of representation than the use of the global telecommunications infrastructure to subvert the governmental and corporate interests that created that infrastructure — of course using public funds and resources — to begin with.

[[subB1]] **Political Design: Hacktivism**
Hacktivists like Touretzky and *®™ark* share many qualities with ordinary hackers. Impatient with the bureaucratic bottlenecks and squabbling that plague legislative decision-making, both groups eschew politics-by-the-book in favor of unofficial movements and underground actions. Both groups also engage in glocal politics, as when a geographically dispersed network of hackers supported the 'Free Kevin Mitnick' campaign to help the first famous hacker ever to be put in jail. Both groups also accept — or cultivate — a public image of being outside the mainstream.

Hackers and hacktivists are both known for a playful form of politics — such as overloading a repressive regime's Web site by repeatedly asking if 'democracy.html' is on its server. But most hackers are not hacktivists. Hackers aim for work that is executable in technological contexts but not legal ones. While there are hackers with strong **author functions** — Phiber Optik or jaromil, for example — many are content simply to poke around unnoticed in the bowels of some government's **Unix** directories and leave the site without a trace. Indeed, the ability not to attract the attention of anyone besides their peers is a skill highly prized by these trespassers on immaterial real estate — and that gives them the opposite goal to *®™ark* and David Touretzky.

In contrast to the hacker ideal of an elusive 'crypto-anarchy'[93] hacktivists are hackers with a cause. In this aspect, they are more like terrorists than hackers; they value attention more than votes, but they seek that attention from the world at large rather than just from their peers. To garner this attention, hacktivist artists sometimes emulate the high aspirations — and the solid programming skills — of a particular species of activist that might be called a 'political designer'. As we saw in Chapter 01, every software architecture has political implications, whether deliberate (as in Microsoft's monopolistic integration of its Explorer browser into its Windows operating system) or unintended (as in AOL Instant Messenger's potential for trading pirated music). Unlike software companies with implicit agendas, however, political designers wear their politics on their sleeves. Most political designers espouse an open society, and they view their work as an antidote to corporate or governmental attempts to close it. What distinguishes individual political designers is less their ends than their means — less the parties they belong to than the protocols they wield.

The digital weaponry used by political designers ranges from databases to peer-to-peer networks to open code or open-content repositories. The computer scientist Patrick Ball builds databases to track tortured dissidents in Sri Lanka and Guatamala. In Ball's hands, Perl scripts and **JOIN statements** may be able to accomplish what the grenades and assault rifles of indigenous guerrillas never could: bring the plight of an oppressed people to the attention of the World Court. Antoni Muntada's *File Room* is the online extension of a roomful of metal file cabinets containing paper records of censorship cases (www.thefileroom.org). Although it has been included in exhibitions of online art, *File Room* fits more easily alongside Ball's work as an instance of political design. Comparable parallels exist for other protocols. The Guerrilla Girls' letter repository *BroadBand* (www.ggbb.org) recalls Wendy Seltzer's Openlaw and Chilling Effects Web sites of the same year (openlaw.org; chillingeffects.org), even though the former came from artists and the latter from a legal activist. **Peer-to-peer applications** such as Napster have been repurposed by Christian Ryan and others for new, albeit parallel uses.

[[prompt head]]
David Touretzky,
Gallery of CSS Descramblers (2001)
[[subAprompt]]
HACKING LEGAL CODE

Executable culture can be found in some of the most unlikely places. David Touretzky, a computer scientist at Carnegie-Mellon University in Pittsburgh, assembled one of the most influential examples on a Web site that he called a 'gallery', even though it will probably never be mentioned in *ARTnews*. Touretzky's *Gallery of CSS Descramblers* (www.cs.cmu.edu/~dst/DeCSS/Gallery/) aimed to debunk a particular myth about computers and, in the process, overturn a legal judgment that, he believed, abrogated the Constitutional right to free speech.

The judgment in question, Universal v. Reimerdez, challenged the right of online magazines and Web-site operators to publish or link to a computer program claimed by the plaintiffs to be 'illegal' according to the Digital Millennium Copyright Act. This program, known as DeCSS, had been designed neither by Luddites intent on destroying hard drives nor by hackers bent on spreading viruses. It was a software utility written by Jon Johansen, a sixteen-year-old Norwegian kid who'd realized that the 'Content Scrambling System' software that prevents DVDs from being pirated also prevented him from viewing *Star Wars* and *Gone with the Wind* on his Linux operating system. Johansen's utility decrypted his DVDs so he could watch them. Sound harmless enough? The Motion Picture Association of America didn't think so, and neither did District Judge Lewis Kaplan, who ordered the code and links expunged from the Web.

Against the plaintiff's argument that censoring DeCSS software was akin to stifling free speech, Judge Kaplan contended that computer code was unlike speech because it was executable. As a practicing programmer, however, Touretzky believed that there was a continuum between software and speech, one that could not easily be

divided and legislated, and he set out to prove it. His call for variations on 'illegal' DeCSS code generated a vast array of responses along the spectrum between executable and expression. Some of the variations suggest utter geekhood: professional programmers translated DeCSS into numerous computer languages (C source code, Perl code, Standard ML); a more academically inclined contributor wrote an abstract mathematical description of the algorithm. Those of a more 'artistic' bent embedded the code in familiar media such as a **GIF** image, a movie, a T-shirt, a Yahoo greeting card, and a song; the song attracted enough attention to be banned from the popular music-distribution site MP3.com. Several contributors created 'how-to' manuals in plain English, or as explained by JavaScript agents, or even in haiku:

[[set as poetry]]
How to decrypt a DVD

...

Arrays' elements
start with zero and count up
from there, don't forget!

Integers are four
bytes long, or thirty-two bits,
which is the same thing.

To decode these discs,
you need a master key, as
hardware vendors get.

...

While many of these examples were clearly created in the spirit of fun, they also raised profound questions about the philosophical and legal status of various forms of expression. One contribution was written in a theoretical software language that has never run on any machine. Assuming this ineffectual code is legal now, would it become illegal once someone created a compiler for it? In which case who would be liable for infringing the law, the author of the fictional program or the creator of the compiler? Should distribution of mathematical formulae by their creators be

[[counterprompt head]]
®™ark, rtmark.com
[[counterprompt subA]]
HACKING CAPITALISM

Touretzky's *Gallery of CSS Descramblers* is clearly revelatory, perverse, and executable. Yet despite its invocation of a 'gallery', precious few dealers or curators from the offline art world have ever heard of it. In ironic contrast, one of the most successful examples of hacktivist art, *®™ark* — an entry in the Biennial of the Whitney Museum of American Art in New York — eschews the term *gallery* altogether in favor of the phrase 'activist clearinghouse'.

®™ark channels money and resources to people who dream up clever ways to subvert multinational capitalism. It has sponsored hacks of gender-biased computer games, posted bogus Web sites that pretend to represent American presidential candidates, and sent ersatz representatives of the WTO to spout imperialist ideas at international conferences. Subterfuges like these are more carefully targeted than pranks but less solemn than political campaigns or underground movements. Yet they are not exactly political art in the tradition of Géricault or Picasso either, since — rather than representing issues in an art context — *®™ark* actually intervenes in the real world, prompting interviews by CNN and cease-and-desist letters from the WTO.

One of the earliest and best-known 'cultural hacks' supported by *®™ark* was to switch the voice-boxes of three hundred Barbie and G.I. Joe dolls in 1993, so that unsuspecting girls bought Barbies that
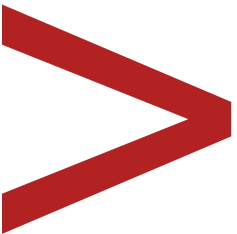
barked 'Commence firing' instead of cooing 'Let's go shopping.' Of course, it is rare that someone who gets the idea to switch the voice-boxes of gender-stereotyped dolls actually works in a toy factory. What *®™ark* does is to channel such ideas to people

in a position to accomplish them — in this case, the 'Barbie Liberation Organization'.[92] Ideally, *®™ark* also channels financial backing to such causes, though in practice the amounts 'pledged' are usually measured in the hundreds of dollars.

If *®™ark*'s strategy is to use the tools of capital to subvert it, the structure of *®™ark*.com apes the model of the mutual-fund portfolio. Funds such as OBIT ('Add Afghan dead to S-11 obituaries') and GOLF ('Replace golf greens with edible greens') are listed by the four-letter-abbreviation scheme familiar from the New York Stock Exchange. Most of *®™ark*'s calls to action go unfulfilled, but there are notable exceptions. In 1996, *®™ark* channeled $5,000 contributed by a New York shopkeeper to a Silicon Valley programmer who inserted unauthorized code into his company's popular *Simcopter* shoot-'em-up game. In place of the usual reward for blowing up targets — a date with a buxom babe — the modified version of the game offered scantily clad boys kissing, thus sneaking homoerotic content into a gaming culture defined by extreme machismo.

When *®™ark* was accepted into the 2000 Whitney Biennial — the first such exhibition to include works of Internet art — it seemed to cement its status as 'art' despite the fact that the site's pseudonymous authors never use the term *art* to

outlawed? Most importantly, the gallery highlighted the arbitrary nature of Judge Kaplan's decision to draw the line somewhere amid this unruly assortment of variations so that executables lay on one side and expressions on the other. The logos and haikus grouped in Touretzky's gallery create a social impact not usually associated with art. Géricault's *The Raft of the Medusa* and Picasso's *Guernica* represent politics; DeCSS art, on the other hand, *executes* politics. Touretsky's gallery was cited in testimony when the case was appealed, and although the decision was upheld, the appeals judge admitted that DeCSS was subject to the same protections as speech.[91]

Consider a particularly clever artwork from the gallery, created by embedding the illegal code directly into the official DVD logo. For Touretzky, this image offered a 'hard case' with which to thwart a meretricious line of judicial reasoning. There is a subtle and important difference between merely protesting a court decision and furnishing a legal conundrum that calls that decision into question. A button with a red cancellation mark over the letters 'CSS' raises consciousness. The altered DVD logo, by contrast, executes both computer code (via optical character recognition) and legal code (by undermining a court decision).

describe their work. As its contribution, ®™ark simply submitted their home page, to be projected on a wall and interacted with via a keyboard. Unbeknownst to the museum's curatorial staff, however, ®™ark had offered to 'lend' its space on the wall to other artists during the run of the show. Visitors who accessed ®™ark.com from the Whitney were automatically redirected to urls submitted by other visitors. (®™ark even created an email address, show@rtmark.com, especially for this purpose.) Even when honored as art-world insiders, ®™ark produced a crack in the Duchampian frame, a fissure leading to the space beyond the art world's confines, very much like a killer T-cell produces a gap in an attacking virus to disable it.

All of these are excellent examples of the reason why the World Wide Web was created in the first place: to empower a broader community of people through the sharing of information. In that sense, the *BroadBand* Web site is indeed the logical extension of the posters that the Guerrilla Girls used to paste up in the streets of SoHo in Manhattan; there's no reason for modern-day Levelers to be content with 17th-century technologies for circulating information outside established institutions.

It does not necessarily follow, however, that these instances of political design are art. At issue is not whether art can tackle political subjects but *how* it tackles them. As we saw in Chapter 01, art is perverse; whether wheat-paste or Web site, it approaches problems not by fulfilling an existing need but by defining new objectives in the act of accomplishing them. This chapter's comparison studies of art's perverse approach to politics should help clarify the difference.

[[subB1]] Hacktivist Art: Accountability

At its best, hackivist art combines the social reach of political design with the perverse playfulness of hacking. Like political designers, hacktivist artists often piggyback their messages onto the global telecommunication system, with the result that their reach is as broad as their subject. It's easy to underestimate what an innovation this is for political art; it's as though Picasso had stenciled *Guernica* onto the bombs loaded by Luftwaffe pilots.

Just as the immune system derives the bulk of its power from rapidly executable code, so the executable works seen in this chapter wield a form of power fundamentally different from previous forms of cultural expression. Some political designers make use of this power for direct political ends. The executable weaponry wielded by Patrick Ball was based on interviews, government records, and testimony by Albanian border guards. His statistics proved that killings and refugee flows in Kosovo were independent of military activity by NATO or the Kosovo Liberation Army but tied directly to Serb attacks. More speculative political designers, meanwhile, use the power of code not to act directly in existing legal systems but to alter public perception in a way that could in the future lead to a change in the political status quo. Yet political design does more than raise consciousness in the tradition of Vietnam War protests; it manages to 'raise what is not yet conscious' — that is, to create expectations or trigger behaviors that just happen to have political consequences.

The best example of this speculative species of political design is the music-trading service Napster. Intentionally or not, Napster created the expectation that music (and, by extension, other manifestations of digital culture) should be free. In a scant six months, a little program coded by a handful of teenagers gave an entire generation a taste of open access to music. Now that this expectation exists, it will be very difficult to take away. Even as Napster (or its clones) are co-opted by corporations, these companies run the risk of alienating their consumer base if they fail to fulfill the same expectations as the original software. Indeed, 70 per cent of Americans surveyed by Jupiter Media Metrix in 2002 said they couldn't see paying for any kind of online content. It is inconceivable to imagine so many minds swayed by street protests or *New York Times* editorials.

Figure 11: Estimated killings over time, with nominal confidence interval

It's tempting to ascribe the same awesome power to executable art — tempting but misguided. Simply put, it is dangerous to give artists this kind of power. A political designer with bad politics can wreak havoc on the world. But artists must be free to explore unconventional, untested, even dangerous values. For this reason, society can only hand them unloaded guns. This is true for pre-digital political art as well. No one minded when Hitler acted out his frustrations in the arena of oil painting, but when he invaded Poland he subjected others involuntarily to his speculative fantasies. Leni Riefenstahl's film *The Triumph of the Will* was a masterpiece of theater, but it was also a political weapon glorifying the Third Reich. In recent times, the most egregious example of confusing art and politics was the scandal provoked by the alleged reaction of the German avant-garde composer Karlheinz Stockhausen to al-Qaeda's attack on the World Trade Center: 'That characters can bring about in one act what we in music cannot dream of, that people practice madly for 10 years, completely, fanatically, for a concert and then die. That is the greatest work of art for the whole cosmos. I could not do that. Against that, we, composers, are nothing.' Whether or not the quote was misattributed, the horrific inappropriateness of evaluating the act of murdering three thousand people as art brought the difference between direct political intervention and artistic expression into stark relief.

Which is ultimately why Touretzky's *Gallery of CSS Descramblers*, together with the artifacts it contains, is art, while Ball's testimony is not. Like Ball's databases, Touretzky's work has influenced the course of legal history. Where he departs from Ball

is that his success lay not in indicting a defendant but in clearing one. Touretzky's gallery wasn't meant to prove a case but to challenge a way of thinking.

Art arms its audience with neither evidence nor explosives but with a safe arena in which to challenge the status quo without completely dismantling it. But its audience won't feel safe to play in this arena unless art eschews the direct political power exercised by Patrick Ball or Muhammed Atta. If this is a constraint on art, then it is, paradoxically, a liberating one. Children in a fenced playground roam further than those in a playground whose fences have been removed. Constraints are essential to play.

COMPARISON STUDIES

[[divider]] **Perverse Domains**

Domain names like Microsoft.com or Hell.com are the human-readable addresses of the Internet. Some companies spend exorbitant sums purchasing such names or defending their trademarks over them — for in an attention economy like the Web, the right domain name can mean the difference between a dot-com's success and its failure. This commercialization of ordinary words has not gone unnoticed by hacktivist artists, whose responses have ranged from consciousness-raising to paradigm-shifting.

[[head2]]
Heath Bunting, _readme.html (Own, Be Owned, or Remain Invisible)
[[subA2]]
ATTENTION ECONOMY

One of the earliest instigators of hacktivist art, British 'net.artist' Heath Bunting drew attention to the politics of domain names well before the trademark disputes over 'etoy' and 'Leonardo'. In characteristic low-tech style, he transformed a paragraph of autobiographical description into a demonstration of the power of names just by making every word on the page clickable. In the opening sentence 'Heath Bunting is on a mission,' he linked 'is' to 'is.com', 'on' to 'on.com', and so on. The work's subtitle — *Own, Be Owned, or Remain Invisible* — speaks volumes to the power of names in an attention economy. To click on this deadpan concatenation of urls is to realize immediately the extent to which words are increasingly owned by corporations. As executable technologies go, Bunting's weaponry is Stone-Age — the ordinary hyperlink — but he gets a lot of bang for his buck.

[[head2]]
Paul Garrin, *Name.space*
[[subA2]]
ICANN.SUCKS

A former video editor for Nam June Paik and an installation artist in his own right, Paul Garrin has spent the better part of a decade developing a quasi-commercial alternative to the conventional Domain Name System established by the founders of the Internet. Like the official naming service administered by the Internet Corporation for Assigned Names and Numbers (ICANN), Garrin's *Name.space* project maps names to individual Web servers; the trick is that his system (www.namespace.com) is a completely different naming convention. Change the proxy setting in your browser preferences to a machine on Garrin's network, and the world changes, too: suddenly, MyTerribleDomainName.com becomes MyTerrificDomainName.artist or .activism (or even .sucks, as in AOL.sucks). The effect is as though you could put on a pair of glasses that reconfigured the streets of your town according to a new address system, one as navigable (if not more so) than the existing one.

Garrin's proposed shuffling of Web addresses has sparked volumes of online debate over its political merit. Ted Byfield, moderator of the influential online forum nettime, has expressed concern that as a business model *Name.space* won't be immune from the same political pressures that ICANN is. To the extent that it survives as a business by kowtowing to trademark law and closed-door decision-making, *Name.space* will not be a work of art. Nevertheless, in its present embryonic form, it provides an excellent example of how to piggyback onto the existing system so as to open people's minds to new possibilities.

Perverse Information

Information is power, as the examples of Openlaw and BroadBand demonstrate, and the Web allows hacktivists to reveal information which established interests would rather keep hidden. Numerous examples of political design exploit this aspect of the Internet, including Adbusters (www.adbusters.org), Autonomedia (slash.autonomedia.org), Disinformation (www.disinfo.com/pages/categories/Activism/), Indy Media Center (www.indymedia.org), Interactivist Info Exchange (slash.autonomedia.org/), Mediachannel (www.mediachannel.org), Subvertise (www.subvertise.org), and Surveillance Camera Players (www.notbored.org/the-scp.html). Alongside these important projects are information services that are just too quirky to be taken seriously — even if they masquerade as bona-fide corporations. Some of them have an obvious use. iSee, a project of the Institute for Applied Autonomy and the New York Surveillance Camera Project, offers maps of Manhattan which highlight routes with the fewest surveillance cameras. Another mapping project targeted at New Yorkers, WhereDoYouWantToGoToday.com, charts the location of publicly accessible toilets in midtown. (You can be sure that Microsoft's attorneys were none too happy about the pun on the Microsoft Network's advertising slogan.)

Heath Bunting and Natalie Jeremijenko,
Biotech Hobbyist
BRINGING BIOTECH DOWN TO EARTH

In some cases, a site's nuts-and-bolts details are only a springboard to more profound questions about social structures its visitors may take for granted. Heath Bunting and Natalie Jeremijenko's *BioTech Hobbyist* site instructs untrained visitors on how to grow spare skin and other tissue cultures in their basements (www.irational.org/biotech). While the site mimics the 'do-it-yourself' spirit of an 'Amateur Scientist' column in *Scientific American* magazine, the underlying effect is to demystify biotechnology and perhaps make its ethical dilemmas more concrete in the minds of lay citizens. The project also reminds us that the reaches of this technological revolution span neurons and circulatory systems, not just copper wires and ethernet cables.

OUTING THE OLD BOYS NETWORK

One of the best examples of an artwork that uses Internet technology to make the hidden structures of social power visible, *They Rule* is an expandable diagram showing the board members of the most influential American corporations (www.theyrule.net). Unlike organizational charts and annual reports, which only indicate the members of any given board, *They Rule* traces the hidden connections among corporate power brokers. Using this interface, for example, it's possible to discover that members of the boards of the so-called competitors Coke and Pepsi actually sit together on the board of a third corporation, Bristol-Myers Squibb. *They Rule* occupies the intersection of political design and hacktivism. Although it derives from publicly available information rather than private testimony, the database underlying the scripted interface exploits the same principle as Patrick Ball's: once you get enough information in one place, you can draw connections you might not otherwise apprehend. *They Rule* also demonstrates how an artist — someone experienced in making the obscure visible — can render information in a legible, and hence instructive, form.
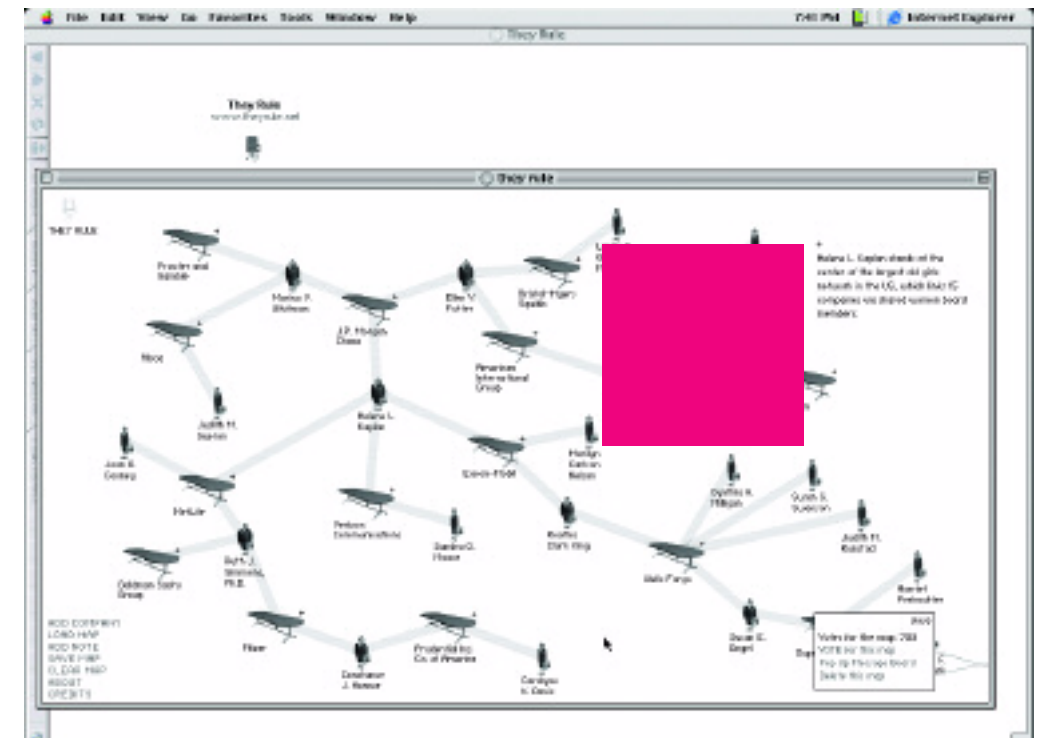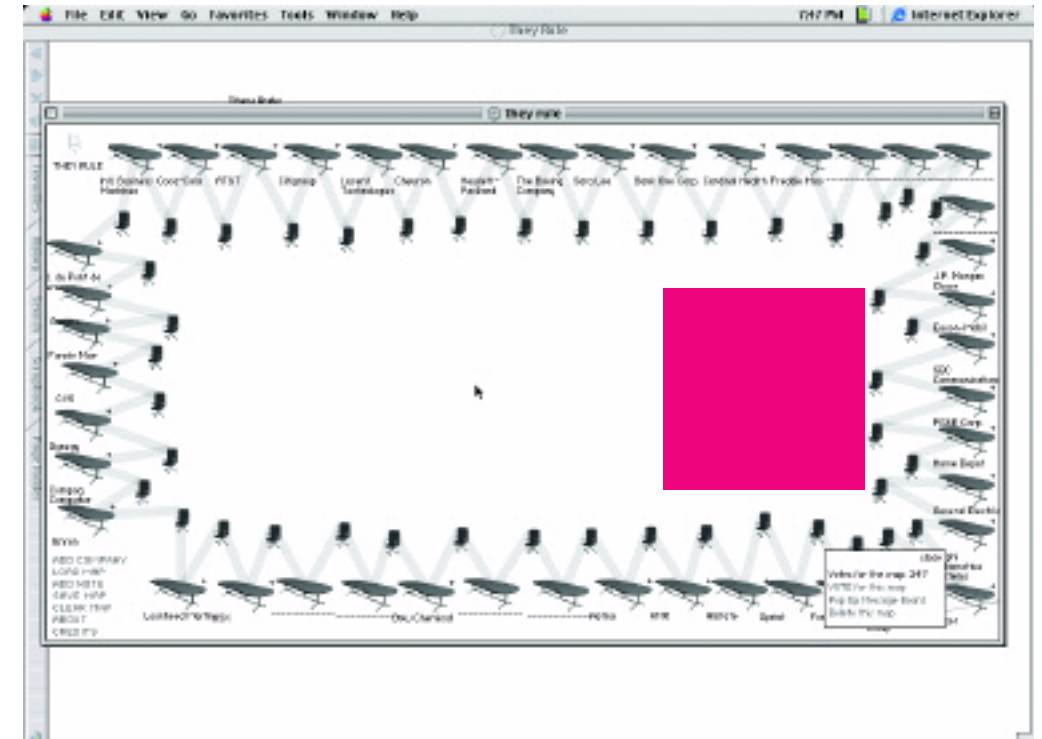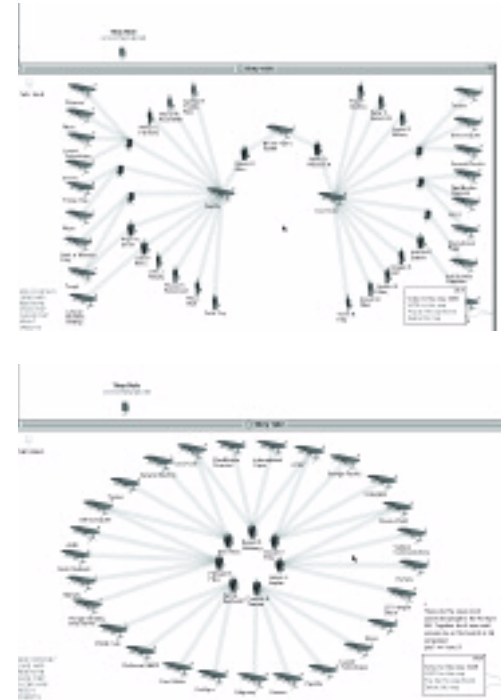
The Internet has yet to deliver on the electronic republic pundits promised in the 1990s. The 'Athenian Age' of enhanced democracy once predicted by Al Gore was much shorter-lived than the original, if indeed it drew breath at all, and with the election fiascos and terrorist attacks following the turn of the century, the Bush administration easily drowned out pleas for online town meetings and voting with clamor for roving wiretaps and encryption controls. All of which just turned the clock back a decade, to a time when the task of exploring new forms of electronic democracy fell to activists and artists. The creators of the following sites may wield fancier tools now than were available ten years before, but their spirit echoes the days when the Internet was democracy's new frontier.
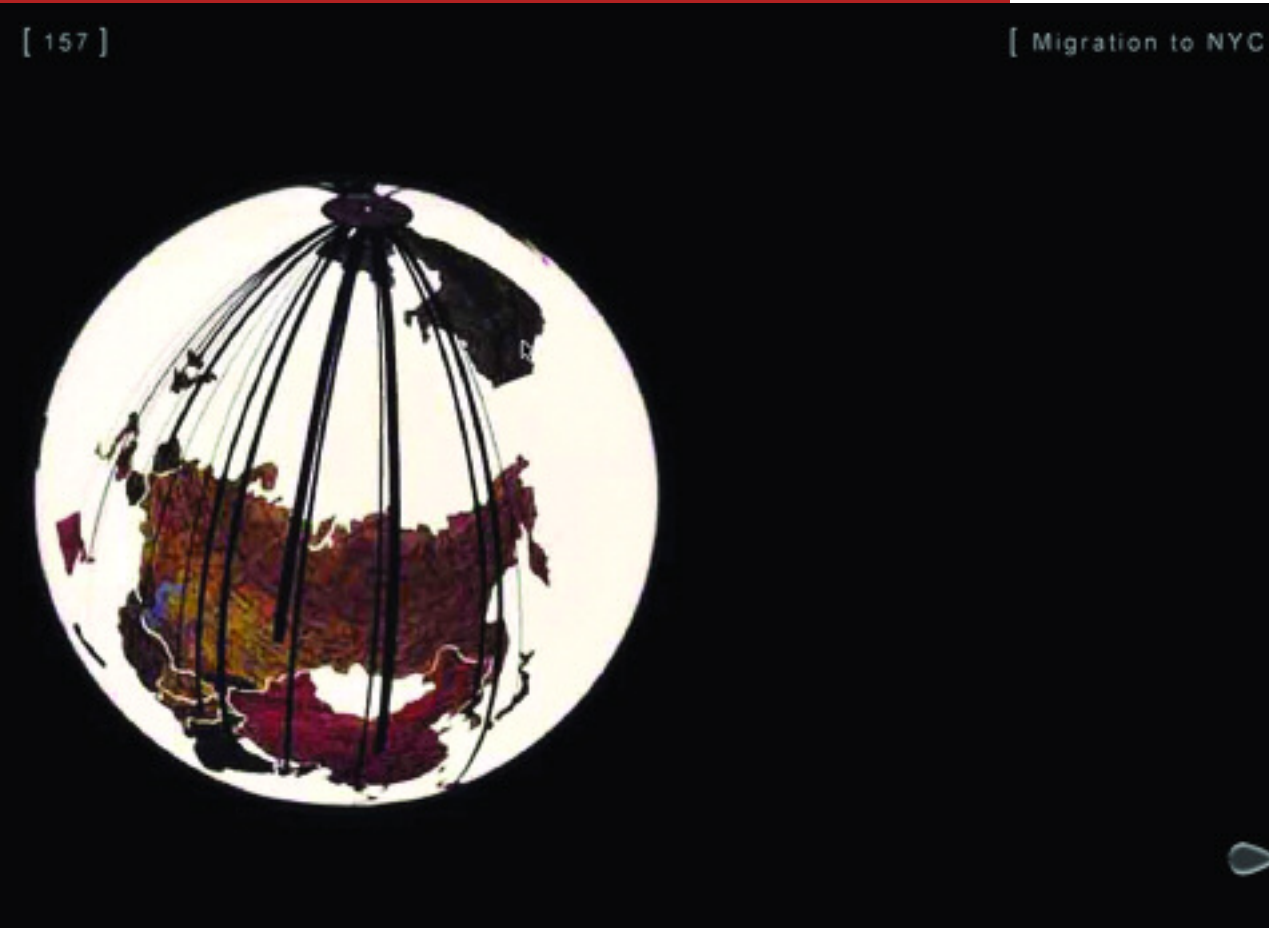
[[head2]]
Ingo Gunther, *Refugee Republic*
[[subA2]]
NON-GEOGRAPHIC NATION

The Web realization of this project by media artist Ingo Gunther (www.refugee.net) proposes to create a non-geographic nation composed of the world's refugees. Arguing that refugees represent an untapped resource comprising a 'comprehensive spectrum of cultures, civilizations, and religions', Gunther expanded on the model of non-geographic nationalities such as *Nova Roma*, an online collective of self-described 'direct spiritual successors to the Roman Empire' (www.novaroma.org/cursus_honorum), to create a homeland made up of all the people who currently don't have one. Aside from the downloadable passport cover, the site is less a practical experiment in deterritorialized government than a conceptual gesture aimed at raising consciousness about the plight of refugees. Though Gunther's proposal may be satiric, it nonetheless points to the increasing relevance of transnational entities in a globalized economy.


[157]   [Migration to NYC

[19]   [Refugee Currents]

Today 20 million refugees are registered worldwide by UNHCR, the UN High Commissioner for Refugees, the largest number ever. The width of the arrows indicates the relative amount of refugees.
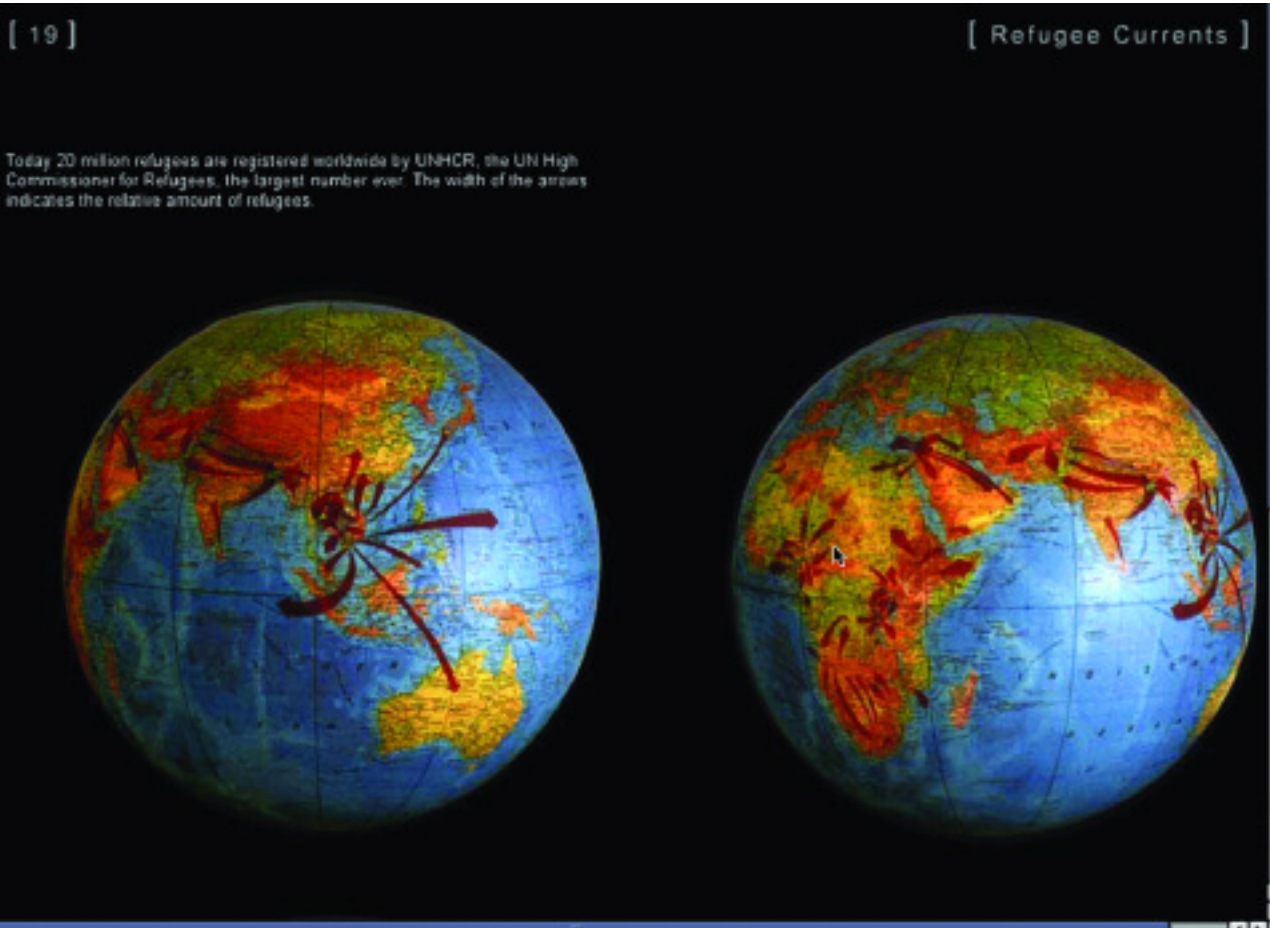
What happens to an emblem of solitary statehood when that state's internal affairs become entangled with geopolitical commitments? How can the notion of a flag reflect global politics rather than pining for a nostalgic nationalism that no longer exists? Mark Napier's *net.flag* is one answer to these questions.

net.flag is an emblem for the Internet as a new territory, more fluid and flexible than the political boundaries of nations, yet composed of fiercely or playfully loyal people from various geographical regions and ideologies. Its design changes constantly, manipulated by users who make selections from menus of familiar flag motifs: stars, fields of color, bold patterns, insignia, and stripes. As *net.flag*'s viewers add their contributions to the palimpsest, the cumulative identity of the flag changes as one country's insignia or symbols temporarily overlap those of another. Expanding upon the model of non-geographic nationalities such as Roma,[94] *net.flag* permits viewers to customize and save personal flags for their own virtual domains. Since each element of a flag generally represents a symbol chosen by that country's founders, *net.flag* also includes a 'browse history' feature that permits access to the evolution of its symbolic value — that is, the percentage of signs indicating 'peace', 'valor', or 'blood' present in the flag at a given moment.

As one proof of the passion netizens feel about their communities, this net symbolism has become the playground for some mock — and some rather serious — international competition. One viewer doggedly added a glut of white crosses from the Greek flag, ensuring that the Greek cross would topple the American stars and stripes as the most popular symbol on the chart.[95] *net.flag* reminds us that Greek nationalism is not necessarily confined to 'Greek soil': a new flag can represent a little bit of Greece in many different flags, and the Greek flag itself can incorporate, say, Turkish elements. Or an
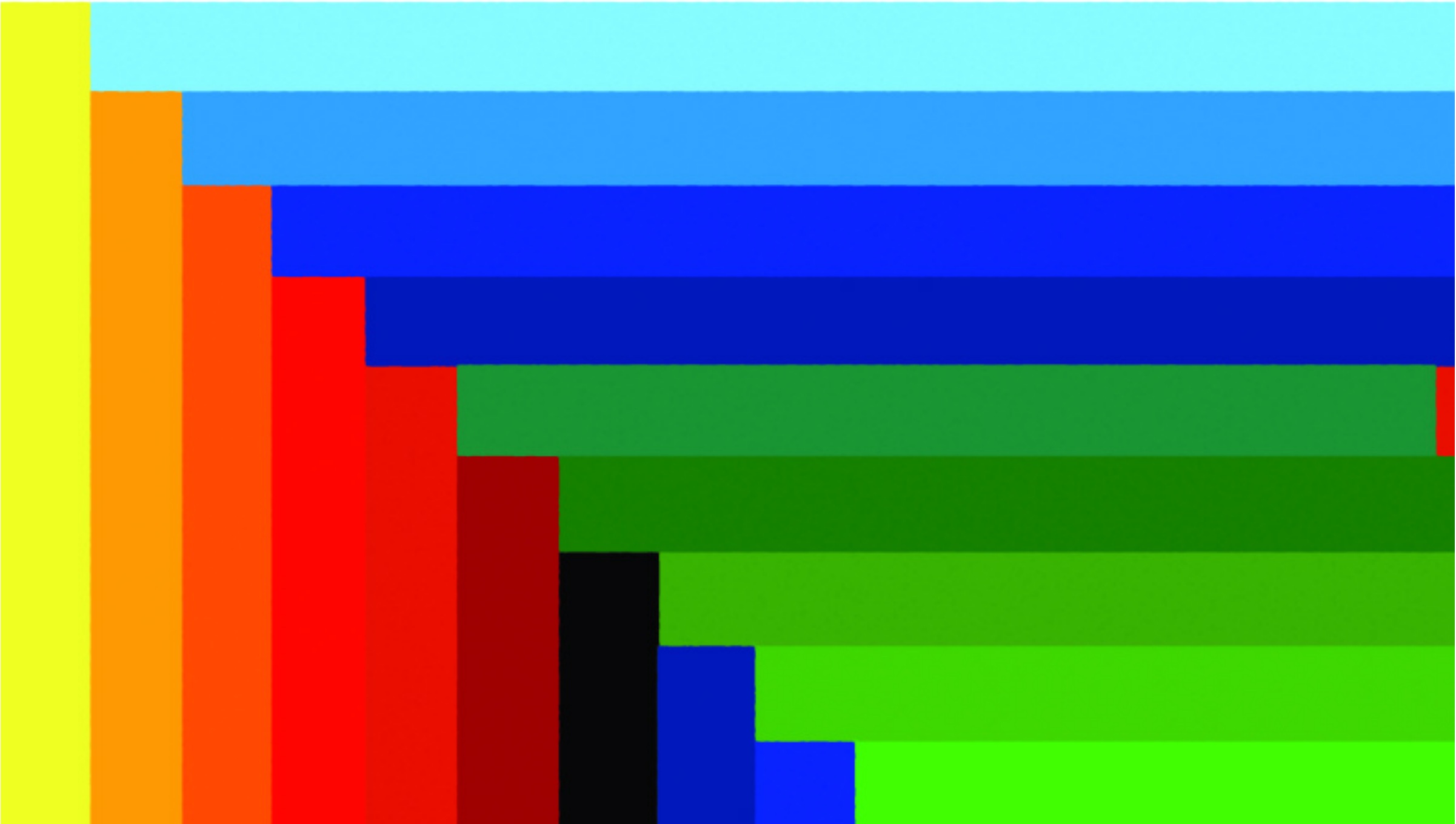
entirely new quasi– or non-geographic nation — of Mediterranean people, or Russian lesbians, or Inuit tribes — can emerge with a flag of its own. *net.flag* reminds us that national boundaries and the flags that represent them are arbitrary and yet meaningful. We long to belong to communities but are not always free to design them or decide their boundaries.
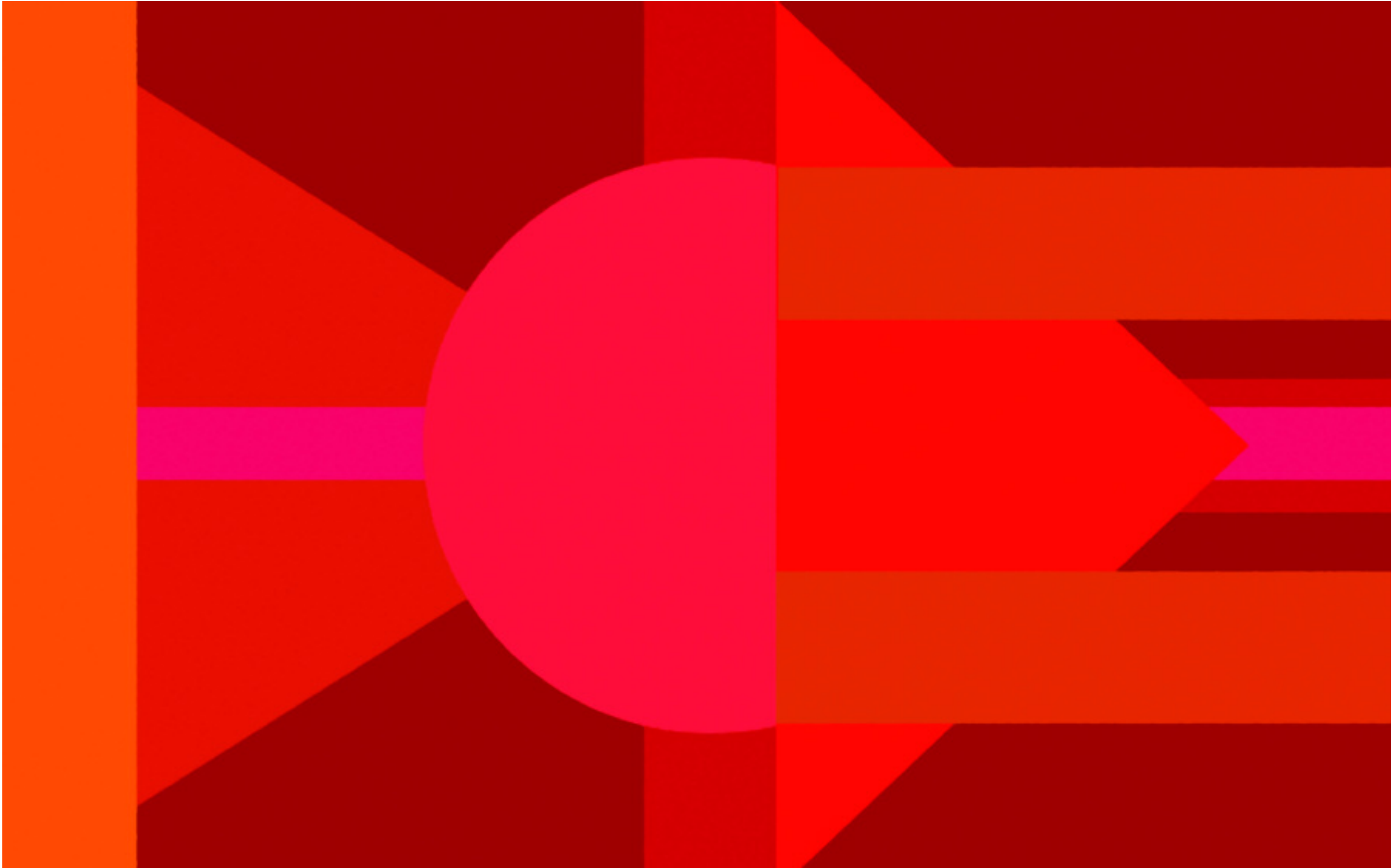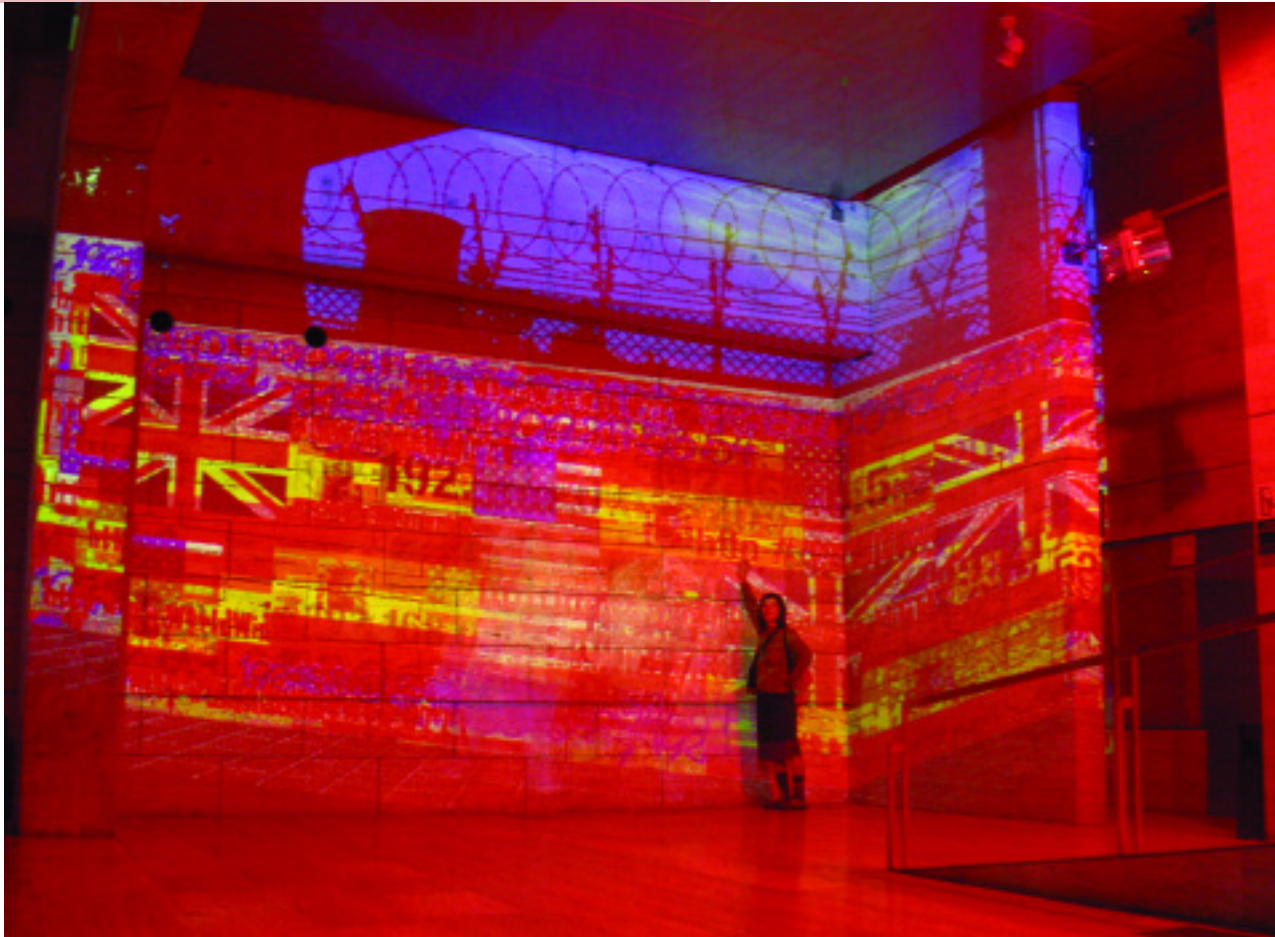
Based on the FBI wiretapping software of the same name, *Carnivore* uses 'packet-sniffing' — a technology that eavesdrops on telecommunications at the most basic level — to create vivid depictions of raw data (rhizome.org/carnivore/). *Carnivore* consists of two parts. The actual box ties into a local area network (the community of users in an office, say) and serves the resulting data stream via the Internet; and an unlimited number of artist-made interfaces tap into this data stream. So far, *Carnivore* has only been let loose in fenced-in pastures — at participating galleries, for example — but with a new downloadable version called *Carnivore PE*, RSG's project of demystifying FBI technology can now reach the masses. To date, a handful of founder Alex Galloway's fellow artists, among them Joshua Davis, Entropy8Zuper!, and Scott Snibbe, have contributed to these *Carnivore* 'clients'; their interfaces interpret network data variously as billowing circles (www.praystation.com/), expanding supernovae (www.snibbe.com/scott/fuel), and even a **VRML** update on the Monopoly board game (entropy8zuper.org/guernica/).

Kilderkin

Her eyes **eavesdropping** on him in the garden, his chosen **zone** of play, she sloughed off her skins of fret that she was just one of his **watchers**. Whatever **mindwar** this **utopia** bred in her, he was **safe**, lent this **freedom** to wander from the **basement** below her into the sunken **shelter** of the **iris** beds, the petal **rain** of **cornflower** dew-stuck she saw **smuggle** summer sky-blue over his **sneakers** each time he returned. And these **zen** blues must, she nagged, clear his **force** of that **dictionary** of **spookwords** such an **argus** of **psycho** eyes had until now with such **mania** bound him. The garden could be for today the **hope** of a heaven on earth where she would **forecast** with the confidence of a **monarchist** a tomorrow the same.

A boy in his garden, not a **target** for **hitwords** or **fetish** for burning flesh with any **enigma** or **sweeping package** of diagnoses that were but **viruses** in disguise. She was **debugging** him as he toyed among the daisies, but her **mindwar** spun her like a tossed **dice** in her own house until she could laugh at her own attention deficit disorders, her random access memory.

He was at his **Firewall**. The day blazing. Here he need never say anything. But in his mind these crumbling stones were given a name, his **Firewall**. As it was once on fire. And his task was to gather the ash in his hands and **blow** it to the winds. The finest **dust** in an endless supply. Overhead the clouds harvested his hands, sulphureous, **burned** with his unrelenting **replay**, reaping the hot yellow like there would be no tomorrow. His vision saw the **Mayfly** mutate into the **Firefly** and the poplars wands of **bronze** cast in the heat. Only this time it would work, this new born child dropped into oblivion in the box of this **asylum**. She called him her **Sundevil**, how he would keep her waiting, beyond hope of his turning from the **secure shell** of his **Flame** he must keep alive, even if it was but **dust**...

ECHELON, the worldwide intelligence network run by the US and its English-speaking allies, automatically monitors telephone calls, faxes, and emails by comparing them against a list of suspicious keywords like *mailbomb, rebels*, or *Enemy of the State*. To raise awareness of government surveillance, hacker-activists previously tried to flood email systems with messages including these keywords, but ECHELON is purportedly too smart to be fooled by lists of words out of context. In response, journalists at *Mute* magazine invited authors to craft works of fiction that employ the maximum number of keywords in a literary narrative. For example, one passage incorporated the trigger-words *eavesdropping, zone, play, watchers, mindwar, utopia*, and *safe*: 'Her eyes eavesdropping on him in the garden, his chosen zone of play...she was just one of his watchers. Whatever mindwar this utopia bred in her, he was safe.' The winners, archived in the magazine's online publication *Metamute*, may not merit a Pulitzer Prize, but the contest is proof that Tom Clancy doesn't have a lock on spook-inspired literature (www.metamute.com/forum/viewtopic.php?topic=44&forum=1; www.metamute.com/eletter/archive10.htm).

If domain names furnish the addresses of Web sites, search engines like Google are the maps by which they are found — and they are no less a target for subversion by hacktivists with attitude.

Online services provided by corporations are just as vulnerable to being hijacked by hacktivists as protocols developed by governments. In fact, a 'digital hijack' of search engines was one of the first online artworks to gain widespread attention (www.hijack.org), nabbing a Golden Nica at the Ars Electronica festival in 1996. For this project, the etoy.com artist collective wrote software which analyzed the way search engines rank Web pages — for example, by looking for key words in HTML meta-tags — and then used that information to redirect traffic away from corporate sites. Unsuspecting viewers who clicked on, say, the top-ranked link in an Infoseek query about Porsche were transported to an etoy page informing them that they had just been 'hijacked'. As a mere demonstration of technical prowess, *Digital Hijack* would have been hacking rather than hacktivism. But at a time when consumer watchdog groups were beginning to accuse search engines of selling rankings to the highest bidder,[96] it exposed a hidden corruptibility in a supposedly objective research tool.

In his perversion of search engines, Heath Bunting dealt an even more underhanded blow to the growing commercialization of the Web in the late 1990s. Like etoy, he created Web pages that 'hijacked' searches on mainstays of consumer culture, but his pages

(www.irational.org/heath/realty) contained simple JavaScript redirects which bounced the visitor to a competitor's Web site. When a click on a high-ranking url in a search on 'Nike' brings visitors to the Adidas Web site, the millions spent by corporate giants on branding and advertising is undercut by a few lines of JavaScript written by a single consumer.

Like most online ventures, the popular search engine Google relies on advertising revenue instead of charging users for its service. Google intended its Adwords campaign to allow companies to position context-specific promotions adjacent to its search results, so that companies like Honda could buy the keyword *car* and place the phrase 'Click here for great deals on Accords' next to Google search results that incorporated that word. The artist Christophe Bruno realized that he could piggyback a 'targeted poetic happening' onto this automated advertising protocol (www.iterature.com/adwords). Having bought the word *dream*, for example, he submitted the following 'advertisement':

Speech is supposed to be free, but Bruno's intervention brought to light the economic value of words as determined by the frequency of search requests. As of April 2002, the word *sex* was worth $3,837, the word *art* $410, and the phrase 'net art' only $0.05. Bruno paid his money like everyone else — so why did Google's managers terminate his ads once they got wind of them? Like etoy and Bunting, Bruno gave online consumers pause — a reason to reflect rather than simply obey the conditioned impulse to shop. For Google and its advertisers, this detour on the information superhighway threatened to shake their advertisers' faith in e-commerce by undermining the predictable electronic pathways on which it depended.

Prices of some words

Keyword	Clicks / Day	Average Cost-Per-Click	Cost / Day
anal	390.0	$0.83	$319.90
art	800.0	$0.52	$409.67
bin laden	250.0	$0.10	$24.37
britney spears	490.0	$0.30	$144.20
capitalism	30.0	$0.10	$2.74
communism	2.1	$0.16	$0.33
death	92.0	$0.47	$42.66
dream	390.0	$0.17	$63.07
free	5700.0	$1.33	$7,569.23
freedom	5.1	$0.37	$1.88
gay	2200.0	$1.02	$2,239.56
hemorroid	0.5	$0.16	$0.08
language	650.0	$0.37	$237.30
lesbian	740.0	$0.80	$584.62
love	730.0	$1.74	$1,264.72
mankind	8.0	$0.59	$4.70
money	350.0	$0.81	$281.46
net art	0.9	$0.05	$0.05
self	80.0	$0.85	$67.72
sex	7500.0	$0.52	$3,836.79
suicide	18.0	$0.27	$4.72
symptom	23.0	$0.30	$6.83
Overall	20449.6	$0.84	$17,106.49

Traffic Estimator

Many surfers are unaware that every Web page they visit is temporarily downloaded to a directory on their hard drive called the 'cache'. A select few use their cache as a political weapon, a brute-force means to duplicate — and hence render access to — closed culture.

Vuk Cosic, *Documenta Done* (1997)
[[subA2]]
DECOMMERCIALIZING THE ART WORLD

Catherine David, curator of the 1997 international exhibition Documenta X, invited the Dutch media activists Geert Lovink and Pit Schultz, together with the Swiss Web designer and the artist Simon Lamuniere, to create a Web site that would incorporate the many lectures and projects presented on the occasion of the exhibition and its 'Hybrid Workspace' media component. Given the project's emphasis on encouraging the dissemination of information and perspectives, news of David's plans to close the Web site at exhibition's end and re-issue the material on a CD-ROM to be sold in the trade came as a surprise to many netizens. Before the show closed, Vuk Cosic, a Slovenian artist active in defining the movement that called itself net.art, took matters into his own hands and cloned most of the site on his own server (www.ljudmila.org/~vuk/dx/). He then opened his site to the public — to the consternation of Documenta's organizers.

[[head2]]
www.0100101110101101.org/hell (1999)
[[subA2]]
PUBLICIZING THE PRIVATE WEB

Caching allows artists not only to re-create projects but also to modify them. With the help of caching, 0100101110101101.org, the elusive programmers of the *Life Sharing* project mentioned in Chapter 03, created a perfect example of how the duplicability of digital files, when combined with the Internet's easy access, conspire to defeat any attempt at cultural exclusion (www.0100101110101101.org/home/hell.com/). In 1995, an organization began to host online exhibitions of Web-based artworks at the domain Hell.com. Unlike the numerous online exhibitions that preceded it, from ada·web to 'Beyond Interface', Hell.com was a private Web site. Visitors to its home page were greeted with a series of all-black screens marked only by enigmatic questions in minuscule white text. Even the answers to the questions were off-putting rather than revealing: 'What is *Hell.com*? Hell.com is a private, parallel Web.' 'How can I get in? You can't.' 'How can I be a guest? You can't.' True to its words, Hell.com was an experiment in replicating online the exclusivity of the offline art world — a world in which success is measured by invitations to private cocktail parties and museum openings. Hell's gatekeepers periodically emailed a selection of guests passwords for temporary access or invitations to private openings where they could see works on terminals and meet the artists.

But *Hell.com* made a mistake. It offered access for a predetermined forty-eight-hour period to members of the Rhizome email list. The protagonists of 0100101110101101.org seized the opportunity to download most of the Hell.com site onto their own server, where the gates of Hell were thrown open for all viewers. Hell's art projects were preserved more or less intact, but the answers to the questions on the infernal front page acquired a decidedly more egalitarian tone in the process: 'What is *Hell.com*? *Hell.com* is a free parallel web.' 'How can I get in? Access is granted to everybody.' 'How can I be a guest? Please understand: you don't need any fuckin' permission!' In a matter of hours, the artists of 0100101110101101.org had turned private art into public art, from exclusive property into common culture. Given the ease with which digital files can be cloned, the technology was on their side. The law, of course, was on Hell.com's side – but, given that only a handful of people knew who the elusive 0100101110101101.org artists were, the cease-and-desist letters to their representatives had little effect.

The Yes Men, *Plagiarist.org.*; Detritus.net, *Reamweaver*

CREATIVE CLONING

A pun on Macromedia's popular Dreamweaver Web-design software, *Reamweaver* automates the process of caching other sites to create alternative versions (www.reamweaver.com). Following in the tradition of ®™ark's misappropriation of domain names like GWBush.com, a group of hacktivists known as The Yes Men nabbed the domain name Gatt.org and posted what appeared to be the World Trade Organization's official site dedicated to the controversial GATT trade legislation. When an unsuspecting association of international lawyers invited a spokesman from Gatt.org to speak at their conference, that spokesman declared that commerce had superceded democracy and voting was obsolete — an extremist agenda but one that was nevertheless an extrapolation of the WTO's own policies. This masquerade was politically executable, in the sense that a simple domain registration created a believable, if illegitimate, pretext for a degree of public attention normally only accorded to government officials.

Reamweaver, meanwhile, is the digital equivalent of The Yes Men's executable performance. As the 'manual' for the application explains: '*Reamweaver* lets you automatically "funhouse-mirror" anyone's website — an ability you can use to obtain speaking opportunities on behalf of your adopted organization.' When an unsuspecting user visits a page on your ersatz organization's site, *Reamweaver* gets the page from the target domain, changes the words as you specify, and displays the altered text together with the original images and layout. Although these 'funhouse-mirror' versions can be ridiculous in the extreme, it's easy to imagine the havoc a *Reamweaver* user could wreak by replacing the word *minority* with *underclass* or *terrorists* with *freedom fighters* to create an alternative reading of an organization's Web site. While ®™ark and its

associates generally steer away from calling themselves artists, when required to defend their actions humor becomes a convenient pretext. Under a 'Legal Risk?' rubric, the *Reamweaver* manual reads: 'Well, you may get an angry letter from your adopted organization, but you can always ignore it or, if you like, adopt another instead by changing one line in reamweaver.conf [the configuration file that stores information about the site and its authors].'

Hactivist artists who join ranks can wield power normally reserved for well-organized activists. Yet as we'll see, the accountability of executable art is different from the accountability of political designers and other cultural guerrillas.

[[head2]]
®™mark, etoy, *et al.*, Toywar
[[subA2]]
CORPORATE TAKEOVER

Unlike political activists, artists each march to the beat of their own drummer. But for three months during the turn of the Millennium, a virtual army of artists marched together with a common mission: to repel a corporation's attempt to commandeer an artistic Web domain.

In November 1999, the online toy retailer etoys.com managed to shut down the Web site of the

venerable artist collective etoy.com — the same artists responsible for misusing search engines to create *Digital Hijack*. Although the artists had registered their domain name two years before the trinket salesmen registered theirs, the corporation happened to register their trademark first. Ignoring the fact that US trademarks don't have automatic jurisdiction over an international territory like cyberspace, a California judge granted a temporary injunction blocking public access to the artists' domain. The timing of this action, a few months before the Christmas that many predicted would be the first real moneymaking season for e-commerce, seemed to confirm that corporate giants would soon overpower grass-roots collectives by hijacking the democratic protocols that had spurred the early Internet.

Domain names are one of those protocols. Unlike physical addresses like Fifth Avenue or Broadway, Web addresses like etoy.com or etoys.com are available on a first-come, first-served basis and are not priced competitively; the first time they were registered, CocaCola.com and MyWebSiteSucks.com both cost about twenty dollars a year. Once you register a domain name, it's yours to keep as long as you shell out the annual fee. Because of this, the toy seller's attempt to muscle in on territory the artists had already claimed was particularly offensive to many netizens. Etoys Inc. may have paid out of their own coffers to trumpet their brand name on subways and TV spots, but US taxpayers underwrote the technology that makes etoys.com go somewhere when you type it into your browser.

Responding to a call for a campaign against the toy giant orchestrated by ®™ark and etoy 'agent' Reinhold Grether, online artists and hackers emailed journalists, posted exhortations to disinvest on electronic bulletin boards frequented by etoys stockholders, and used virtual sit-in software to tie up the toy purveyor's server with random subscribers and counterfeit shopping carts (www.toywar.com). None of these 'etoy soldiers' were compensated for their services, though ®™ark put up $200 for any hacker who could post a protest directly on etoys' own home page (no one did). But the spurious visitors automatically generated by the Floodnet-style software cast into doubt etoys' hit counts, which just happen to be one of the benchmarks by which investors value their stock. That stock tumbled 70 per cent off its original value over the course of ®™ark's 'toywar', and etoys.com formally withdrew their suit in January 2000.

Toywar's generals knew that constraints are essential to play. According to Reinhold Grether, etoy's soldiers considered but rejected a 'killer bullet' that would have shut down the etoys.com Web site altogether. As one participant wrote, 'I'm not ready to trade the distributed, swarming community of activists model for a single tactical nuke.' etoy artists understood the difference between executing code and executing people. As etoy AGENT.ZAI put it:

[[extract]] ...what we knew was that if we just set up a nice (&boring) list where people can put their names and express their bad feelings about capitalism etc. a lot of people will probably do it...but it will not help at all...instead we decided to involve people into a

very special process. not in the traditional way but in an entertaining story. it worked because people loved to be part of the 'war' that was not really terrible (no killings...the only thing that could be lost was a domain name and lots of money). it was not by chance that we called it 'TOY-war'... we tried to play with the irony of the situation...but hit many peoples deep feelings.[97]

To say that art must play within constraints doesn't cripple its long-term political power. On the contrary, art's peculiar position grants it a twisted kind of protection. When asked if the weapons of *Toywar* weren't potentially dangerous in the wrong hands, ®™ark's 'Ray Thomas' replied that Floodnet software inherently favored the little guy over the bigwig. In response to the question 'What if someone used it against your own Web site?' he replied, 'Then it would just give us more publicity.' ®™ark, like all hacktivist art, is provocative rather than prescriptive. Hacktivist art's power comes less from answers than from questions, less from effectiveness than from play. And in this fundamental way, though it may share the immune system's goals and functions in the ways that it executes code to protect the body, it differs from the immune system. Hacktivist art may execute its code, but it doesn't execute its targets.