Chapter Five

The Cyborganic Whole: Business and Community, Online and Onground

The previous chapter described the practices and innovations of Cyborganic and its members primarily in terms of their contributions to other firms and ventures—*Wired*, *Hotwired*, Organic Online, CNET, and the Apache Project—none of which were mounted under the aegis of Cyborganic. Emphasis was placed on situating Cyborganic within the networks of San Francisco's Web publishing industry in the 1990s. In contrast, this chapter moves to look at Cyborganic itself, describing the community's constituent parts and the practices they encompassed.

The name Cyborganic refers at once to the business project, the community within which it grew, and subsequently, to the larger community that grew around these. The project was imagined and pursued as a start-up business and that enterprise provided the impetus and infrastructure, both technical and narrative, for the community. Yet, both the business and community were aspects of a symbiotic whole that: (a) can not be neatly separated; and (b) is best understood, overall, as a community, rather than a business, association, club, or any of the other social forms and functions Cyborganic encompassed. Both claims are substantiated by ethnographic material in this chapter that demonstrates the inseparability of Cyborganic's entrepreneurial and communitarian forms, practices, and imaginaries.

Just as its business and community, Cyborganic's online and offline components overlapped and were mutually constitutive. Yet, representing these

various phenomena ethnographically requires some analytic vivisection and, for heuristic purposes, the Cyborganic whole can be divided into three parts which can be seen as different interfaces through which social actors participated in the community: (1) the business project; (2) the place-based, face-to-face community; and (3) the online community.

Cyborganic as Business

In its narrowest sense, Cyborganic was a project to build a community-based Internet business, similar to the WELL, but for a younger generation[1] and with the key addition of a physical space (the Cyborganic Café) for informal, face-to-face, interaction. Rather than begin by selling a product or service to customers, Cyborganic's strategy was to build a local community of its own to demonstrate the value of combining face-to-face and online sociality. The business was started with personal resources and volunteer labor and grew from this initial phase: first, into Cyborganic Media, a sole proprietorship owned by Steuer (1994-1995); and then, into The Cyborganic Corporation (1995-1997), a company in which principals and some employees held stock options, though the majority of equity was reserved for investors.

Though it was integral to the development of the community, only a subset of community members participated directly in the Cyborganic business. Community

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[1] That is, people who were in their twenties in the 1990s.

members can be distinguished by their roles in the following hierarchy of participation, from most to least directly involved in the business project.

- Founder, Jonathan Steuer, initiated Cyborganic and led the company from its inception in 1993 through its closing in 1997. His role in the business was singular, formative, and authoritative.

- Company principals took on managerial roles and worked without salary to launch Cyborganic as an Internet start-up in exchange for equity when the business incorporated in May 1995. Cyborganic's founding principals were:

    – Jonathan Steuer, President and CEO
    – Jennifer Cool (the author), Community and Education Director
    – Ann Hess (Sonic), Director of Web Production
    – Caleb Donaldson, Gardner-In-Chief (Editorial lead)
    – Tricia McGillis, Design Director

- Full-time employees hired after Cyborganic incorporated who worked onsite at Cyborganic's offices were compensated with wages and, in some cases, stock options. Over the course of its operation, the Corporation had 11 employees: these included the five founding principals as well as:

    – Bryna Bank, Crisis Management (Office Manager)
    – Peter Rosberg, Chief Technology Officer (CTO)
    – M Normal, Community Ringleader
    – Terri Nelson, Operations Manager
    – Steev Hise, Web Producer
    – Ivonne Pokorny, Designer

- Office and systems administrators were hired during all phases of the business project and compensated with cash, rather than equity. Cyborganic generally had no more than two staffers at a time, with a total of about eight people participating in this way over the lifespan of the business.

- Community members also worked as independent contractors for Cyborganic, taking on specific jobs for which they were paid. These included public relations and accounting, as well as work on client projects that Cyborganic took on while working to raise venture capital. Contractors were professionals with specialized skills such as accounting, design, systems administration, and computer programming. Over the course of the business, approximately thirty community members worked in this capacity.

- Volunteers who were not formally compensated on a market basis also contributed to the Cyborganic business on the basis of reciprocity. These included those who worked to develop Cyborganic's online curriculum (Francis and Haig); contributed code and custom Web applications such as the Carving Tree (e.g., Laura La Gassa, Stefan Lisowski, John Shiple, Ian McFarland); did the wiring for the local area network (Rick Schneider); helped scout commercial real-estate for a downtown location (Holly Kreuter); office interns (Susie Kameny); and the volunteers who cooked, cleaned, or provided music for the weekly potluck community dinners. While dinner volunteers were most numerous (about 100 people), over the course of the business project

approximately 24 members of the community contributed their skill and labor to the other tasks described.

- Cyborganic members who did not take on any of the roles above also provided benefit to the business by populating the community and adding their own Web pages and creative projects to the content hosted under the Cyborganic name.

During its initial phase, the business project consisted primarily of Steuer and I working on our own time, outside of jobs and school. In October 1993, Steuer bought a computer identical to the one he had just installed as *Wired* magazine's Internet gateway, set-up Cyborganic's first server and, with help from roommates, took on such physical plant projects as transforming the downstairs kitchen at 65 Ramona Avenue into a server and media storage room for video, audio, and data backups. I focused on developing the business plan and writing proposals for the project, such as the brochure for Cyborganic's first demo at the Halloween Anon Salon in 1993. Together, we worked with housemates and neighbors to build Cyborganic's network and information systems. This included wiring the apartments on Ramona Avenue, setting up an old Macintosh (the Butler) as a local file server to share media and software, and getting all the spare computers available working and online. Even though all the housemates had their own computers, there were terminals and computers in the hallways and common areas, just as were planned for the proposed Cyborganic Café. In the spring of 1994, the first "Cyborganic Summit" was held and 25 community members gathered to discuss the project and their interest in participating.

While Steuer and I were the only ones working on the business plan at this time, all who lived in the group households on Ramona participated materially and vitally in the initial project of building a techno-commune. Beyond incorporating the Cyborganic vision of techno-sociality into their own lives, they opened their homes to guests ("couch surfers"), visitors, and later, the media, in the effort to launch the start-up business. During this period, the business project had no funds to pay anyone involved. Steuer used his own money to set up the Internet server and LAN, and was adept at securing contributions of hardware and labor to bootstrap the technical and administrative infrastructure. Essentially, this infrastructure was part of Steuer's consulting business, Cyborganic Media, which, at this point, involved contract work for others in the community only occasionally. Other than this, the practices and relationships entailed in the business project during this initial phase were uncommercial, uncontractual, and largely indistinguishable from the everyday life of the Ramona community.

The second phase of the Cyborganic business got underway in January 1995 after Steuer quit *Hotwired*. Though it had been on hold for several months, he now turned his attention back to the project of starting his own company. While opening an actual café required capital he did not have, the project of opening one online could be realized by community members participating out of their own interest in creating such an online forum. The strategy was to write a business plan to secure funding while bootstrapping the online part of the proposed venture, then called "The Cyborganic Clubhouse," through unpaid, individual investments of time, labor, and

other personal resources. The business goal of the website was to demonstrate

Cyborganic's community vision, making the project more attractive to potential

investors. Creating Cyborganic's Web presence was the defining goal of this phase

of the business project.

On January 15, 1995 a meeting of project volunteers was held at which

Steuer described the project overall; explained its initial goals; and outlined the

structure of the virtual "Clubhouse" space. He emphasized that none of the proposed

design was "written in stone" and invited input from the group. The meeting agenda,

excerpted below, gives a good sense of the goals, means, and processes that defined

Cyborganic's business at this stage.

> 1/15/95 meeting agenda
>
> + overview of cyborganic media
> − not service provider. is home, source, place
> − registered business with [bank] account
> − physical space will exist at later point
> − a place based around people, not a publication based around "content"
> − integrated, not a free for all. coordinated, centralized area
>
> + money
> − none right now to buy stuff (except scanner which JSS will buy immediately)
> − idea is to run space as one destination for infobahn drivers, give them someplace cool to go. A destination of worth!
> − idea is to build a demo, business model not worked out, still to be done
> − co-op volunteers unless we get paying contracts
>
> + sponsorship
> − cyborganic media cut to be determined
>
> + business structure (3 things, only head of 1)
> − project leaders
> − committees; task force groups of 3 or 4 people
>
> + ownership
> − individuals own copyright of work throughout

- exclusivity of outside content (3 mo?)

+ laws of infoprocedure (jonathan)
  - versionitis
  - client server

+ production management
  - needs to be rigidly enforced (caleb)
  - permissions
  - files / accounts
…

+ deadlines

+ 2/2 jonathan returns- content review
  - home pages should be up
  - 4/1 launch- WebWorld II
(Jenny Cool, e-mail to the cc list, January 19, 1995)

As these agenda items show, Cyborganic's aim was not to be a service

provider, or a "publication based around 'content,'" but a "place based around

people." The first priority was for each project member to make his or her own

homepage and put it up on the Cyborganic site as soon as possible. Even though a

business model (i.e., a plan for generating profits) had not yet been worked out, the

group proceeded to build a "demo version" of their online community with

volunteers. The rules of participation were that each volunteer only be involved in

three, and head up only one, of the "task force groups" working on the project.

Following this meeting, the Cyborganic mailing list was re-launched and

plans for the Clubhouse website, along with organizational and administrative details

of the project, were sent to everyone who had expressed interest in participating, 33

people in all. Beginning in February, a weekly brainstorming meeting was held on

Thursday evenings, and a business meeting on Sundays at noon. These were

convened for approximately six weeks before people broke in to smaller working groups and the larger meetings were discontinued. Hess took on the task of helping community members create their homepages, and worked with Donaldson and McGillis to design and produce the rest of the Cyborganic site. Some community members—Justin Hall, Steve Bahcall, Dog and Pony, Carla Sinclair (co-founder of Boing Boing)—signed on to put their own creative work on the Cyborganic website. Others created HTML and Perl tutorials for the site (Charlie Fulton, Ovid Jacob); or helped with tasks such as maintaining the desktop Macintosh systems (Francis [Graham] Potter, John Haig). I took on the administrative role of e-mailing schedules, agendas, plans, and announcements to the group. Steuer focused on the consulting work through which the business was then funded, on seeking investors and innovative collaborators, and on Cyborganic's computer and information systems. Working in this way, Cyborganic's first website was produced and went online as scheduled in April 1995.

The start-up project entered its third phase when the business was incorporated as the Cyborganic Corporation in the summer of 1995. Hess, Donaldson, and McGillis joined on as principals in the company and began the work of redesigning and expanding the Cyborganic Gardens website which was re-launched in October. The project still had no start-up funding so Steuer and I continued shopping the business plan and salaries were negotiated, but deferred until the company received its first investor check in November. The events, people, and practices involved in the project during its corporate existence (1995-1997) were

presented in the last chapter, and are detailed further in the following descriptions of Cyborganic's face-to-face and online components.

Cyborganic as Place-based, Face-to-Face Community

Both the Cyborganic community and Cyborganic business started in an apartment at 67 Ramona Avenue, in San Francisco's Mission Dolores neighborhood. The housemates at 67 Ramona, single and in their mid-twenties, made a conscious choice to live communally, sharing groceries, household chores and expenses, and social lives. Having lived before in groups that shared nothing but the rent, they decided to create a household where food in the refrigerator was not labeled as personal property, and residents did not simply come and go, as if living in a hotel. Their Ramona Avenue apartment became a gathering place for young techies, ravers, and artists in the City's burgeoning rave and multimedia scenes. When neighbors moved out of the apartment below (65 Ramona), the household expanded, adding two new members, and beginning the process through which more than thirty community members moved into apartments on the street as they came up for rent over the next few years. Each new apartment was connected to the group's local computer network via Ethernet cable running over rooftops and across the street.

The households on Ramona were the most tangible manifestation of Cyborganic as a social group. The boundaries of this group can be traced as a physical network of computers, wires, and buildings that extended at its height across 11 separate rental apartments. This neighborhood was the geographic heart of the community. It

was the place where Cyborganics met face-to-face in the course of everyday life, for

work, meals, recreation, project meetings, and weekly potluck dinners. Socially, this

place-based community was composed of three nested groups: (1) people who lived

in the Ramona Empire; (2) those who were connected to the Ramona LAN; and (3)

those who participated in the weekly community potlucks, known as Thursday Night
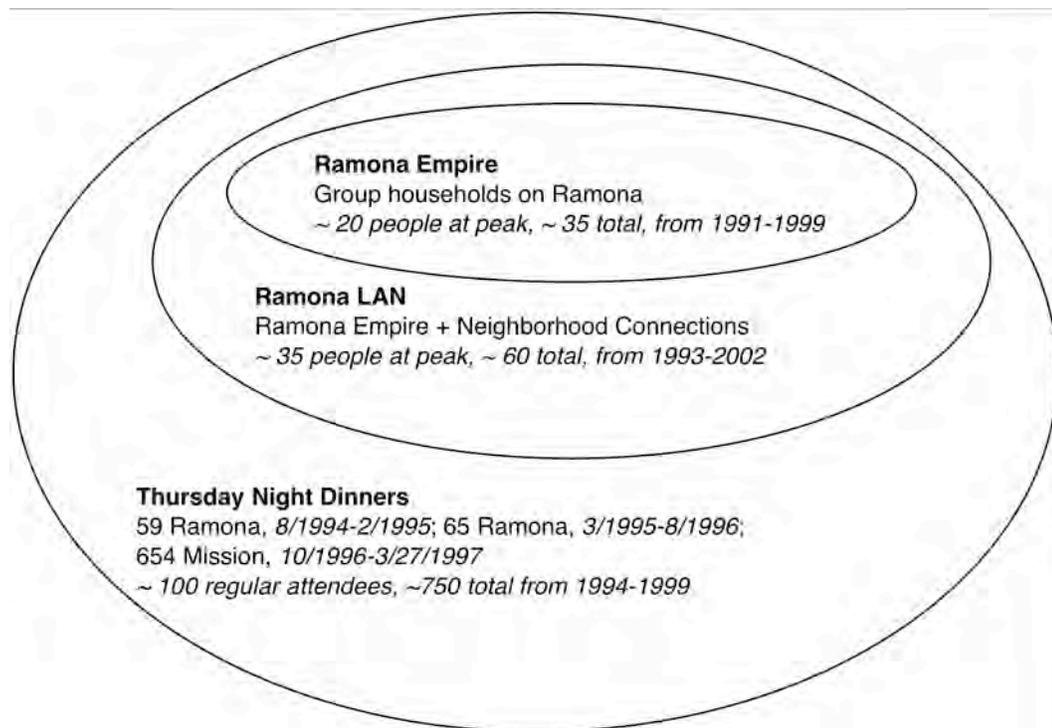
Dinner, or TND.

Ramona Empire
Group households on Ramona
~ 20 people at peak, ~ 35 total, from 1991-1999

Ramona LAN
Ramona Empire + Neighborhood Connections
~ 35 people at peak, ~ 60 total, from 1993-2002

Thursday Night Dinners
59 Ramona, 8/1994-2/1995; 65 Ramona, 3/1995-8/1996;
654 Mission, 10/1996-3/27/1997
~ 100 regular attendees, ~750 total from 1994-1999

Figure 5.1: Cyborganic as place-based, face-to-face community

Peaks are largest number of *simultaneous* members in each group.
Totals are the number of members over the life of the group.

The Ramona Empire

The cluster of group households, known first as "Ramona Towers" and later, the "Ramona Empire," preceded the business project and was distinct from it, despite significant intersection. The Ramona Empire included all those who lived in the first five apartments to be occupied at 59, 65/67, and 80/82 Ramona; and, later, three apartments in the Victorian house on the corner at 15th Street. This physical community of housemates and neighbors, which grew at its peak to twenty members, formed a subgroup within Cyborganic. Between 1991 and 1999, approximately thirty-five people were Empire residents. Though many in this group were active in both the business project and online communities, others were not active in either. The bonds linking members of the first Ramona households were those of fictive kin and they have since become godparents of one another's children.

Figure 5.2: Aerial view of the Ramona Empire

Numbered houses were connected by Ethernet cable to the Ramona LAN.
(Image courtesy of Google Maps)

The Ramona Neighborhood and Local Area Network (LAN)

The apartments on Ramona Avenue, and a few others in the neighborhood, were connected to the Internet through the Cyborganic server and local area network, or LAN. At its peak, the Ramona LAN extended across 11 apartments, providing approximately thirty people full-time, residential connections to the Internet.

Before DSL and cable modems became commercially viable in the late 1990s, dial-up connections were the only type of Internet access easily available to individuals outside of institutions (i.e. universities and corporations). A high capacity digital transmission line (T-1) cost $3,000 to $5,000 per month in 1993, putting it beyond the reach of even a small business. In this context, Cyborganic provided a way for members to share full-time, residential Internet connectivity in a social formation I call a "bandwidth collective." Sharing connectivity in this way served to distribute the cost of an expensive resource, providing a service that was *not available any other way* at the time. The costs and labor of creating and maintaining this network were shared on a variety of bases over the years it operated. Initially, Steuer absorbed the set-up and monthly bandwidth costs as a business expense of Cyborganic Media. Members of the original five households never paid for connectivity, though they contributed reciprocally to Steuer's project in other ways. LAN members who joined later typically shared a portion of Cyborganic's monthly bill for Internet connectivity.

One of the ways the Ramona neighborhood grew was that residents watched for and told friends about vacancies in the area. When new people moved in, one of the first group activities was to run cable across the roofs or street to connect their apartments to the Ramona LAN. When the large Victorian house on the corner burned in a fire in 1994, Cyborganics offered to wire the gutted structure for phone and Internet at no cost to the new owner, who was restoring three rental units there. Their motives were to expand the Ramona Empire and create ideal geek quarters with phone and Ethernet jacks handy in every room. Within a year, the new housing—with pristine wiring by Cyborganic's resident hardware guru, Rick Schneider—was ready and rented to other Cyborganics, adding three apartments, and seven people to the Ramona LAN.

Though the bandwidth collective piggybacked on Cyborganic's business need for full-time Internet access, it was part of the community project and became an entity in its own right that outlived both the business and the Ramona Empire. After Cyborganic's business folded in 1997, neighborhood residents took over responsibility for the LAN and organized a non-profit group, the Church of the Immaculate Connection, as a cooperative that shared Internet connectivity ("bandwidth"), technical infrastructure, and administrative labor. The cooperative was active until 2002, years after the business and most of the original Ramona Empire residents had moved off the street.

Thursday Night Dinner (TND)

Thursday Night Dinner, or TND, was a weekly potluck that constituted the largest and only regular face-to-face gathering for the whole Cyborganic community. Started by Ramona residents as a supper club and new media salon, it grew to be a weekly party for San Francisco Web workers with a regular attendance of 80-100 at its peak. TND was an experiment in bringing people together around networked media in a relaxed, playful setting.

> Cyborganic has combined the block party, performance art, and mass communication into an electronic garden…Thursday Night Dinners opened the door to face-to-face partying and cyberspace exploration. Using a server located in the kitchen, guests could explore cyberspace in the context of friends and informal socializing. Nesting the virtual experience in a social situation humanized an otherwise potentially impersonal experience. (IFTF 1996:25)

TND guests congregated at the computers set up throughout the apartment, sharing favorite websites, trying out new software, and introducing neophytes to the Internet. Though the goal of a Cyborganic Café was never realized, TND functioned as a "demo version" of the vision. For two and a half years, the dinners were the main forum for face-to-face social interaction in the community, showcasing the Ramona techno-commune and Cyborganic vision to the outside world, and drawing new members and attention to the group.

In the summer of 1994, I began hosting the potluck dinners and with housemates Francis (Graham) Potter and John Haig at 59 Ramona. Community members took turns cooking a main dish which guests were expected to supplement

with contributions of other edibles and drinks. Dinners were usually prepared on site, in the kitchen where TND was hosted. Food was set out buffet-style and eaten, plate in hand in the kitchen, living room, and common areas. Initially, when 12-15 people attended each dinner, the household dishes and cutlery where used. But within a few months, regular attendance grew to two or three times that and the Ramona residents bought a stock of disposable plates, cups, and utensils for use at TNDs. Dinners ran from about seven in the evening until midnight, but were casual affairs with guests arriving and departing at different points throughout.

Back rows, from left:
Safi Bahcall, Ovid Jacob, Amber Luttrel, John Haig, Francis (Graham) Potter, Anne Francis, unidentifiable.

Front row, from left:
Ken Goldberg, Jennifer Cool, Jonathan Steuer, unidentified.

Figure 5.3 Attendees at an early Thursday Night Dinner (TND)

Initially, TND was a community project, not under the business, and the primary goal for most of the Ramona residents was to spend social time together and with friends. Dinners were held about every two weeks, but not on a strict schedule.

In the interest of launching the business, however, Steuer felt TND had to be held *every* week. As his collaborator in the business and organizer of TND, I took on the task and TNDs became weekly in the fall of 1994, but were still held at 59 Ramona, rather than at Cyborganic's business offices next door. After Steuer quit *Hotwired* and returned full force to his plans for a start-up, TNDs became even more central to the business, both as a venue to showcase Cyborganic's techno-social vision and for the camaraderie of volunteers contributing to the project.

In the spring of 1995, responsibility for TND was brought formally under the business project and dinners were moved to 65/67 Ramona, where Cyborganic's offices and server were located. Though the business provided the facilities and some basic supplies, TNDs had no budget and were produced every week with community volunteers supplying food, drink, entertainment, and clean up labor. To coordinate the effort on an on-going basis, I set up a basic template: each TND needed a guest chef to provide the main dish, a DJ to provide the music, and a "swabmaster" to lead the clean up. In addition, it became practice for each TND to have a theme, usually chosen by the chef, which gave attendees ideas about what to bring and, sometimes, what to wear. For example, themes included: "Pajama Party Breakfast," "Goth Night," "Playboy Mansion Swank Seventies," "One Fish, Two Fish" (colored food à la Dr. Seuss's green eggs and ham), and "Organic's Not Square," featuring triangular foods prepared by Organic Online staffers. Co-workers from different firms and subgroups (e.g. the contingent of Cyborganics from Mills College) often teamed up in this way to cook for TND.

Starting in the fall of 1995, "TND Dispatches" were published on the Web with stories and photos from each dinner. A Cyborganic staffer[2] was assigned the job of reporting on each TND, taking digital photos, and producing the HTML pages every week. Members of the general community were also encouraged to produce their own dispatches. For some, this was an opportunity to display their skills with the new media; and for others, it was an introduction to making their "very first HTML pages:"

> I'd really like to thank all the folks at Cyborganic for the opportunity
> to get my feet wet in HTML. It's not hard, but marking up text is a
> real pain. I'd also like to send out a real special thanks to Drue Miller
> for extra help with the HTML formatting. (Mark Gavini, TND
> Dispatch, November 30, 1995)

In addition to providing fresh content for Cyborganic's website every week, TND Dispatches were a way to recognize the chefs, swabmasters, and DJs who volunteered for the dinners. Thus, the dispatches not only served the business project by drawing traffic to the website, but also fed back into the community project of sustaining volunteerism.

By 1995, with the Internet boom in full swing, TND became something of a media event. It was chronicled in *Rolling Stone* and reporters and film crews became a regular sight at the weekly dinners.

> Last night's TND began under the glare and heat of two (count'em!
> 2!) television crews roaming our not-yet-ivied halls and poking fuzzy

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[2] Jeff Logsdon, Cyborganic's systems administrator, was the first to hold this job, which was later passed to other staffers—Sarah Keogh, Kat Kovacs, Terri Nelson—and circulated to volunteers from the community.

> boom-mikes in our faces. A crew from c|net interviewed Caleb and M
> for a cable special on online community, while MSNBC's The Site
> conducted a group interview of the GeekCereal Geeks concerning
> "geeksploitation." (Terri Nelson, TND Dispatch, October 18, 1996)

During the dot-com boom media attention to the Internet was rampant. TND's

photogenic, young crowd furnished much sought after visuals and colorful characters

to reporters hungry for stories about the Net and Net culture. In addition to those

from the U.S. (CNET, MSNBC, Discovery Channel), television crews from Japan,

France, and Germany came to cover the event, which was also featured in the online

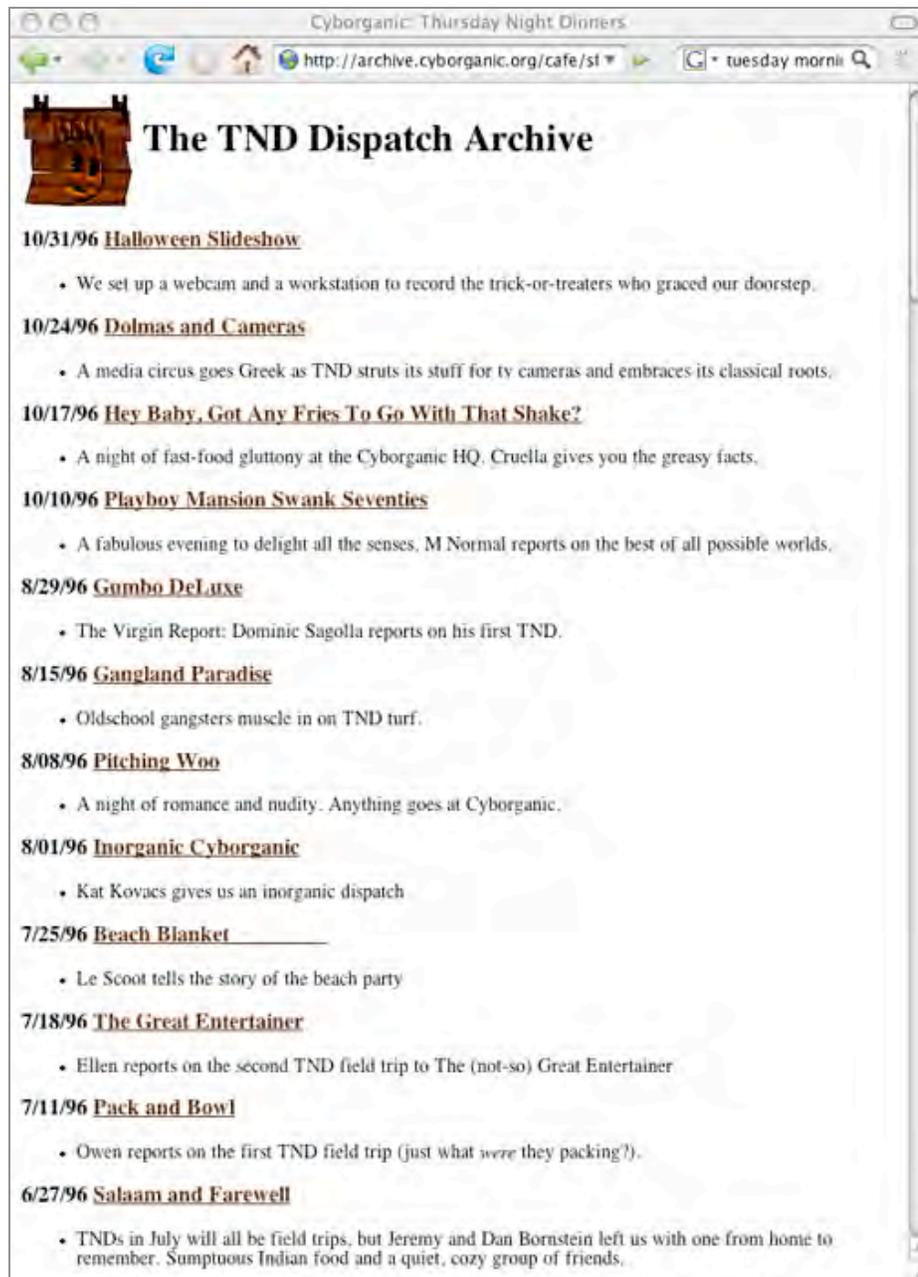project and book *24 Hours in Cyberspace* (Smolan and Erwitt 1996).

Figure 5.4: The TND Dispatch Archive, Cyborganic Gardens website

Cyborganic as Online Community

In addition to the business and place-based community, Cyborganic was also

an Internet community in which members participated through several online venues.

These included: accounts and domains hosted on Cyborganic's servers; a real time

chat forum (space bar), mailing lists; and the website, Cyborganic Gardens.

Cyborganic Servers: User Accounts and Domains

At the group's peak approximately a hundred people had logins on

Cyborganic's servers, which over the years were named *ramona*, *erehwon*, *xanadu*,

xanatoo, and *oz*, reflecting the project's place-based and utopian imaginaries. While

some, such as the volunteer systems administrators, or *sysadmins*,[3] had shell access,

most user accounts were for e-mail and Web publishing only[4]. Cyborganic provided

many members their first e-mail accounts and many more a place to host their first

Web pages, along with publishing tools such as a staging server to preview changes

before publishing pages "live" on the Web.

Cyborganic also provided virtual hosting[5] for community members and their

projects. Between 1994 and 2002 more than a hundred domains were hosted virtually

on Cyborganic's servers: these are listed in Table 5.1 below.

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[3] Systems administrators, or sysadmins, maintain computer systems and networks.

[4] Put simply, "shell" accounts afford higher-level access allowing users to edit files
on a server, rather than simply uploading and downloading files to and from a server.

[5] Virtual hosting is a method by which multiple domain names can be hosted on a
single computer server.

Table 5.1 Domain names hosted on Cyborganic

abulafia.com	perisphere.com	cool.org
abbedon.com	plaintext.com	cyborganic.org
alphamark.com	pistel.com	deoxy.org
archaic.com	press.com	dorf.org
anonymous.com	pretension.com	ellen.org
anonsalon.com	princetonareafriendsoftibet.com	ezone.org
artmakinglife.com	radiofreemaine.com	justin.org
beckybond.com	radioluchalibre.com	lotus.org
bryna.com	rehab-team.com	rainforestjukebox.org
bubbe.com	reverberate.com	safersex.org
bud.com	rollover.com	schlemmer.org
coffeehousebook.com	rushkoff.com	sfemf.org
cspam.com	raphaellevy.com	sttf.org
cyborganic.com	spindoctors.com	tibet.org
dharmalens.com	southtothefuture.com	tibetfund.org
devapremal.com	superbad.com	Tibethouse.org
drsinger.com	superbomb.com	tibetanyouthcongress.org
eyeneer.com	superbonnedesign.com	tyagarah.org
eggthings.com	snarly.com	ustibet.org
farklempt.com	takingtimeoff.com	dip.net
feathersite.com	telecircus.com	dom.net
fieldguide.com	TheCommute.com	fleischer.net
functionnet.com	third-dimension.com	heathen.net
genieee.com	tibetanarts.org	links.net
geekcereal.com	treadwillow.com	matisse.net
globalworldtech.com	thecouch.com	path.net
greenhome.com	unlicensedtherapist.com	pepito.net
hood2coast.com	yotarot.com	sannyas.net
HQ2O.com	veselka.com	satori.net
josemarquez.com	vivabush.com	tibet.net
khawachen.com	warui.com	byronbayfm.org.au
katherineinterface.com	whitecranefilms.com	innerversity.com.au
Laplayadelcarmen.com	wiredwarehouse.com	handyrentals.com.au
levity.com	worldmaker.com	sidoun.com.au
mediaeater.com	zhangzhung.com	mitra.hm
nariarts.com	21stsuffragettes.com	
neomuseum.com	action4tibet.org	
newlangtonarts.com	code33.org	

These included domains for members' personal and professional websites, creative

projects, and a variety of non-profit and activist organizations in which Cyborganics

were involved. Most notably, Tibet.net—the official website for the Dalai Lama's Tibetan administration in exile—and more than a dozen websites and mailing lists for Tibetan relief organizations, have been hosted on Cyborganic since 1997. The cost and labor of administering Cyborganic's servers has been shared on a variety of bases over the years. Though there was a move in 1996 towards charging for user accounts of members who were not otherwise contributing to the project, once the business closed in 1997, Cyborganic's servers were operated non-commercially as a bandwidth cooperative.

Space bar

Space bar, a text-based synchronous conferencing system or "chat room," was another of Cyborganic's online venues. Unlike instant messaging, which affords one-to-one communication, synchronous conferences allow multiple people to login to the same channel and exchange messages with a group in real time. Anyone on the Internet could login to space bar, but users could only chat in channel one until their accounts were verified by the chat's administrator, "the spaceman" (Donaldson). Verified users could create their own channels on space bar and make these visible, or invisible, to others. Users could also send private messages and "beeps" to one another through the chat.

```
 O O O                    telnet://spacebar.com
Trying 208.96.51.52...
Connected to spacebar.com.
Escape character is '^]'.

space bar
Powered by est@hyperreal.org's plur 2.3.3
Home to space cadets since 1995

Welcome to space bar!

Type "new" if you are a new user.
     "who" to see who is logged in.
     "quit" to leave.

Enter your user name: cool
Password:


=====[ welcome to space bar ]===================================================

INFO:  Public messages typed on channel 1 and all broadcasts are logged for
       96 hours. You cannot leave channel 1 or use most of the commands until
       your account has been verified by the spaceman.

       Send ALL verification requests and feedback to: spaceman@spacebar.com

       For more information, visit: http://www.spacebar.com

COMMON SPACE BAR COMMANDS:
  Help (command list)........... /?      Send a private message......... /p
  Change your nickname.......... /n      Change your password.......... /&
  See who else is on............ /a      Log off/quit................. /qy
  _____

  LOVE SPACEBAR?  help us keep the lights on.
  make your donation here: http://spacebar.com/donate/
  _____
```

Figure 5.5: Space bar login screen showing basic commands

From the time it went online in April 1995 space bar had a contingent of

regulars who spent much of each workday logged in to the chat. Most were people

whose jobs entailed being at a computer with an Internet connection all day.

> I'm usually on the space bar by eleven-thirty or eleven, say, and bail
> for lunch, go outside and talk to my tape-recorder or talk to my
> journal, or play guitar or something to get the stress out and then,
> show up at one and deal with afternoon meetings and then by, easily,
> definitely by three I'm back on "the bar." (Dominic Sagolla,
> interview, October 17, 1996)

It's certainly busier during the day, during the week, when everybody's supposed to be working and they've got their telnet window open, on their computer desk…(laughs)…yeah, I think a lot of people actually do get work done while they have space bar running. (Kat Kovacs, interview, October 8, 1996)

Besides "hanging out," "gossip," and "banter," Cyborganics—whether space bar regulars or not—also used the chat as a way to get immediate help with practical and technical matters.

I've seen that happen, too, people trying to set up http servers on their Macs and they don't know exactly what's involved and someone saying, "Oh, ok, just go to channel 92" and spend 15 minutes and they have everything figured out. (Sean Robin [pseudonym] interview, October 21, 1996)

Keeping a window open to space bar all day was tantamount to having a cohort of knowledgeable friends with you on your desktop in the workplace. As I found myself while working in Silicon Valley, an hour south of "the City," this was a rather empowering experience. Psychologically, it countered the isolation of working far from home among people I did not know. If someone at work asked me a question I could not answer, I often turned to space bar and found an answer without letting on that I had not known it all along. Nearly all space bar's regulars worked in information technology and the chat provided Cyborganics their own personal group of experts, available real time at any networked computer.

Most of space bar's regulars also logged in from home and the chat room was also typically active late at night. Some even stayed logged on when they were asleep or otherwise out of range of the "beeps" space bar users could send to one another's computers. When asked about this practice, some suggested it was "a

status thing to be on the bar," while others indicated that staying logged on gave a sense of "being together" that was comforting. As one of my interviewees said of space bar, some people "lived there."

> I've described the space bar as a "time suck" before, but people live there, so I can't really do that, you know. (Dominic Sagolla, interview, October 17, 1996)

Many Cyborganics noted the addictiveness of chat and joked about themselves or their friends—for example those who logged in to space bar while they were at TND—as "chat addicts."

> Space bar just sucked me in (laughs!) it did, it's really terrible… since then I've introduced my friend Brea, her online persona is Lilith, I got her on space bar and it's just funny to see her going through the same thing I went through, it's some sort of sick addiction (laughs)… "I just need to see who's on space bar, just real quick, it'll just take me one sec, let me just get my fix real quick" and sometimes, even if I don't have time to logon, I'll just peek in to the porthole, I'll just see who's on, I'll just pop-on and say "hi" and it makes me constantly late for things (laugh). (Kat Kovacs, interview, October 8, 1996)

Even Cyborganics who did not spend much time on space bar used it as a hailing frequency when they wanted immediate answers, or needed to track somebody down. To facilitate this usage, Cyborganic's Web team created a "porthole" on the space bar website so people could see who was online in the chat without having to login themselves. They also devised a "cadet detector," that space bar patrons could put on their homepages to indicate whether or not they were currently logged in to the chat.
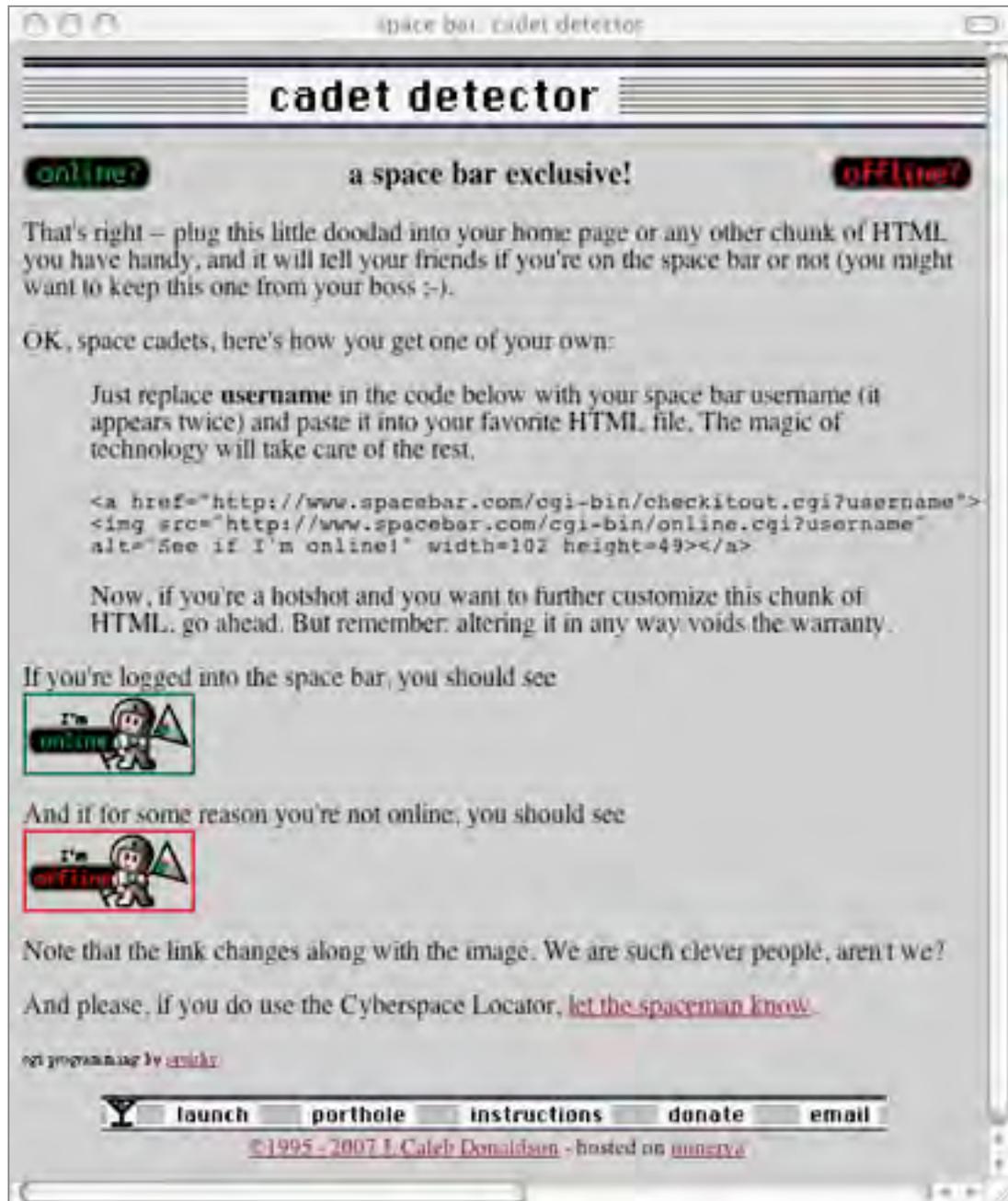
Figure 5.6: The space bar cadet detector

Space bar was accessible from any location and some of its regulars lived

outside the Bay Area. Yet, because of the preponderance of members from the Bay

Area, the chat was place-centric, if not entirely place-based, as one of the space bar's early regulars describes.

> Space bar has gone probably through 2 or 3 distinct changes [since] we first went online. There was a lot of light-hearted word play and the mood could really stretch from total light-heartedness to very serious discussion. For the first few months that was the general tone, and of course the general welcoming of new people into it because it was expanding. It probably went from a few tens of people to a few hundreds logging in, and then, in terms of regulars, from probably 4 or 5 or 6 to probably 15 or 20 regulars. And it started changing slowly, for 3 or 4 months it was more or less the same, people having fun with the new-comers, just sort of joshing around a little bit, giving them a hard time in channel 1, popping back and forth from other channels, but underlying all that was still a very trustworthy relationship between all the people who were there. You could always ask or tell someone what you honestly thought and that probably lasted a few months as well and then it began to change. It became much more popular with people in physical proximity to the Bay Area, maybe San Francisco itself. What started happening was more sort of SF, San Francisco-centric conversation and topics coming up, which was a novelty when it first got up, even for someone who's never been there and has no idea where people hang out and all that, it's amusing and entertaining and interesting to listen to people talk about what they did when they were all at lunch and they are now talking about it on space bar, that's fine. And *that* grew into a whole new area of interaction all by itself and I think that started some people feeling more left out than others, almost as if they were kind of pushed out. (Sean Robin [pseudonym] interview, October 21, 1996)

While this out-of-towner speaks of feeling "pushed out" by space bar's San Francisco-centric character, he himself moved to the Bay Area after finishing graduate school and attended a few TNDs, but did not become a regular member of either the mailing list, or the face-to-face community. Others were also drawn to San Francisco through the chat. Some came to visit and attend a TND; others decided to move there and got help finding work and apartments through space bar friends.

Space bar's regulars formed an in-group within Cyborganic and having fun with (i.e. fooling or tricking) "chat newbies" was fairly commonplace. Though users had to request verification from space bar administrators (Donaldson and the regulars he deputized with administrative powers), this did not require revealing one's identity to others in the chat. About half of space bar's users had a login different from their main Cyborganic one and, though regulars might know who was who "in real life" (IRL), it would not be clear to others. Further, one person could have multiple accounts, so even those who used their Cyborganic logins might have other accounts not tied to that identity.

> A lot of the Cybo establishment used the same names as their main accounts, but had aliases for fucking around. (James Home, personal communication, March 19, 2008)

> Tunaluna is a space bar regular and she is usually very helpful to everybody, although she also just has fun playing around with newbies in channel 1 under a different ID, and as the moderator she has another login which if you ask her, she's always pretty helpful, but she also plays with newbies. There was one great evening, me and her and there were 2 other people and a couple newbies and within about half an hour we had them believe that everything they said was being measured for some big government project from Iowa and everything went into this big computer to design chat machines for the next generation. It's really childish at some level, but it's a harmless game that some people play, but then as the moderator login, she wouldn't do that, she would not intentionally mislead people [laughs]. (Sean Robin [pseudonym], interview, October 21, 1996)

As these space bar regulars indicate, even the chat's moderators had different aliases and engaged in the in-group games with neophytes. Though Cyborganic's policy of not offering anonymous accounts was technically in effect because the chat's administrator (Donaldson) could map each alias to the person who used it, from the

point of view of chat visitors not "in the know," this principle of community was effectively moot. In this sense, space bar was a liminal zone within Cyborganic.

Space bar was Donaldson's project and when Cyborganic's business closed in 1997, he moved the chat to another community member's machine (James Home's *minerva*). A group of about 14 people continues to log in to space bar today, mostly to idle together in the channel, or engage in conversations that proceed at the rate of one or two lines a day. Thus, the chat serves essentially a phatic function: it is primarily used to establish *social* connection, rather than communicate messages. "The anthropologist Bronislaw Malinowski (1884-1942) coined the phrase 'phatic communion' to refer to this social function of language, which arises out of the basic human need to signal friendship—or, at least, lack of enmity" (Crystal, 1987). Malinowski (1989) pointed to ritualized greetings, formulaic speech (e.g. "Hi, how are you?," "Fine, thanks," "Well, here we are.") and talk of the weather as examples of this use of language to maintain social relation. In identifying phatic communion, he points to its meaning (friendship/lack of enmity), its social function (message), and also to one particular medium of its expression—language. Recalling Gitelman's definition of media as "structures of communication [that] include both technological forms and their associated protocols" (2006:7), one might say that in Malinowski's examples human biological capacities to think and vocalize language as speech are the technologies involved, while the grammar, syntax, and conventions of use of particular languages are the "associated protocols." Eminent linguist Roman Jakobson described the phatic function as the "endeavor to start or sustain

communication," noting it as "the first verbal function acquired by infants" who "are prone to communicate before being able to send and receive informative communication" (1981:24). But he also highlighted the technical function of phatic utterances noting that this "contact without a message" also serves to keep a channel open as a test of the overall system itself.

As it is currently used, space bar represents a structure of communication that in its very minimalism demonstrates Gitelman's point that media are never only technological, but always already conjoined in social protocols and cultural meanings. It also illustrates what I mean by highlighting the techno-sociality of Cyborganic's cultural practices and imaginaries. For example, in technical terms, one might say this use of space bar *automates* the phatic function of communication in its display of users who are logged in to the channel, for example:

```
cool/anthropologist [jenny@cool.org] (idle:0s)
jim/obamageddon [jim@spacebar.com] (idle:23 days, 11h, 17m, 56s]
```

But the function is also *infomated*—to use Zuboff's (1988) term for the way information technologies support richer communication around the tasks to which they are applied—with automated messages from the system (idle time) as well as customized messages from users (e-mail address, nickname). In the example above, I (cool) have just logged in (*idle:0s* means idle for zero seconds), while space bar's sysadmin (jim) has been logged on and idle for almost 24 days. Appended after each login are "nicknames" (anthropologist, obamageddon) as they are called in space bar's command menu, though this optional function is not typically used to convey a

fixed identity, but is updated with status messages of different kinds (e.g., mood, location, role) or, in this case, political commentary. Even in its present narrow use, the communications practices observable on space bar, include a range of social functions and cultural meanings. Besides the phatic communion of a small group of old friends who stay logged in to the channel, it exists as a way for people who used to frequent the chat to find known regulars, or at least learn their current e-mail address and when they last said something in the chat.

The inactivity of space bar has itself become a point of cultural elaboration in a drinking game called "Jim types" wherein those logged in to the channel are supposed to take a drink of alcohol anytime Jim actually types something—a safe contest given the infrequency of the event. Thus, while the object of most drinking games is to consume alcohol for speed or quantity, "Jim types" is not so much a game as a ritual of phatic communion. Moreover, it is one that parodies the cultural genre of drinking games and jests wryly about the common practice of staying logged in without actively exchanging messages. In this way, space bar's continued use underscores the importance of understanding media as Gitelman defines, never as simply artifactual or instrumental, but as structures of communication "where communication is a cultural practice, a ritualized collocation of different people on the same mental map, sharing or engaged with popular ontologies of representation" (2006:7). Space bar's technological forms are difficult to disentangle from their associated protocols: together they include not only the Internet, telnet protocol,

vrave chat program, and computer systems used to serve and connect to the chat, but also other social and cultural protocols, genres, and contexts.

Mailing lists

Mailing lists were central to Cyborganic as means of coordinating action, expressing norms, identities, and purpose (i.e., socialization), and in terms of group formation and structure (i.e., the scaling and articulation of smaller and larger social forms). From the time *ramona.cyborganic.com* came online, Cyborganic's servers hosted a great variety of mailing lists that served numerous distinct projects, organizations, sub-groups, and super-groups of the community. Some mailing lists were ephemeral, arising to serve a particular project or event then falling out of use. Others were long lived such as the cc list that was active for seven years. Cyborganic members also operated mailing lists for independent projects and groups, for example, the Tibet.org mailing lists. Thus, the humble mailing list was a crucial structure of communication through which Cyborganic was socially realized, both intensively, as a group called "Cyborganic" with particular sub-groups, and extensively, in relation to the world beyond Cyborganic. Mailing lists were instrumental to Cyborganic's spread beyond Ramona Avenue. Though there is some fluidity in the categorization, lists were of three types: Cyborganic community lists, business project lists, and lists run by members for their own projects (e.g., Salon Medusa and Tibet.net). This overview focuses on three community mailing lists that

were central to the Cyborganic project of combining online and on-ground social interaction: the Empire list, the TND list (later tnd-sf), and the cc list.

The Empire List <empire@cyborganic.com>

The first mailing list on Cyborganic was *empire@cyborganic.com* which went to all those in Cyborganic occupied territory on Ramona Avenue. Initially, this was the residents of 65, 67, and 59 Ramona; but as the Ramona Empire grew and the apartment at 65 became a workplace, the list was extended to all those who lived or worked on the street. The criteria for membership on the Empire list reflects a clear place-based logic; and the name "Empire" conveys this sense of place along with an expansionist imaginary of occupying more territory and extending the group's dominion.

Table 5.2 Empire list subscribers, February 1994

jonathan, giamma, bananne	lived at 65 Ramona
lisa, dv	lived at 67 Ramona
cool, graham, christina	lived at 59 Ramona
luna	did not live on Ramona
Rules of inclusion: List members are residents of the networked apartments on Ramona Avenue, or their significant others (luna).	

In its first phase, the Empire list was primarily devoted to discussion of household activities, such as: laying Ethernet cable; coordinating shopping, bills, dinners, parties; and carpet cleaning. It was a list of roommates and neighbors, trafficked by the details of everyday life from the practicalities of garbage pick-up and apartment openings to the festivities of concerts, raves, dinners, and jokes. Some

members of the Empire list were principals in the Cyborganic business; others worked on Cyborganic as volunteers, contractors, or employees; and some had no involvement with the project. People who moved into apartments on the Ramona LAN were automatically subscribed to the Empire list, no matter their level of involvement. For example, Christina (Table 5.2) was a member of the Empire list and dinner participant while she lived at 59 Ramona, but was not otherwise active in Cyborganic and was taken off the Empire list after she moved off Ramona Avenue. Similarly, people such as Ed and Lukas (Table 5.3 below), were on the list only during the time they lived or worked on Ramona.

Table 5.3 Empire list and sub-lists, April 1995

List Name	Subscribers[6]
59	bagus@organic.com, graham, isbister@leland.stanford.edu
towers	jonathan, cool, eyeneer, lisa
80	sonic, ed
82	jsd, bananne
ramona	59, towers, 80, 82
empire	ramona, alita, giamma, luna, ovid, nick, lukas

Numbers in list names refer to street numbers: for example, 59 went to the residents of 59 Ramona Avenue, 82 to those at 82 Ramona, etc.

Towers refers to the conjoined apartments at 65 and 67 Ramona.

Rules of inclusion: List members are residents of the networked apartments on Ramona Avenue, their significant others, people working onsite on the Cyborganic project, or alumni of the original group on Ramona (i.e., giamma and luna).

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[6] Listed by Cyborganic login except for those subscribed from accounts on other servers who are listed by their full e-mail addresses (now defunct).

Initially, the Empire list was a multi-household list, governed by the domestic logic of friends, housemates, and neighbors, but it grew according to a logic of place. As the business grew, people who did not live on the street began to report for work at 65/67 Ramona. They were added to the Empire mailing list as occupants of the territory, people who might be there to receive packages when you were not, or have coffee, or paper, when you ran out. This is why I say the Empire list grew according to the logic of place, rather than, say, residence, or friendship, though these certainly shaped the list as well.

Table 5.4 Empire list and sub-lists, November 1995

List Name	Subscribers
59	graham, bagus@organic.com, kath
65	mister3d, eyeneer
67	jonathan, tricia, caleb, cool, bryna, jeff
towers	65, 67
80	sonic, ed
82	jsd, bananne
1834	amber, oliver, stuart, geezer
ramona	59, 65, 67, 80, 82
empire	ramona, giamma, luna, 1834
Rules of inclusion: List members are residents of the networked apartments on Ramona Avenue, Cyborganic staff working at 65/67 Ramona (towers), or alumni of the original group on Ramona (i.e., giamma and luna).	

Tables 5.3 and 5.4 show that, as "the Empire" grew, the Empire mailing list grew and spawned sub-lists. Lists were set up so one could e-mail the residents of each apartment separately, a subgroup of apartments (towers, ramona), or everyone on the Ramona LAN (empire). The architecture and naming of these lists articulate the place-based logic by which the Empire list grew. By November 1995, the list and

the Ramona Empire it connected had grown and changed, not only in membership but also in the character of their connection. By this point, six of the eight people on the towers sub-list had moved off Ramona, and only one of Cyborganic's seven full-time employees still lived on the street. Yet, 13 of the 21 Empire list members were residents of Ramona Avenue and the list maintained its neighborhood character, focus on place, and the shared physical network (i.e., the LAN).

As the Cyborganic community beyond Ramona continued to grow, greater numbers of people came to the weekly dinners, making an impact on the neighborhood in terms of traffic, parking, noise, and security. When the Cyborganic business gained momentum, the Empire list became an important channel through which those not directly involved in the business could raise neighborhood and community concerns to those who were. Further, as a place-based list, Empire continued to reflect and exemplify the core mission of Cyborganic, that of "building a home on both sides of the screen," a home just as rooted in place and the face-to-face, as in the forums and interactions online. Though not open to the general Cyborganic community, Empire was clearly a community list of stakeholders in a particular set of resources.

The TND List <tnd@cyborganic.com>

Started in February 1995, the TND list (*tnd@cyborganic.com*) was set up to announce and organize the weekly Thursday Night Dinners. An event specific mailing list, the TND list was also subject to the logic of place in the sense that it

focused on face-to-face gatherings at a particular location. List members lived in the Bay Area[7] and, while the great majority were San Francisco residents, a number also lived "across the Bay" or "down the Peninsula" in Silicon Valley and would make the drive to "the City" to attend TND. This spatial logic was reflected in use of the list and in the replacement of the original TND list with two new lists in October 1995—tnd-sf for the Cyborganic dinners in San Francisco and tnd-nyc for Cyborganic's New York City dinners.

The TND list was hosted on a Cyborganic server throughout its life, and was administered through the business project. Administrative announcements about what the list was for and how to get on or off it came from the Cyborganic staff member responsible for TND, rather than from a community volunteer. Though administered through the business project, the TND list was unmoderated, open to anyone who subscribed, and the majority of posts came from the general community, who neither lived on Ramona, nor worked on the start-up. It was a relatively lightly trafficked mailing list, averaging over its nearly three-year lifespan about three posts a week. Because TNDs were potluck, most list traffic was devoted to soliciting volunteers to cook, clean, or DJ, but there were also: thank-you e-mails, discussions of possible themes and activities, recipes, morning-after commentaries, announcements of items lost and found, links to pictures, and later to TND Dispatches. When TND ran short of volunteers, both Cyborganic staff and active

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[7] There may have been a few exceptions, but in general, those who moved away from the Bay Area left the list.

community members would post to the list encouraging greater participation and making theme suggestions for the dinners.

Because the list's stated focus was TND and geeks take this sort of thing seriously, people where "flamed" (sent harshly worded e-mail) for postings not related to the Thursday dinners. In practice, however, topic boundaries were less absolute. The identity and history of the poster, content and context of the post, all influenced the reception of an off-topic item. List members would post with impunity about local events, such as a friend's band playing or an art opening; local raves (e.g. Friends and Family, ComeUnity); or when they were having a big party. For example, when Organic Online hosted a party in the company's new South-of-Market offices in April 1996, the invitation was sent to the tnd-sf list. In addition, there were occasional off-topic threads, some for amusement, such as one about the "purity test,"[8] and others about local and Internet politics.

Though all posts to a mailing list are implicated in list socialization, there were also meta-posts that took up the matter explicitly. In addition to administrative announcements about the list, these included posts from list members educating others about the norms and values of the subculture. For example, the following thread about junk e-mail (spam) to the TND list clearly illustrates this type of socialization.

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[8] Wikipedia, "Purity Test," http://en.wikipedia.org/wiki/Purity_test, accessed May 1, 2008.

Date: Wed, 12 Jun 1996
To: tnd-sf@cyborganic.net
Subject: Re: Chain letters

At 1:28 PM -0700 6/11/96, Jeffrey Logsdon wrote:
>>Who is sending chain letters on the tnd list? Naughty naughty.

At 5:58 AM -0700 6/12/96, Richard Raucci wrote:
>Yeah, what bad taste! Sometimes I liked it better when you hadda
> use Unix commands to access the Internet!

At 3:05 PM -0700 6/12/96, Matt Brown wrote:
IMO, although I am violating it with this email, you should ignore
any spam-like email. If you are concerned that the list manager won't
deal with it, send them a note (directly, not to the list) asking if they
have dealt with it. Otherwise, that single spam actually translates into
about 6 messages in my mailbox. That is nearly as bad as the original
post.

Fortunately, only a few people replied to the list regarding that chain
letter so this time it wasn't so bad. On some of the lists I am (with 5k+
members), that would have brought down their list server.

:) Just my $0.02. Take it as that.

In his initial posting, Logsdon assumes that because the TND list is only open to

subscribers, the "spammer" must be someone on the list. His comment addresses this

person and is meant to censure their sending of e-mails not related to TND. The first

follow-up to his complaint also seems to address the person sending "chain letters,"

though in a sidelong way. In calling out their "bad taste," Raucci's comment

separates spammers from the in-group, by casting them as technological neophytes,

people who would not have been on the Internet in the old days when "you hadda

use Unix commands." Then, Brown chimes in with a more prescriptive post about

how to respond to "spam-like email." In addition to describing specific steps to take,

he explains why responding this way is more constructive than complaining about

spam on the list itself. Each of these posts serves as an instrument of socialization, not only about sending and responding to spam, but also about keeping posts on-topic, and the importance of being mindful of what you send to other people's in-boxes, particularly where large mailing lists are concerned. The thread thus stands as an example of the way even narrowly specified mailing lists, tend to exceed their instrumental charters and convey a variety of socially meaningful communications.

Though customarily focused on the planning and promotion of TND, when the tensions between the business and community aspects of Cyborganic began to have a negative impact on the weekly dinners at the end of 1996, the situation was discussed on the tnd-sf list. Community member and space bar regular, Jose Kirkland, initiated the conversation in a post with the subject "Putting the 'din' back in TND," excerpted below. She begins by noting the "dominant dissatisfaction with TND" that had grown within the community.

> From: Jose Kirkland <jose@calvin.pitzer.edu>
> Subject: Putting the "din" back in TND...
> To: tnd-sf@cyborganic.com
> Date: Thu, 12 Dec 1996 13:09:00 -0800 (PST)
>
> …I think at this point it would be foolhardy to deny that there is a dominant dissatisfaction with TND and what it is seen as representing around here, that however much it has been loved in the past, and that fondness persists, that people don't like how things are going lately... attendance has been down, spirits have been low or confused, rumours and weird little theories (granted nothing says they're incorrect either ;)) have been flying, and overall there's a grumpy apocalyptic taste of brimstone in the air.

Kirkland then proceeds to invite community members "to share their ideas or suggestions, or visions of what could be."

We've all heard the complaints, the arguments, the conjectures...Now I'd like to hear some solutions.... if anyone is willing to share their ideas or suggestions, or visions of what could be, please spit em out... I'd like to see some thinktank action here …I just think it's about time we stopped complaining and dropping off and did what we can to make this thing, which is ours, what we really want it to be.

Kirkland's post launched the only long discussion on the tnd-sf list and, over the next week, 12 list members wrote responses about the trouble with TND and what could be done to fix it. The discussion prompted a rally of support for TND that contributed to the planning and participation of a number of well-attended dinners in what turned out to be the last three months of the event.

Though the last TND hosted by the Cyborganic business took place on March 27, 1997, the tnd-sf list continued for a few months after. It was used to propose the idea of continuing weekly potluck dinners without the support of the business and to gather e-mail addresses of those interested in participating in the new endeavor. On May 2, 1997, a new mailing list, *dinner@satori.net*, was launched for this purpose and carried on in place of the tnd-sf list.

The Cc List <cc@cyborganic.com>

Besides the Empire and TND lists, Cyborganic also used a community-wide mailing list, the cc list (*cc@cyborganic.com*). Started in 1994, the cc list was re-launched in January 1995 with 33 subscribers, grew to 52 subscribers by March 1995, and 152 subscribers by mid-1996. Though initially used to organize the business project, it became a community list and remained the channel through which to address the whole of Cyborganic's membership. Being on the cc list was

one measure of membership in the Cyborganic community, and getting on the mailing list was one of the first things new people would do. That the cc list became a forum of the community, rather than the business, is reflected in its continuation long after the company's demise in the fall of 1997, with an average of three to four posts a day through 1998 and 1999, and over one hundred subscribers. Though list activity diminished to about two posts a day in 2000, and just over one post a day in 2001, membership held fairly steady, with 85 subscribers in October 2000, falling to 68 at the end of 2002 when the cc list was finally shut down.

The list that gave rise to Cyborganic's community list was, in its initial incarnation, a project list at the address *cafe-list@cyborganic.com*. Launched in September 1994, the café list was not place-based, nor was it open to self-subscription. However, it was self-selected to the extent that it included those who had expressed interest in helping realize the project of creating a Cyborganic café. Initially, list discourse focused on the task of putting together a business plan and discussion of the project vision. There were posts about the café industry, other cybercafés (e.g., the Icon Byte Bar), potential investors, dividing responsibilities for research, specifying technical infrastructure, creating spreadsheets, and the logistics of meeting.

In January 1995, the café list was reincarnated as the Cyborganic Clubhouse mailing list (*cc@cyborganic.com*). Steuer subscribed 33 people to the new list and sent out the following welcome message:

Date: Tue, 17 Jan 1995 06:11:45 -0800
To: Cyborganic Clubhouse Team <cc@cyborganic.com>
From: Jonathan Steuer <jonathan@cyborganic.com>
Subject: Welcome to cc!

Hi folks...

I've taken the liberty of adding all of you to our new Cyborganic
Clubhouse mailing list. The address is <cc@cyborganic.com> -- in
other words, messages sent to the address will go to the entire list,
which currently consists of:

Steve Bahcall eyeneer@cyborganic.com*
Brian Behlendorf <brian@wired.com>
Gianmaria Clerici <gclerici%dvlpyr@us.oracle.com>*
Jennifer Cool <cool@cyborganic.com>*
Abbe Don <abbe@cyborganic.com>
Jon Drukman <jsd@cyborganic.com>*
Anne Francis <bananne@cyborganic.com>*
Charlie Fulton <foultone@mtcc.com>
Peter Getty <seldane@aol.com>
Bagus <bagus@cyborganic.com>*
Justin Hall justin@cyborganic.com
Sonic <sonic@cyborganic.com>*
Alita Holly <alita@cyborganic.com>*
Morgan Holly <mholly@voyagerco.com>
Marjorie Ingall <sassy@phantom.com>
Ovid Jacob <jacob@slacvm.slac.stanford.edu>
Julia Jones <jj@panix.com>
Dan Levy <danlevy@well.com>
Mara <luna@cyborganic.com>
Niels P. Mayer <mayer@eit.com>
Ian McFarland <imf@neo.com>
Tricia McGillis <tricia@cyborganic.com>
Mark Petrakis <spoon@well.sf.ca.us>
Nick Philip <nphilip@netcom.com>
Graham Potter <graham@cyborganic.com>*
Howard Rheingold <hlr@well.com>
Ed Rigaud <ed@cyborganic.com>*
Lisa Seaman <lisa@cyborganic.com>*
Aleen Stein <aleen@applelink.apple.com>
David Steuer <nwdave@echonyc.com>
Ellen Steuer <ellen@cyborganic.com>
Jonathan Steuer <jonathan@cyborganic.com>*
Dave Thau <thau@nwu.edu>

> If you want off (or know someone who wants on...), please send mail
> to the list maintainer, Jenny Cool, at <cc-request@cyborganic.com>.
>
> I'm outta town until 2 Feburary, and offline until 27 January. But
> when I get back, it's time to get this show on the road! So get up for
> the downstroke, 'cuz the Cyborganic Clubhouse is no dream...
>
> Aloha-
>
> -jonathan-

All residents of the Ramona households (asterisked above) were included on this new list, along with family, friends, and colleagues who had expressed interest in the project, or whose aid was being solicited. The e-mail addresses of those subscribed to the list reveal several as experienced with online communities (well.com, echonyc.com), others as computer savvy (wired.com, oracle.com, slac.stanford.edu, netcom.com), as well as the fact that nearly half the subscribers had accounts on the Cyborganic server (cyborganic.com).

The cc list launch coincided with Steuer's decision "to leave *Hotwired* to pursue the vision of Cyborganic that had been stewing for so long."[9] Further, the name change from Cyborganic "café" to "clubhouse" reflects the strategic decision to focus in the short term on creating an online Web presence for Cyborganic, and to use that as a "demo" in the longer-term effort to raise capital for a physical venue. The list was used to circulate plans for the Cyborganic Clubhouse website; for the project over all; and to organize and report back on weekly meetings. The majority of posts to the cc list in its first few months were meeting minutes and other official Cyborganic announcements. There was no discussion on the list during this time, no

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[9] Jonathan Steuer, e-mail to the cc list, January 2, 1996.

spillover of conversation from the meetings. My interpretation is that, as an all-volunteer venture, where everyone had another full-time job, Cyborganic was already tapping its volunteers to the fullest with weekly meetings and project teams. People barely had time to read the agendas and notes posted to the cc list during this period, let alone engage in discussion there.

By the summer of 1995, the cc list had grown to 52 subscribers and project activities were being coordinated within smaller teams that had formed and stabilized during the series of meetings in the spring. After one of the people who had been active on the café-list (Thau) went to work for *Hotwired*, Steuer became concerned about the number of *Wired* and *Hotwired* employees on the cc list, where Cyborganic's business and website plans were openly discussed. It was decided that the cc list should be left as it was for general discussion, and that more sensitive business communication should be quietly moved to another list (rosebud), a sub-set of the cc list comprised of 22 people. The formation of this new list demonstrates Cyborganic's growth on two fronts. First, a core group of active participants (rosebud) were now working on the business project and the period of open enrollment, and calls for participation came to a close. Second, discussion on the cc list had increased sufficiently that cessation of posts about plans for the business project did not result in any noticeable drop in list traffic. Rather, people in the wider Cyborganic community began posting on topics of more general interest and, as they did, transformed the cc list from the project list it had been into a community discussion list.

Topics discussed on the cc list included: (1) political subjects, such as censorship of the Net via software and legislation (e.g., the Communications Decency Act); (2) technology news, opinion, questions, and advice; (3) links to innovative uses of the Internet, interesting or useful websites; (4) announcements of conferences and industry events; and the usual assortment of posts typical of open discussion lists about (5) parties and local events; (6) "classifieds" for housing, jobs, and hand-me down goods[10]; and (7) humor, usually forwarded. Over the course of 1995, traffic on the cc list grew and thoughtful discussions broke out, along side more announcement style posts. For example, in August 1995, the debut of the Internet soap opera *The Spot* inspired a long thread on the idea of Cyborganic folks doing "a *real* online soap opera" of their own, an idea that was realized seven months later in the launch of *Geek Cereal*. The publication of the Unabomber Manifesto in September 1995 was also occasion for many posts and some wide-ranging reflections on technology, but these exchanges did not have the intensity or wide participation of the cc list's later "flame wars." Once confidential business communication was moved to the rosebud list (and later the core list), *cc@cyborganic.com* became an open mailing list. Anyone could e-mail the list administrator to get on it, and could find the information to do so at TND, on the Cyborganic website, or from a friend.

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[10] As on Craigslist, whose founder, Craig Newmark, was subscribed to the cc list.

As the Internet industry grew in San Francisco, and people moved there to work, Cyborganic grew and the cc list saw more subscribers and more postings about jobs and apartments. One draw of the list was the number of industry insiders and knowledgeable geeks who were subscribed, as this interview excerpt indicates:

> Oh, I read about this guy in the trades all the time, and here he is posting an apartment listing, so that's kinda fun uh, um, occasionally you'll have the flame war that comes and pops up on the Cyborganic list. There was one that I was involved in about 2 or 3 months ago, NT versus Unix, that was a lot of fun. (Dave McClure, interview, October 7, 1996)

While most welcomed the cc list as another venue for community, there were some who opted out of the fray, choosing only to receive e-mail about TND (via the TND list). Cyborganic also had an outpost in New York City, and a scattering of members across the country. So, as cc list traffic increased, a decision was made to sort it geographically, while still maintaining an overall community forum. This was done by creating separate geographic sub-lists—one for San Francisco Cyborganics, and one for those in New York. People on each of these regional lists were automatically subscribed to the cc list, but were now supposed to send local postings to the appropriate regional sub-list (*sf@cyborganic.com* or *nyc@cyborganic.com*). Additionally, members in other locations, or those wishing to skip local postings, could subscribe directly to the cc list, without being on a regional sub-list. These changes went in to effect at the end of October 1995 and subscribers were welcomed to the new cc list with an e-mail explaining the reorganization and reiterating the list's purpose and subscription protocols.

At this point, the cc list was still being maintained manually, meaning subscription requests were sent by e-mail to a Cyborganic staff member who then edited a file on the server. Though labor intensive, this process also allowed for some informal screening and initial socialization of people joining the list. There is, however, no record of any request to join a Cyborganic mailing list having been denied. By mid-1996, Cyborganic began using mailing list software (Majordomo) to administer its lists, at which point individuals could freely subscribe or unsubscribe themselves via e-mail to the program.

For many, the cc list was a focal point of their connection to Cyborganic, even if they did not post to it. For instance, when I asked one informant to describe her involvement with Cyborganic during in a typical day, she answered:

> Once I get the family situated, then I get a cup of coffee and do e-mail, check cc list. I look at them as my link to the cyber world. I consider myself *not quite* knowledgeable enough to post but I learn a lot from it. (Breck Sullivan-Carpenter, interview October 16, 1996)

Checking the cc list was part of her morning routine, as it was for many Cyborganics during these years (myself included), but this does not mean the list held the same place or significance for every subscriber. As with most lists, there were "lurkers," subscribers who never (or rarely) posted; and there were also highly active posters, people guaranteed to chime in on almost every discussion. Participation was, however, well distributed, with 223 different people posting at least once—and over two hundred people posting more than that—between January 1, 1995 and July 31, 1996, when list subscription stood at around one hundred and fifty people. Turnover

accounts for the number of unique posters over the 19 month period exceeding the number of list subscribers at any one point in time.

While most traffic consisted of posts that did not generate much discussion, by early 1996 there can be no doubt that the cc list was an open forum for topics beyond the Web industry or those of a bulletin board for local jobs and housing. In March 1996, there was a vigorous and somewhat rancorous debate over the building of a new baseball stadium in San Francisco's China Basin, in which the anti-stadium quip "Fuck sports" provoked many lurkers to speak up in defense of athletics, if not the stadium. On March 28, a forwarded news release about prisoners striking for minimum wage resulted in 29 follow-up posts that day, in which 15 different people presented reasoned, often very informed, arguments for and against the cause; and on such related topics as the prison-industrial complex; growth of prison labor; and the rights to which all human beings, even felons, are entitled. Through such threads, *cc@cyborganic.com* became a list characterized by periodic flame wars that, at times, caused people to unsubscribe and divided the community. Yet, these flame wars also stimulated intense reflection and discussion about what the list was for, what sort of speech and topics were appropriate, whether people should be kicked off the list, and under what circumstances. In this way, flame wars served to define the cc list, and Cyborganic community, by bringing out the community's consensus opposition to kicking even the most reviled person off the list.

Both the intensity of debate and norm of this style of discourse are apparent in the following excerpts from interviews where informants were asked to talk about their experience of the cc list.

> Yeah, I was *real* anxious about posting to the cc, 'cause I've just seen lots of flame wars and, you know, everyone, now that I know them, it's all good natured, but when you're first there, it's like "Oww, ouch." Or, you know, you feel for that person. They're not getting, it's not touching them, but you feel like, "Oh, battered," or whatever. It takes a while to suss that kind of thing out. (Dominic Sagolla, interview, October 17, 1996)

> Generally, I think that, independent thought certainly is encouraged to some extent, flame wars are actually *tolerated*, and even encouraged to some extent. I think that adds a little bit of liveliness—perhaps more than necessary—to the fray. Certainly there is an element of speaking to a public forum and I think there is an expectation of providing some value, or humor or insight, rather than just off the cuff remarks. I think that maybe other people echo my sentiment in that sometimes [name deleted] does get shouted down, other people do get shouted down for not providing anything of value to the list and that, if 50 people are taking the time, or 100 people are taking the time to read your email, you know, you should have something to say, but even that, it depends, on how people perceive the worth of the message. But generally I just think that people *value* that forum for discussion and tend to *think*, hopefully before they put something in there, you know or somebody starts spamming the list or somebody forwards something inappropriately, there is feedback to kind of prevent that from continuing on an ongoing basis. (Dave McClure, interview, October 7, 1996)

In addition to reflecting its quick fire and wide-ranging character, these statements highlight the public performance aspect of the mailing list, and the way informal mechanisms of social control, rather than moderation from any authority, served to discipline participation. The fact that anyone could join the list and post anything to it does not mean there were no rules, only that these were largely unwritten, and

enacted—performed as writing—on the mailing list. Periodic outbreaks of flame wars were a given from early 1996 through the end of 1998, and though less fractious in later years (1999-2003), continued to flare up throughout the life of the cc list.

Cyborganic Gardens Website

The Cyborganic Gardens website was central to both the community and the business start-up. The site was designed and produced by the company principles who formed Cyborganic's Web team: McGillis, Donaldson, and Hess. As Design Director, McGillis created the "look and feel" of the Gardens and did most of the graphics production for the site. As "Gardner-In-Chief," Donaldson was responsible for its editorial voice and most of the copywriting. As Director of Web Production, Hess was responsible for building and maintaining the site (i.e. HTML and cgi coding), and managing the volunteers and staff who contributed to it. Launched in spring 1995, the Cyborganic Gardens website was a key expression and forum of the Cyborganic community. It was actively "gardened" by Cyborganic staff and community members through November 1996, maintained less actively thereafter, and ceased to be accessible at *www.cyborganic.com* around the time the company filed for bankruptcy in October 1997.

Though the site itself was produced through the business, member homepages and creative projects were the primary content featured in Cyborganic Gardens. The goal was to demonstrate the value and power of self-publishing by

supporting and showcasing community members and their work. Cyborganic's

business and community strategies were essentially the same: gather people around

mutual interests and concerns; support expression, the sharing of stories, and many

modalities of communication[11] among them. The business proposition was that

revenues could be generated from hosting this population of users, either through

membership fees, sponsorships, advertising, or some combination thereof. In his

consulting work, Steuer advised corporate clients on how to attract and host such

populations on the Web, identifying five basic strategies as "the five C's"—content,

community, commerce, context, and connectivity. He advised those seeking to create

Web "portals" (i.e., sites that serve as points of entry to the World Wide Web) to

choose one of the five as a primary focus and add elements of the others as

appropriate. This was exactly the strategy taken for Cyborganic's website—a focus

on community and self-publishing with elements of the others incorporated

organically within the framework, and imaginary, of community. Cyborganic

Gardens consisted of four main sections—the Forest, Orchard, Valley, and

Shed—which together articulated this strategy.

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[11]That is, one-to-one, one-to-many, text, graphical, multimedia, online, face-to-face.

Figure 5.7: The Cyborganic Gardens website

The Forest

Member homepages of were hosted in the Forest. The Gardens website launched with 34 members, including: author Howard Rheingold, proto-blogger Justin Hall, Hotwired's "Ask Allison" columnist, Allison Yates, Anon Salon founder Mark "Spoonman" Petrakis, and Telegarden creator Ken Y. Goldberg. Most Ramona Empire residents (10) and a number of *Wired* and *Hotwired* staffers (6) also had Cyborganic homepages when the website went online in the spring of 1995. Within nine months, 86 people had homepages in the Forest.

Figure 5.8: The Forest, Cyborganic Gardens website

To foster browsing and new connections among members, the top-level

Forest page (above) featured quotes from and links to five different homepages each

time it was reloaded, with graphical links to "see five more," and text links to "new members" and "most recently updated" homepages. Those searching, rather than browsing—two basic modes of navigating hypermedia—were offered a "boring list of just names."

The Forest was also home to Cyborganic's carving tree where website visitors could leave short messages (less than 140 characters) for one another.

Figure 5.9: Input form for carving the Cyborganic tree

As the screenshot above indicates, users could to leave a name that would link to any URL entered under "Homepage", along with an e-mail address that would that would

display as a "mailto" link. In terms of the social design of this feature, none of these fields were required. Authors might choose to identify themselves and link to detailed personal information, or might broadcast messages anonymously or pseudonymously (often identifying themselves to a particular in-group). Later, a picnic table was added as another environmentally friendly surface for virtual graffiti. Like physical world graffiti, these communications were public, highly idiosyncratic, and usually anonymous. The imagery of carving served as a metonymic connection to hands that "carve" trees, picnic tables, and—in less rustic contexts—write on desks and restroom walls.

The Orchard

Business websites were hosted in the Orchard, the area for "commerce without commercialism," which, as the website explained, meant "buyer and seller are real people to one another."

> On the Net, we have a chance to reinvent commerce, a chance we can't afford to miss. Newcomers to the Internet toss up billboards and toss around metaphors, subsuming the brave new medium under tired old ideas. Cyborganic will resist doing things the easy way. We will present online commerce as a new kind of interaction, where buyer and seller are real people to one another, not numbers, where advertising means information. (Cyborganic website, Orchard page)

The Orchard remained small, hosting a total of seven sites, for approximately two years. These were websites for Calliope, a CD-ROM company; Maus Haus, an information design firm; Erg8, makers of handcrafted furniture; Yoga Journal, America's preeminent yoga magazine; New Dog Music, a sound and video

production house; Abbe Don Interactive, Inc.; and Neil Singer, M.D., primary care physician for a number of Cyborganics. Some of these websites were built for a fee by Cyborganic's production team, others were the professional websites of community members who created and maintained their own online presence. The production and hosting of these Orchard businesses provided a small, but steady stream of revenue to the Cyborganic start-up.
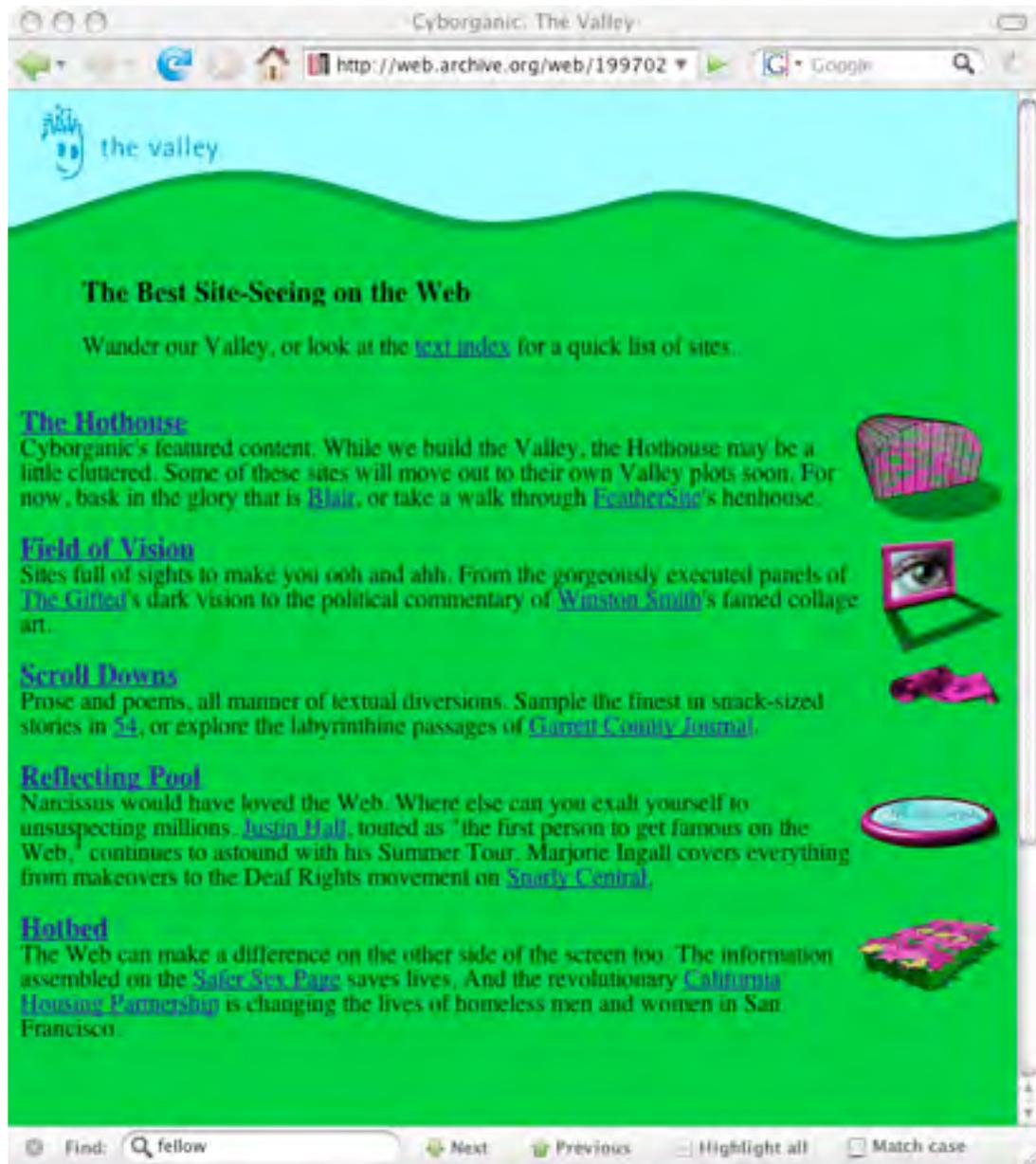
http://web.archive.org/web/199702 ▼   G • Google

🏛 the valley

The Best Site-Seeing on the Web

Wander our Valley, or look at the text index for a quick list of sites.

The Hothouse
Cyborganic's featured content. While we build the Valley, the Hothouse may be a little cluttered. Some of these sites will move out to their own Valley plots soon. For now, bask in the glory that is Blair, or take a walk through FeatherSite's henhouse.

Field of Vision
Sites full of sights to make you ooh and ahh. From the gorgeously executed panels of The Gifted's dark vision to the political commentary of Winston Smith's famed collage art.

Scroll Downs
Prose and poems, all manner of textual diversions. Sample the finest in snack-sized stories in 54, or explore the labyrinthine passages of Garrett County Journal.

Reflecting Pool
Narcissus would have loved the Web. Where else can you exalt yourself to unsuspecting millions. Justin Hall, touted as "the first person to get famous on the Web," continues to astound with his Summer Tour. Marjorie Ingall covers everything from makeovers to the Deaf Rights movement on Snarly Central.

Hotbed
The Web can make a difference on the other side of the screen too. The information assembled on the Safer Sex Page saves lives. And the revolutionary California Housing Partnership is changing the lives of homeless men and women in San Francisco.

Find: 🔍 fellow   ⬇ Next   ⬆ Previous   Highlight all   ☐ Match case

Figure 5.10: The Valley, Cyborganic Gardens website

The Valley

Billed as "the Best Site-Seeing on the Web," the Valley was a showcase for the creative work of Cyborganic community members. It was composed of five "distinct content areas," each for a different type or genre of work.

(1) The *Hothouse* highlighted the most frequently updated or popular websites and included the Web'zine Blaire, the Eyeneer Music Archives, and The Wedge, an online adventure game.

(2) *Field of Vision* presented graphical art and included the collage work of Winston Smith, who did many album covers for the 1980s punk band Dead Kennedys; and *The Gifted*, a graphic novel released serially on the Web by Cyborganic community member Stephan Rice.

(3) *Scroll Downs* focused on writing, "works of fiction and nonfiction created by Cyborganic wordsmiths." It featured the "ezines" *Anonymous* and *Garret County Journal*; Nick Monfort's[12] literary journal, *Plaintext*; *Cron Job*, a geek humor column; as well as more experimental forms, such as the "prose sushi" of *54*, a series of 54-word stories, and the hypertext art and poetry of a publication called *Present*.

(4) *Reflecting Pool* was what would today be called the Garden's "blogroll," and was described as the "personal observations, political rants, and narcissistic

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[12] Cyborganic member Nick Montfort later co-edited *The New Media Reader* (Wardrip-Fruin and Montfort 2003), and wrote a book on interactive fiction (Montfort 2005).

navel-gazing" "of Cyborganic's most self-motivated, self-aware, and self-conscious Web creators." It featured some of the earliest online diaries before these were called "blogs," most notably, *Links from the Underground*, started in 1994 by Justin Hall who is widely recognized as a "founding father of personal blogging."[13] Hall became a Cyborganic during his internship at *Wired* in the summer of 1994. His site was part of the Gardens when the website launched and was hosted on Cyborganic's servers for over a decade. The *Reflecting Pool* also featured Howard Rheingold's *Brainstorms* website, *Rebecca's Revenge* (later *Read Me*) the "daily zine" of technology journalist Rebecca Eisenberg, and the Web diaries of other Cyborganics, such as *Dom.net,* kept by Dominic Sagolla.

(5) The *Hotbed* section of the Valley hosted socially and politically active organizations on the Web. It was home to John Troyer's *The Safer Sex Page*; the *Belongings* website for the California Housing Partnership, a organization for the homeless; and *South to the Future*, a collective of professional and amateur "writers, artists, activists, academics, programmers, retailers, [and] designers." *The Safer Sex Page*, an archive of educational material on the prevention of HIV/AIDS, had long been a resource for the Internet community and was accessed by more than 35,000 people weekly when it was transplanted to Cyborganic Gardens in January 1996 where it was hosted

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[13] Jeffrey Rosen, "Your Blog or Mine?," the *New York Time Magazine*, December 19, 2004.

on donated "bytes and bandwidth" for over five years. One of eighteen

plaintiffs named in the American Civil Liberties suit against the

Communications Decency Act of 1996, "Troyer, dba The Safer Sex Page,"[14]

was committed to the belief that people, particularly minors, should be able

to access the website's potentially life-saving information anonymously.

The selection of websites and personal homepages featured in the Valley's five

content areas were rotated regularly by Cyborganic's Gardner-In-Chief "in order to

exhibit new and promising work from the community." Though never implemented,

there were plans to sell "sponsorship opportunities in the Gardens" and the

marketing materials produced to solicit advertisers focused specifically on the self-

published works in the Valley, and on *Geek Cereal*, a group blog produced by the

Cyborganic business, but written by community members[15].

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[14] Electronic Privacy Information Center (EPIC), "Plantiffs in New Censorship Lawsuit," http://epic.org/free_speech/censorship/lawsuit/plaintiffs.html, accessed March 23, 2008.

[15] Cyborganic Gardens brochure, 1996.

Figure 5.11: Geek Cereal's BackTalk page

Geek Cereal

In spring 1996, Cyborganic staff began work on *Geek Cereal*, an online

group diary that offered website visitors "a day-by-day look into the lives of 7 real-

life Bay Area Web industry workers." Donaldson led production and editorial

development on the project, assembling the group of "real life" geek diarists, and the

team of 11 who did the design, graphics, editorial, data entry and programming for

the site. A Perl programmer was hired to build the backend system for publishing

and maintaining the Web serial.

> I was hired…in the summer of 1996. My original role was to develop
> a publishing system for a project called "Geek Cereal", which was
> Cyborganic's attempt to enter the content provider arena and have a
> place to sell banner ads. The idea of Geek Cereal was to create an
> online group journal, sort of an online version of MTV's Real World,
> only more real. (Hise 2001[16])

As Hise says, *Geek Cereal* was part of the company's plan to sell advertising on

Cyborganic Gardens. Though brochures and rate cards for potential advertisers were

printed, and the serial ran "You Ad Here" notices on its main pages, Cyborganic

never found someone to do advertising sales on commission and no sponsorships

were ever sold.

Geek Cereal went online on March 30, 1996 with seven geek diarists. They

were: Caleb, Cyborganic's Gardner-in-Chief; Bryna, Cyborganic's office manager;

Allison of *Hotwired's* "Ask Allison;" Rocky, a Santa Cruz geek who worked at

Organic Online; Jeremy, a research scientist at Apple; Rebecca, a technology

journalist; and Scooter a freelance writer and Web designer. All were members of

Cyborganic's face-to-face and online community, had space bar logins, and attended

TNDs. Each day, one of them would post a "serving" of *Geek Cereal* to the website

and three or more others would respond with "side orders." Jeremy reported and

reflected on the Geek's posts in a weekly "Sunday Brunch" column. A "BackTalk"

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[16] Steev Hise, "Cyborganic," Everything2, http://everything2.com/?node=cyborganic,
accessed March 27, 2008.

feature enabled visitors to post their own responses to the website. None of the geeks were paid to write for the serial that ran daily for about seven months with its final post dated October 24, 1996.

The Shed

As one might expect, the *Shed* in Cyborganic Gardens housed tools and other

resources for Cyborganic community members.

Figure 5.12: The Shed, Cyborganic Gardens website

The Shed served as the member support area where site visitors could learn more about Cyborganic, become members, or sign up for one of the mailing lists; and where members could access their Cyborganic accounts along with a variety of online publishing resources. The weekly Dispatches from Thursday Night Dinner, as well as the biweekly Almanac with news of the Gardens website, were also housed in the *Shed*. Though these were both published through Cyborganic's business project, the HTML tutorials, tracking, and publishing utilities included in the Toolbox section of the *Shed* were created and contributed by community volunteers.

Place, Networked Media, Community: Cyborganic Innovations and Synergies

For more than three years, Cyborganic's business project, face-to-face, and online communities co-existed symbiotically in the manner described. In representing the people, parts, and practices that constituted Cyborganic, I have worked to show the inseparability of the business and community projects, and their mutually reinforcing articulation online and onground. The depiction presented serves the first of my monograph's objectives (the milieu of innovation argument), and also the second (examining the relations of entrepreneurial and communitarian), in two ways. First, it details a number of innovative forms and uses of networked media within Cyborganic that have—with the rise of blogging, websites like Friendster, Facebook, and MySpace, and a host of other many-to-many media collectively known as "Web 2.0"—become predominant. Second, it illustrates the vital roles place, culture, and dense social ties of community play in milieus of

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innovation by showing the multiple synergies of Cyborganic's online and face-to-face, entrepreneurial and communitarian dimensions.

In its focus on community and self-publishing, Cyborganic prefigured many of the norms and forms of media production and consumption that are dominant on the Internet today. The idea of bringing online community to the Web was not original to Cyborganic but an extension of earlier Net practices and culture[17]. While Cyborganic was certainly one of the first, other Web community companies were launched around the same time as Cyborganic Gardens in April 1995. GeoCities, started at the end of 1994, began offering free homepages in mid-1995; *theglobe.com*, a community portal known for chat, went online April 1, 1995; and Tripod, a free and paid Web hosting service aimed at college students, opened the same year. Each of these companies called their members and website an "online community," and each offered the same basic services—server space for hosting homepages, a set of Web editing tools[18] (e.g. theglobe.com's "Website Builder," Tripod's ""Home Page Builder), themed content areas (e.g. "neighborhoods" on GeoCities, "Cities, Districts, and Interest Groups" on *theglobe.com*), chat rooms and other discussion forums. Like The Cyborganic Corporation, these companies saw selling advertising on user-generated content and hosting homepages under the

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[17] For example, John Coate's "Cyberspace Innkeeping: Building Online Community," first published on the WELL in 1992, outlines principles for those in "the relationship business" of hosting communities online. (Coate 1992)

[18] These are Web-based tools that enable people to make Web pages without knowing HTML, and preview and publish them directly from the Web browser.

rubric of community as a viable business. GeoCities also had a "Community Leader

Program" that deputized volunteers as hosts and moderators. Unlike Cyborganic,

these companies all raised significant investor capital and grew rapidly in the first

wave of the dot-com boom. GeoCities went public in August 1998 and was

purchased by Yahoo! in 1999 for $3.57 billion; theglobe.com raised $27.9 million

with its initial public offering in November 1998 and had the largest first day gain in

share price to that date; and Tripod sold to Lycos in February 1998 for a reported

$58 million in stock. (Brown 1999)

Success raising investment, however, was not the only difference between

Cyborganic's business and these companies. Cyborganic was distinct in its

allegiance to the idea that the most meaningful online communities are local and

include face-to-face forums. Its place-centric model of community and plans to open

a "bricks and mortar"[19] café set Cyborganic apart from other online community

companies. Though Cyborganic's business plan included expanding beyond San

Francisco, the idea was to grow by replicating the local, online/offline hybrid in

other cities. There was, in fact, a New York City satellite of Cyborganic, led by

Steuer's brother David, which held its own Thursday dinners and published a group

blog, *The Couch*, using the same back-end publishing system as *Geek Cereal*.

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[19] A phrase popularized in the vernacular of the dot-com boom to distinguish
physical storefronts and locations from virtual ones.

Despite sharing technical infrastructure, however, the two place-centered

communities were largely independent of one another socially.[20]

Cyborganic also differed from other community-based Web start-ups—and

prefigured the contemporary Web—in its approach to user-generated content. The

large, funded start-ups were aimed at people who were new to the Internet. They

focused on marketing free homepages to a large population of users in return for

including banner and pop-up advertising. Cyborganic was pitched at the technology-

savvy, but also provided free homepage hosting to its early members, and to project

volunteers after fees were instituted. However, Cyborganic's view of user-generated

content went beyond homepages. The Cyborganic Gardens website, the main

product, or prototype, of the business vision other than TND, centered on member

self-publishing and featured member work as its primary content in the Valley

section of the site. Already noted is the example of Hall's *Links from the

Underground*, one of the earliest blogs on the Web with a large audience. Beyond

showcasing the homepages of members who posted daily, Cyborganic created an

editorial section, the Reflecting Pool, for Web diaries as a distinct genre before these

came to be called blogs. In addition to promoting people who were already blogging,

Cyborganic encouraged the self-publishing projects of all its members, and worked

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[20] The Cyborganic business in San Francisco hosted Web and e-mail services for the New York group, but the New York Cyborganics were not active on the cc list or space bar, though some had homepages in the Forest. Due to this separation and the fact that I did not undertake fieldwork among the New York Cyborganics, little mention of the group is made in this work.

to aggregate and curate their artistic work and collections (e.g. Eyeneer). These were supported with publishing tools, utilities, such as a staging server, and, for those the Gardner deemed worthy, prominent placement in Cyborganic Gardens.

While the idea that self-publishing is "what the Web was made for"[21] coincided with Cyborganic's communitarian project, in terms of innovation, the business project took the idea a step further when it launched the group blog *Geek Cereal* with plans to sell advertising on its pages. The Spot, a website on which fictional characters kept online journals, launched nine months before *Geek Cereal* and ran paid advertising and product placement within the journal entries. Yet, with fictional characters played by models and entries authored by a writing staff, The Spot was not a blog. *Geek Cereal*, however, was a blog, written in the diary genre by the featured geeks. It was also among the first Web publications posited on the belief that blogs were, or soon would be, viable advertising-supported content. In 1995 advertisers were still largely unconvinced that sites like GeoCites, let alone blogs, had any potential to carry advertising and there were, as yet, no companies, such as DoubleClick, specialized in serving Internet ads. Today, after the boom and bust of the dot-com era, dozens of companies (e.g. Google's AdSense, Adgenda, Technorati, Gawker Media, and Federated Media) are in the business of making a market matching blogs and other user-generated content with advertisers. As one company website describes:

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[21] Cyborganic brochure, 1996.

> With a readership in excess of 20 million monthly uniques, Gawker
> Media marries a traditional publishing model and an all-star editorial
> masthead with the audience engagement borne out of the candor,
> frequency and hyper-linking of the blog format.[22]

The growth of this market bears out Cyborganic's anticipation of blogging as a popular Web practice and genre that would be able to attract advertisers once critical mass was attained.

Cyborganic Gardens also featured a number of other innovations that prefigured the type of instant, bite-sized, messaging common today among users of social networking sites. The Carving Tree and Picnic Table where visitors could post short messages in the Forest presaged such Web 2.0 practices as writing on someone's "Wall" in Facebook, or "micro-blogging" on Twitter[23]. Some of these social networking sites, such as Twitter, afford anonymity just as Cyborganic's carvings did; others require authentication. Space bar's Cadet Detector was another innovation of this type. Displaying availability in the chat across media on one's homepage not only served the phatic functions already discussed within the space bar community. It also marked one's association with that community, and identity as a geek familiar with command line interfaces, to people who might be outside both publics and accessing the Internet for the first time with the advent of the Web. All these are asynchronous, many-to-many forms of computer-mediated-

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[22] Gawker Media, "Advertising," http://advertising.gawker.com/, accessed April 3, 2008.

[23] http://twitter.com/

communication that involve short messages, personal in voice, but published in a public or semi-public forum. Variations of this type of hybrid personal-public messaging have become ubiquitous today.

Archetypically used for status or location updates, "presence layer" would be a technical term for this form of communication that has proliferated with the rise of the mobile Internet and social networking. Cyborganic innovated, not only in the technical implementation of the Carving Tree, Picnic Table, and Cadet Detector, but also in the communications practices and social contexts in which they were deployed. To illustrate the distinction between underlying technologies and the practices they support, I note that while detecting a user's status in the chat and publishing it to the Web was innovative, space bar itself ran on chat server software (vrave) that was based on very old Unix-CB code. Yet, among a community of Internet geeks who spent all day at their computers and kept a window to space bar open, the old software supported a form of synchronous communication, "live" chat, found today in several many-to-many variants—from Internet Relay Chat (IRC) to Web chatrooms—as well as the one-to-one messaging popularized by AOL Instant Messenger (AIM). This one-to-one mode of live chat has become dominant, in fact generic (IM), with protocols that enable most chat clients, whether AOL's or another maker's, to interconnect. Yet, the older text-only, many-to-many chats continue and their use carries a certain cachet with geeks. One indicator of the contemporary vitality of this practice: there are several IRC clients for Apple's recently released iPhone. Space bar itself was also used as a presence layer when people idled in it and

used the "nicknames" feature to set customized status and away messages. In the social context of Cyborganic, even such pre-Web forms as the mailing list were sometimes used the way instant messaging and Web services like Twitter are used today. For example, a post to Cyborganic's San Francisco list seeking near real time information—"quick, what's the name of the gas station on the corner of 16th and Guerrero?"—that was answered within 12 minutes.[24]

The first part of this analysis drew out particular forms and practices of networked social media to highlight the innovation of Cyborganic's business project and community. Having established earlier (a) a many-stranded (socio-cultural, historical, regional) genealogy showing San Francisco's Internet industry in the 1990s as scion and satellite of Silicon Valley's milieu of innovation; and (b) Cyborganic's kinship and inheritance in these lines; I turn now to examine what the Cyborganic case suggests about the role of place, community, and culture in generating and sustaining milieus of innovation. Or, to come at it from another angle, having looked at *what* made Cyborganic innovative, I turn to ask *how* that innovation was produced. What specific characteristics of the Cyborganic whole supported it, and what, if anything, do these suggest more generally about the productivity of producer/users and their communities of practice? Generalizing from a situated, ethnographic study, of course, is best done with a good measure of circumspection, noting, for example, that one is speaking of connections, correlations, and factors,

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[24] Marjorie Ingall, e-mail to cc list, December 4, 1998.

rather than universal criteria and causes. Thus, let me specify at the outset the scope of argument. Cyborganic shared a host of characteristics with earlier communities of producer/users within which networked personal computing developed. I see these as clustering around three key terms—place, community, and culture—which, translated into emic ("native") argot, might also be rendered as "face-to-face," "synergy," and "collective intelligence" (learning or knowledge), though all these terms are applied in emic and etic discourses that, to complicate the matter, overlap in significant ways.

Place: "Flesh and Blood Back Channel to Community"

The significance of place has been an underlying theme throughout this work from (a) its epistemological basis in Soja's "ontological nexus of space-time-being" (1989, 25); (b) the "community of technical scholars" Terman forged in Silicon Valley; (c) the fairs, hobbyist clubs, and local businesses that ushered in personal computing; and, finally, (d) Cyborganic's location as a place-based community, within a network of other enterprises and communities in San Francisco's SOMA district in the 1990s. Despite the complex manipulations of time and space that information technologies have increasingly afforded in the last century, physical co-location in *particular places* remains a significant factor in technical innovation and economic productivity. Terman recognized the value of bringing government (military), university, and commercial research and development together around the Stanford campus where he grew up. Steuer recognized the value of locating his

Cyborganic vision in a particular place and brought it together around the group household on Ramona Avenue where he lived. In both cases place was not incidental, but a purposive premise and strategy. What this "great man" angle of exposition obscures, of course, is that, so far as production and projects are concerned, places are made by the jobs and people one finds there. While space and our bodies require that we be somewhere, mere physicality does not seem to keep us in the places we are born. This is one of the most salient features of 20th century human geography. For this reason, I stress *co-location* (of people, jobs, communities) in particular places, rather than say, *geography* or *space*.

The co-location of its members in San Francisco's adjoining Mission and SOMA districts was certainly one of the most salient features of Cyborganic. Without diminishing Steuer's role, I see the group household on Ramona as the basic unit from which Cyborganic grew—co-located individuals not individuals per se. The affordances and constraints of space are evident everywhere in Cyborganic from its growth in the neighborhood around Ramona Avenue; its proximity to SOMA arts, organizations, and communities; to its location in San Francisco's northeast quadrant at the confluence of the City's main traffic arteries (U.S. 101, Interstates 80 and 280), which gave easy access to companies in the City, East Bay and Silicon Valley. This situation was no accident. It mirrors the university and industry connections linking San Francisco and the East Bay to Silicon Valley. At the time he moved to San Francisco, Steuer was a graduate student at Stanford already spending most of his free time at shows, events, and parties with friends in the City. In addition to

affordable rents, the Ramona neighborhood was ideal for commuting both across the

Bay and "down the Peninsula." Its proximity to all the area freeways saved travel

time, a factor that weighed in his and his roommates choice to live in that part of the
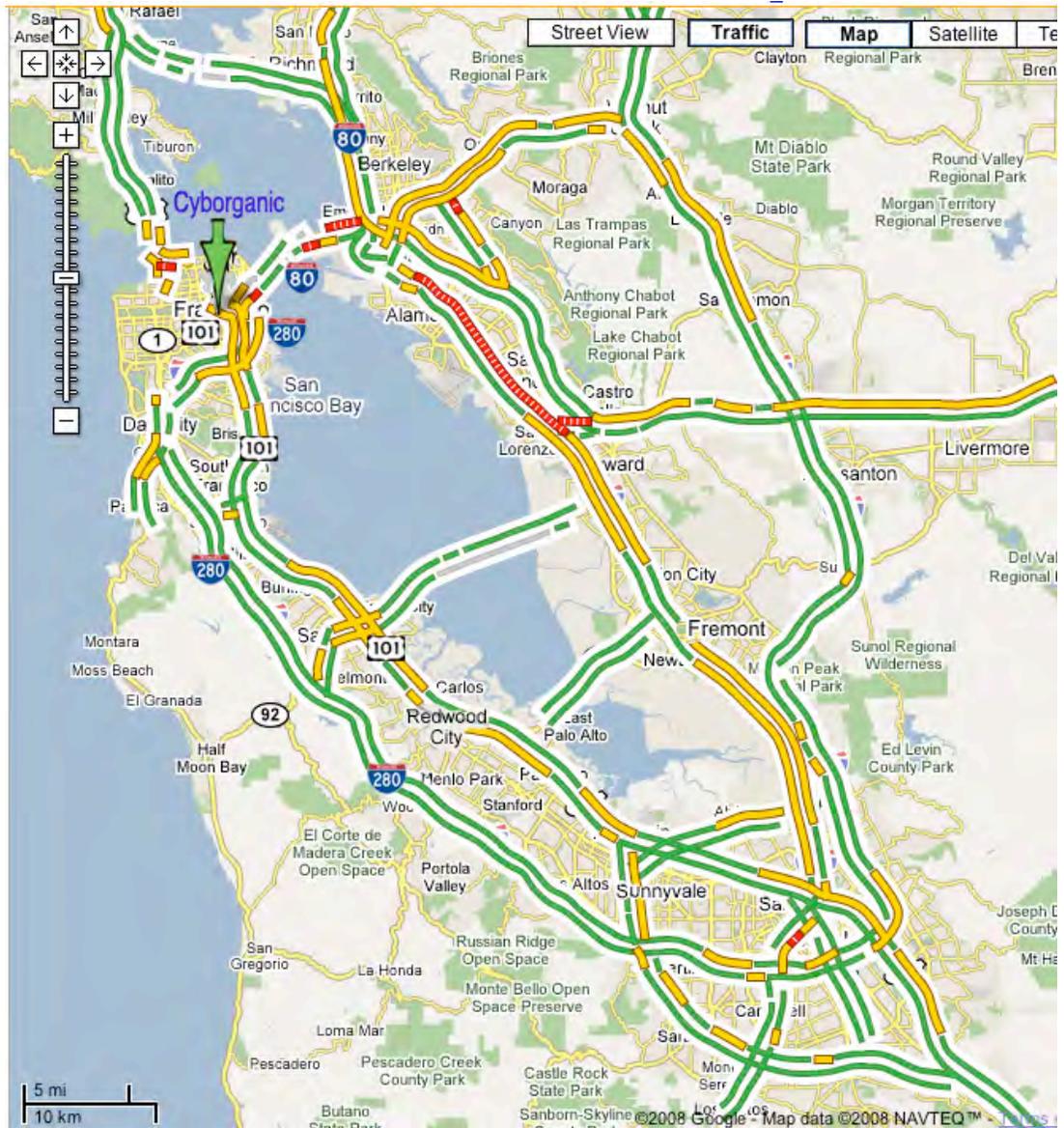
City.

Figure 5.13: The San Francisco Bay Area
(Image courtesy of Google Maps)

Cyborganic's virtual domains and capillary connections to the Internet through the LAN were crucial to its productivity and reach but, like freeways, wires are subject to a logic of place. The Little Garden (TLG) cooperative, through which Cyborganic procured full-time network connectivity in 1993, served a regional network. The T-1 Internet line TLG leased from UUNET was split among geek networks in Santa Cruz, Silicon Valley, San Francisco, the East Bay, and scattered outposts up the Coast. Physicality also circumscribed the Ramona LAN that was connected with 10Base-T UTP Ethernet, CAT5 cables. With these standard components, the maximum distance between network nodes is limited to 100 meters (328 feet), or as the U.S. technical literature puts it, a little less than length of a football field. No computer on the Ramona LAN could be more than 328 feet from a server, hub, or switch (devices used to relay data over a network). Thus, TLG's San Francisco members, who split the line coming up from the UUNET connection in Palo Alto[25], did not form a local area network together, but built more local LANs that "hung off" TLG's San Francisco gateway. Cyborganic connected to the gateway (i.e. the Internet) through a residential telephone line used in an innovative way—to make a permanent phone call from one computer in the City to another. In this way, the physical limits of affordable technology and bandwidth shaped the local community, limiting its growth around Ramona Avenue. Though Abbe Don's

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[25] Initially, there was 56k frame relay line between UUNET in Palo Alto and TLG's San Francisco gateway. After usage grew, a separate T-1 line was added from UUNET in San Francisco to TLG's gateway in the City.

apartment above Dolores Park was connected to the Ramona LAN via an ISDN line (which can be 200-500 meters in length), this would have been a prohibitively costly option for most in the community who lived outside the 328-foot radii of the Ramona server and Dolores Street hub.

What is it about co-location in place that contributed to Cyborganic's project for business and community? The phrase "face-to-face" that appears so many times in this manuscript and is evoked by the Cyborganic logo of two stylized smiling faces (below) holds the key. This image of sociality captures all the elemental affordances that face-to-face interaction holds for human social animals—shaking hands, building trust, seeing eye-to-eye, sharing food, bodies, and daily lives.

Figure 5.14: The Cyborganic logo

Trust forms the basis for cooperative action whether that action be organizing a rave or launching a start-up company with no budget. Breaking bread, partying, and "hooking up"—to speak in a most colloquial way—were not trivial to the value

Cyborganic produced.[26] Face-to-face interaction was foundational and Cyborganic grew around the group household that was the first outpost of the "Ramona Empire" and spread through TNDs and the inter-office cliques that ate lunch and often dinner together in SOMA. Meeting in-person in the course of everyday life—at home, work, and play—serves to enrich dialog and discourse. This kind of intimate social activity also works to build trust, not only between pairs of people, but among groups of people. In this way, the communication and interaction that co-location in place affords was the basis for community and culture, two other factors I will discuss as fostering Cyborganic's innovation.

Computer-mediated-communication was instrumental to Cyborganic's collaborations and relationships, but *especially* so among those who *also* interacted in-person in everyday life at home, work, and third-places, such as TND. For example, though the space bar chat could and did support national and international exchanges, it was a place-centric online forum. This was all the more evident in the way space bar regulars, whether local or remote, tended to move closer in physical space and daily life as they became more closely connected to others in the chat. As community member Ryan Powers recounted:

> My friends Mark, Brian and Fixer, all live together now because of space bar and the community. That's how they met up and found each other and found a place to live. Another friend, Heidi, was living in Idaho. It was cold, her job was not working out, and she was totally

[26] "Trivial" has most favored word status among geeks and is typically used in negative understatement, for example, a problem that is extremely difficult or insoluble, will be described as "nontrivial" (Cf. Raymond 1996).

isolated. She came across space bar and she found her way here. She wound up moving in with me, in my house, because I had a room open. It was all because of the community. (Davidson 1996)

This was precisely the insight at the core of Cyborganic's vision and practice—face-to-face and online interactions are mutually sustaining and can be used together to build uniquely robust communities.

Cyborganic will establish a real space for members to meet and interact—*a flesh-and-blood back-channel*—to its community-building efforts in cyberspace. (Cyborganic Garden website, "Our Big Plan")

This line from "Our Big Plan," one of the manifestos on Cyborganic's website, conceives of "real space" as a "flesh-and-blood back-channel" for interaction "in cyberspace." This is a thoroughly infomated imaginary of place. Here "back-channel" implies all the informal, unofficial, communications and interactions around a main channel, typically metacommunications (e.g., phatic functions). In telecommunications, back-channels are usually lower-speed transmissions flowing in a direction opposite the main channel. Thus, the irony of a flesh-and-blood back-channel is that face-to-face offers a far richer spectrum of communication. All sorts of informal, sub- and preconscious transmissions flow across it in full duplex (i.e., in both directions). The blend of "flesh-and-blood" connection in "real space" with online interaction proved extremely powerful and generative. Cyborganic created trust building face-to-face forums and occasions and combined these with the flexibility, ease, lower cost, and greater reach of networked computer-mediated-communication. This combination resulted in a community co-located in places online and onground, and in the hyper-experience that results when these two are

deeply intertwined. The Cyborganic case illustrates that even in the telecommunications age, place continues to be important to communities of producer/users and forms the basis of their communion.

Community: Frame, Synergy, and Glue

My account of Cyborganic illustrates the exchange that occurred across the group's online and face-to-face, entrepreneurial and communitarian imaginaries, practices, and other instantiations. "Synergy" is the emic term used to describe the cooperative action of two or more actants (nerves, muscles, drugs), and the cybernetic overtones of the word are apt. In addition to coordinating action through positive and negative feedback, Cyborganic connected discrete fields in a way I find useful to think of as *cross-pollination*. By this I mean individuals were connected through multi-stranded ties in overlapping social networks that extended through all domains of life; and exchanges traveled across boundaries by a variety of conventional, opportunistic, wind-blown, and instrumental means. As complex and messy as all this interconnected exchange sounds, laymen and experts have a common word for it: community. Terman brought military, university, and business interests together in a "community of scholars," Turner described the WELL as a network forum "within which information exchange, community building, and economic activity took place simultaneously" (2005:491). In these, as in the Cyborganic case, the imaginary of community and practices it informed are the

frame and glue that bind. Community catalyzes and supports synergy, as a matrix of cross-pollination, but also as thickening agent, fixative, or gel.

In Cyborganic, multi-stranded ties and overlapping networks linked individuals in a field of relationships extending from personal intimacy to public reputation. These included kinship, school ties, hometown and regional networks, co-workers, courtship and sexuality, and membership in a variety of occupational, cultural/ethnic (e.g. Jewish), and sub-cultural (e.g. raver, geek) identities, practices, and organizations. Though marriages and births far exceed them in number as of this writing, during its most active period (1994-1997), siblings were the most commonly occurring kin unit in the Cyborganic community. For example, the Steuer siblings (Jonathan, David, and Ellen), the Nelsons (Jonathan and Mathew), and the Haigs (Dan and Bagus) were all central actors and key nodes of connection in the Cyborganic project. All attended the same public high school, Nicolet, in a suburb of Milwaukee, Wisconsin. While in school, those in the same age cohort collaborated on a number of small, moneymaking ventures with classmates who later contributed to Cyborganic. Steve Bahcall, who lived in the group household on Ramona from 1993-1998, was part of the group, as was Knitting Factory founder, Michael Dorf, and his brother Josh. The Knitting Factory, an alternative music venue in New York that grew into a recording label and concert promotion business, was to have partnered with Steuer and Nelson in the CHANCE business plan that preceded Cyborganic. Though that plan did not bear fruit as such, regular exchanges of work, knowledge, and opportunities took place between the Knitting Factory and

Cyborganic for many years on the basis of this earlier association. The high school cohort served as a model for collaborating with friends on subsequent projects. It also connected Cyborganic in networks of others from Wisconsin, mostly through the University of Wisconsin system, with the result that approximately 15 percent of those with homepages in the Forest hailed from the state. Other university networks operated in the same way, with small groups of friends who had been to college or graduate school together forming the basis for sub-groups, or cliques, within the community.

These sorts of kin and age-cohort ties were the vectors of Cyborganic's growth. They cut across domestic and public spheres, linking individuals, families, firms and intensifying with time. For example, half-sisters Leslie Rossman and Halley Silver were both vital to Organic Online during its start-up phase. Rossman was the company's publicist; Halley and Dan Haig did all its Web production. Soon after Matthew Nelson moved to San Francisco and partnered with his brother in Organic Online, he and Rossman began dating and later married. Another example, after entering Mills, a women's college in Oakland, California, Ellen Steuer began bringing classmates to TNDs. Several became regulars and formed a clique of their own within the community, The Lotus Eaters, that linked Cyborganic to the East Bay, and to a group of women who were 5-10 years younger than most Cyborganic members. Given that men far out number women at most technology industry events,

the fact that TNDs were attended by almost as many women as men[27] was an important factor in their success, to which this Mills connection contributed. Like the group from Nicolet High School, most Cyborganics brought friends, relatives, and co-workers into the community, just as Steuer recruited me to the project from among his college friends. In this context, multi-stranded connections fostered enriched communication and high-trust. Hiring friends, relatives, and personal contacts was considered practical, rather than nepotistic, and, in many contexts, ideal. In the early days, when there was a shortage of people with HTML and other Web production skills, there was tremendous advantage in hiring people you knew could learn, and with whom you had the rapport to work in a fledgling field where hours were long and projects accomplished primarily through peer-to-peer interaction. The flow went both ways with some learning about Cyborganic in their workplaces and joining the community, and others entering the Web industry through their connection to the community.

In addition to overlapping, multi-stranded social ties, Cyborganic's community and business projects showed several other kinds of cross-pollination. The mixing of leisure and labor, arts and engineering, production and consumption of networked media—all worked to catalyze innovation, promote cross-linkage, and build trust. TND exemplified blending across all these boundaries and was created

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[27] I do not have TND attendance breakdowns of by sex. Cyborganic's core membership was roughly 65% men, 35% women, but sex ratios at TND were slightly more balanced, based on my fieldnotes and on the TND Dispatches.

and sustained with that mission in mind for that was the vision for the Cyborganic Café. The Great American Music Hall, the monthly raves Friends and Family and ComeUnity, Survival Research Labs shows, and the Burning Man Festival were other recreational forums where Cyborganics interacted. All encompassed a range of technologically intensive arts (techno-music, large outdoor audio systems, visual projections) and served as venues where friends and co-workers socialized.

As those who pioneered personal computing in the 1970s and 80s, and those who work on open source software today, the Cyborganics who worked in the developing Web publishing industry were both producers and consumers of the products and services they made. Such situations tend to be highly productive, not only because individuals have genuine passion for their work, but also because of the beneficial feedback loops that result. All these connections were framed by the imaginary of community at the root of Cyborganic and were held together, not only through the instrumentalities of the project, but also by the sharing of everyday life within a local community. Though communities of producer/users like Cyborganic existed long before the Web, networked telecommunication facilitated the fast, flexible transfer of contacts, tools, and practices from one domain to another, and made it easy to maintain a wide range of "weak-tie" associations (Granovetter 1973). The new media rendered informal sociality more powerful. Through space bar, Cyborganics could be with friends, in a place of their own, while at work. Through the cc list, they could learn about local events and issues, while keeping abreast of the latest news and gossip in their community, the Web industry, and the world.

Culture: Socialization and Collective Knowledge Creation

Of all the cross-boundary exchanges within this local community, the

transmission of knowledge and skills was one of the most significant. It was central

to the community's productivity and innovation, but also, I would argue, to the value

and pleasure of being a Cyborganic. As the last chapter emphasized, the

development of Web publishing required new production processes, new ways of

organizing the labor of design, engineering, and business teams. During the upswing

of investment in Web businesses, there was urgent demand for features and

functionalities that had not before been implemented on a large scale. These

included, for example, websites of hundreds of pages that would continue to grow on

daily basis, Web-based authentication systems that could support hundreds of

thousands of users, and a new advertising-supported genre called a "portal." In

addition to these engineering challenges, design and content production teams had to

establish and disseminate a great deal of micro-knowledge, such things as legal file

names, directory structures, version control, or knowing to change an image from

index color to RGB format before resizing it. In this context, having co-workers who

were also Cyborganic members facilitated communication in figuring out how to do

work for which there were as yet no established procedures; flexibility when things

did not go according to plan; and morale during launch periods when teams worked

over 50 hours per week. Cyborganics worked at all the businesses diagramed in

Figure 4.1 (and Appendix D), making up most of the Hotwired, CNET, and Organic

Online launch teams and significant portions of the founding staff at Third Age, Electric Minds, and Critical Path.

Even those who worked from home, or in offices with no other Cyborganics had the benefits of this sort of knowledge sharing. TND was an important hub for this sort of exchange. There was always someone using the Silicon Graphics (SGI) Indy[28] in the office during TND, and usually a group looking on, or someone hovering in the hallway, awaiting his chance to sit at the computer. Around this workstation, many were introduced to VRML (a format for displaying three-dimensional graphics on the Web) and other multimedia technologies that were new at the time (e.g., CU-SeeMe, a Web conferencing client). Discovery and learning took place at many levels of technical experience and areas of interest. Some learned to make their first HTML pages at TND and were encouraged to try their new skills out in a TND Dispatch; others learned Perl, VRML modeling, and other Web programming and scripting skills through their exposure to them at TND. The reach of this collaborative learning and exchange also extended to Cyborganic's online forums, as the discussions of space bar and the cc list illustrate. Community members often logged into the chat to get help with technical problems, or in setting up systems—a task for which real time, interactive support is especially useful. In addition to these forums, being a Cyborganic meant always having a ready supply of

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[28] The SGI Indy (introduced in 1993) was a workstation with far greater graphics capacity than PCs of the time, and the first computer to include a video camera.

beta-testers, people to look over the websites you were building and send "bug reports" describing errors or problems, and other feedback.

The knowledge sharing that took place around the production of new media also took place around its consumption and Cyborganic's role in demonstrating what people could do with networked media was significant in both regards. New Web genres and features (e.g., blogs, Carving Tree, Cadet Detector) and new ways of using older genres (mailing lists, chat) are the most visible places to observe this education of consumption, but it took place in countless exchanges, most so subtle and spontaneous one might not even notice them as learning. For instance, when I interviewed Holly Kreuter[29] who got her first computer through Cyborganic, I expected to hear about the skills she had gained through membership in the community. Yet the most revealing thing she said was, "I taught the Burning Man organization how to bcc[30]." Being able to "bcc," that is, to send copies of e-mail to recipients without their names or e-mails appearing in the headers, is not something one ordinarily thinks of as having to learn. Learning to use the bcc field is barely a technical matter. This is precisely my point because there is, nonetheless, much to learn—everything from knowing that the feature exists, to the occasions, and dangers of its use in particular contexts. This is what Kreuter meant by saying she had taught her co-workers at Burning Man to use the feature, not that she had shown them how

[29] Holly Kreuter, interview, October 4, 2005.

[30] Bcc stands for "blind carbon copy" a rather atavistic acronym in the context of e-mail, but nonetheless, the term that is currently in use for this function.

to find the command in a menu. As noted earlier for the development of personal computing, many inventions require complementary inventions before they can be usefully deployed (Rosenberg 1994:143) and *all* technologies require a cultural milieu to support their meaningful application. Through its grounding in place, multiple synergies, and community, Cyborganic provided such support to its members, creating a milieu in which personal Web publishing and other applications of the new media could be imagined, practiced, and understood.