Some Aspects of California Cyberpunk

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Abstract: This paper explores the rise and fall of Cyberpunk influences in California's Silicon Valley and San Francisco Bay area circa 1988–93, in prevalent technologies, industry, by artists and in enthusiastic magazines thriving there. Attentive to the Cyberpunk novelists, an animating spirituality of the time also looks to Timothy Leary and Marshall McLuhan.

1. Introduction

Cyberpunk is a literary genre. Yet to some of us in a certain time and place, twenty-five or thirty years ago in Silicon Valley, northern California, it is most recalled as a moment as full of characteristic constellations of sights and sounds and tropes and topics and toys and tools and conversations, sometimes consciously looking to Cyberpunk fiction for its validation.

Simultaneity of experience and representations is a hallmark of Postmodernism (William Gibson in the Economist, 4 December 2003: "The future is already here—it's just not evenly distributed".) (Mortensen 2018). To pull in a metaphor from media design, a popular late-1980s style of magazine illustration and videos called Blendo made use of video, still photography, animation and hand drawing, for digital compositing tools allowed their coordination; this might also serve to represent the eclectic style and content of the lifestyle Cyberpunk moment, its contradictory polished clarity and evocative ambiguities.

2. The Cyberpunk Moment

In his sixth INTERZONE column "Cyberpunk in the 1990s", Bruce Sterling recalled "Cyberpunk", before it acquired its handy label and its sinister rep, was a generous, open-handed effort, very street-level and anarchic, with a do-it-yourself attitude, an ethos it shared with garage- band 70s punk music" (Sterling 1998). The Cyberpunk moment incorporated some Punk cynicism, some Hippie psychedelia, and multiple workshops of digital media tools, low-end and high-end, garage tech and university or government labs. What follows is an overview of some art, some tech, and some Cyberpunk journalism that nourished, excited and inspired us at that time and place.

In *Cyberpunk and Visual Culture* (2018), Graham Murphy and Lars Schmeink build on Frederic Jameson's assertion that Cyberpunk was not only "the supreme literary expression . . . of late capitalism itself" to designate it as late capitalism's supreme visual expression (Murphy and Schmeink 2018). After a period of purposeful urban Punk grimness in the 1970s and into the 1980s, the end of the decade saw a technocratic sunniness in the Cyberpunk constellation of cultural phenomena out of Silicon Valley and the San Francisco Bay area. Cyberpunk as lifestyle, and constellation of exciting possibilities, blossomed in the late 1980s and early 1990s, a time of optimism (despite the 1987 US stock market "correction") and money flowing around Silicon Valley. San Francisco money was multiplied through investors on Palo Alto's Sand Hill Road.

Aspects of California lifestyle Cyberpunk include a PostModernist eclecticism in style and content, beyond the dystopian fictions; the desktop computer seen as a tool of personal and political liberation, and creative medium; technology as where the action is, its innovations the driver of nearly all culture. Despite industry contractions (in videogames in 1985, in multimedia in 1990), there was optimism, and there was money around, with established companies expanding and others starting up. Less optimistic were Dennis Hayes' nonfiction *Behind the Silicon Curtain: The Seductions of Work in a Lonely Era* (1989), which exposed the inequities, human and environmental costs of the Valley's boom, while a neo-Luddite critic of the zeitgeist was put forth by Mark Slouka, *War of the Worlds: Cyberspace and the High-Tech Assault on Reality* (1995).

Despite the limitations of squealing 2400 baud modems, we were all Cyberpunks then.

3. Artists with Computers

While Cyberpunk science fiction was being written, its accoutrements were being carried into the public consciousness by games, education, and especially artists. Enthusiastic books on cyberculture recognize roboticists Survival Research Laboratories and Chico McMurtie, body-modifier Stelarc, innovators in well-equipped garages or laboratories (Dery 1996). Perhaps there are no exact boundaries between cyberculture and cyberpunk. Yet one might first recognize how the games industry and the boom and bust of the mid-1980s developed and dispersed (i.e., from Atari to Apple and Electronic Arts) a lot of ad hoc practitioners that might better be called Cyberpunk. The launch of the Apple Macintosh in 1984, packaged with 800K disks of its software MacPaint, its 72 dots per inch aesthetic of visible pixel was loosed upon the world. A video image was translated into a mysterious, mediated black-pepper image, and this aesthetic flowered in Michael Green's *Zen and the Art of the Macintosh* (Green 1986). This author first created instructional graphics 1984–1985 on a Sony SMC-70, then in 1986 on a PC using Lumena and a Radio Shack 3000 with EGA card. The Amiga had a good interface to video cassette recorders and rudimentary video editing capabilities; San Francisco artist Eleanor Kent used it to create rug-weaving templates.[1] MTV, still primarily music videos, even had a short-lived, dense montage-magazine in 1989 called Buzz, which featured short portentous narrations by Timothy Leary and William S. Burroughs. In two works on CD-ROM for Windows and Macintosh, published by Ion of Los Angeles, CA, San Francisco audio artists The Residents designed an interactive album Gingerbread Man, with nine original songs and an interactive narrative with grotesques in 3D graphic environment. "The Cyber Rave Experience HEADCANDY", a CD-ROM with five original musical works by Brian Eno, provided prismatic glasses to enjoy the "ever-changing kaleidoscope of shapes and colors".

Cyberculture theorists, such as Donna J. Haraway and Allucquere Roseanne Stone were notable in academia. In the visual and hypertextual arts, Cyberpunk was perhaps more feminist than the overall cyberculture. The role of female computer-enabled artists, most on desktop PCs, Macs and Amigas, and the organizations in which they flourished, are underappreciated in the creation of Cyberpunk culture.[2] Named from the Greek concept of "exploding mass from which the universe emerged", YLEM[3] was an organization put together by intelligent, educated mid-life women to bring artists and scientist-engineers together in conversation, in the manner of the nineteenth-century Chautauqua assemblies. Artist Trudy Myrrh Reagan of Palo Alto, a 1950s Stanford graduate married to a SLAC (Stanford Linear Accelerator) researcher, was the driving force, accompanied by Amiga-enabled weaver Eleanor Kent and mutimedia artist Beverly Reiser. Exploratorium curator Larry Shaw hosted

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[1]　Apple, including my electronic user documentation group, gave much attention to new tools and networking research taking place at the MIT Media Lab. (Brand 1987) enthusiastically promoted the story of Nicholas Negroponte's innovative laboratory. But science fiction comics writer Link Yaco worked at the Media Lab in the 1980s and said in private conversation to this author that many of its demos of software (not yet functional) to corporate funders—including Apple—were purely illusory, "smoke and mirrors".

[2]　One book that began their belated appreciation was (Flanagan and Booth 2002). (Malloy 2003) was another.

[3]　http://www.ylem.org. Accessed on 5 May 2018.

presentations and exhibitions of tech work, usually created on small desktop computers, such as the Macintosh, Amiga, or PC, and the organization published a bimonthly newsletter. Its 1991 directory listed 262 paid members, mostly in California but including the rest of the United States, Canada and Japan.[4] Hypertext and multimedia CD-ROMs, as well as other forms of interactivity, desktop video and animation, computer-aided performance, fractals, robotics and scientific imagery were all presented at its forums and newsletter. A 1991 YLEM excursion to NASA Ames Research Center were given a demonstration by Scott Fisher of his telepresence research.

On the east coast of the US, the Philadelphia-based Small Computers in the Arts Network (SCAN 1991) began in 1980. Its 1991 Conference at the University of the Arts in Philadelphia had presentations on computers in music, VR, digital photography, desktop publishing and educational computer labs. Its Robotics panel included presentations on motion tracking, outdoor art installation, computer-aided manufacturing (CAM), and Tim Anderson of Massachusetts Institute of Technology's experiments with robots creating paintings (as if the demand for paintings so outstrips supply.)

Cyberpunk as a literary genre had been discussed and argued—forged and tempered—in specialized SF zines like *Science Fiction Eye*, though I only became aware of it when I began to work at Apple in 1987, for those members of my department who were not fanboys and aficionados were, like the Administrative Assistant, published science fiction writers; I was given Bruce Sterling's *Mirrorshades: The Cyberpunk Anthology* as beach reading on my first vacation. Apple's simple app (or "stack") builder HyperCard (1987) was loosely inspired by Ted Nelson's vision since the 1960s of a global, networked hypermedia "Xanadu".[5] Linked documents, with a metaphor of navigation through a network, engaged artists, poets, fiction and non-fiction writers, excited about creative and pedagogical uses of that network.

Virtual Reality was the three-dimensional realization of that possible network. Just preceding the Cyberpunk moment, the October 1987 issue of Scientific American magazine (Peled 1987) "The next revolution in computers" predicted social transformation through increased power, networks and advanced interface devices for handwriting recognition, eye trackers, voice communication and a wired glove manipulating an avatar hand upon the screen with evident dexterity, pictured on the cover. In 1988 Jaron Lanier, principal in VPL Research, demonstrated his Virtual Reality system, with Eyephones and Data Glove, at the ACM SIGGRAPH Conference, the special interest group in graphics of the Association of Computing Machinery. It featured an art show as well. Lanier delivered an influential demonstration of virtual reality was delivered at SIGGRAPH 1998. The first panel of its 1989 conference in Boston, chaired by Coco Conn of Homer and Associates, included Lanier, Margaret Minsky of University of North Carolina and MIT Media Lab, Scott Fisher of NASA Ames Research Center and Allison Druin of Tell Tale Technologies (Beach 1989). The SIGGRAPH 1990 conference featured a Special Session: Hip, Hype and Hope—The Three Faces of Virtual Worlds that began "Virtual world systems are the focus of the media, grist for the TV mill, and everyone's pick as the big idea of the '90s . . . Is virtual worlds technology really that important?" (Beach 1990) Soon Brenda Laurel, Theatre PhD with Atari, Apple, NASA Ames Research Lab and then Paul Allen's Interval Research on her vita, created a resonant virtual environment "Placeholder" for the Banff Art Centre in Canada. Char Davies, at Toronto 3D software developer SoftImage, created immersive abstract environments. Virtual reality was a great interest of the greater Cyberpunk community, as a realization of the state of personal fusion with networked machines predicted in science fiction only a short time before.

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4   YLEM Artists Using Science and Technology (1991). This author exhibited HyperCard fiction kiosk "Hucklefine" at one 1990 YLEM gathering at the Palace of Fine Arts, San Francisco and performed HyperCard-aided performance "Christopher Cumulonimbus" there in 1992, contributed several newsletter articles and graphics, and served on YLEM Advisory Board.

5   (Nelson 1987). Apocryphal corporate lore says that when HyperCard inventor Bill Atkinson asked Apple CEO John Sculley to include HyperCard with each Macintosh computer sold, he agreed in anticipation that the increased demand for storage memory would stimulate the sale of Apple hard disks.

Artists had long been intrigued by programmable systems, like the "Telematic" work of Roy Ascott in the UK or Sonia Sheridan's work in Chicago. The Inter-Society for the Electronic Arts (ISEA) grew out of the First International Symposium on Electronic Art (FISEA) held in Utrecht, Holland. Subsequent symposia were held in Goningen, Holland; in Sydney, Australia, then Minneapolis, MN. The fourth, in 1993, at the Minneapolis College of Art and Design, where board member Roman Verostko, inventor of a computerized abstract drawing generator, attracted more desktop computer-using American artists. Hirano Saburo of Japan demonstrated "Nervous Nest" installation of synthesizers, sensors, loudspeakers and computer running agents reactive to movement or ambient sound, creating an audio environment reminiscent of woodland insects. Judith Kerman demonstrated hypertext poetry in Eastgate Systems' Storyspace, while and Anita J. Stoner created a multimedia poem structured upon the metaphor of a pinball game.[6]

4. *MONDO 2000* Shapes Perception

Perhaps the most authoritative, or well-funded and therefore big, glossy, worldly and ubiquitous, was MONDO 2000. That its animating traits diffused into the wider culture testifies to its success. I will talk about them in context of a scene, events and creative conversations and cultural creations, largely in northern California. The entire corpus of *MONDO* and its predecessors High Frontiers and Reality Hackers (as well as friendly rival *bOING bOING*) deserves a much closer reading than this author will give them here. Its entire corpus should be unpacked as time capsules of memes, technologies and hardware or software products, the hippest musics, and quirky individuals, I shall ignore most tech articles and music coverage, to note its neo-psychedelic spirit, and its dialogues between old Leary and Cyberpunk novelists.

There were many small zines and papers in late 1970s/early 1980s Punk era San Francisco, including *Waterdrinkers*, *Nancy*, *Revolutionary Wanker*, and *Search and Destroy*. The publishers of the latter began REseach Publications, glossier and more professionally designed, with issues featuring Burroughs and Ballard. The publishing project of editors R.U. Sirius (Ken Goffman) and St. Jude (Jude Milhon), and "Domineditrix" publisher Queen Mu (Allison Kennedy) began in 1986 as the oversized post-Punk tabloid *High Frontiers*, then was incorporated into a second publication, the glossier *Reality Hackers*. Here we will review the contents of one exemplary, and pivotal, issue.

Issue #7 of *Reality Hackers*, still cheery, optimistic, eclectic and drug-friendly, bore the new name MONDO 2000. This was a sophisticated magazine for an in-crowd, in the tradition of the *New Yorker* and *SPY* magazine, but out of the San Francisco/Berkeley/Silicon Valley metropolis. The first thing noticeable about examination of *MONDO* #7 is its impressive weight, 160 glossy pages, color covers but black and white text, photos and graphics within. Yet this is the watershed issue, the moment when Cyberpunk is at its most inclusive, embracing garage-tech and psychedelic advocates.

The cover of *MONDO 2000* Fall #7 (1989; again, really Reality Hackers #7) lists "Cyberpunks, Todd Rundgren (pictured, looking at an earlier Reality Hackers issue), Tim Leary, William Gibson, Max Headroom, Virusgate, Future Media". Inside front cover says CYBERPUNK Issue, featuring Rudy Rucker, Vernor Vinge, Gibson, Bruce Sterling and John Shirley. The cover logo done on the Mac II with Electronic Arts' Studio 8 by Brummbär, formerly of Germany and adept on the Amiga 2000 as well, each letter in the name its own iconic representation. The "M" is urban neon, the "O" is the planetary globe, "N" is a lubricious devil's horn encircled by a halo, "D" is digital circuitry, and the last "O" is the Ouroboros snake biting its own tail.

There is a sparkle to the glossy magazine, like the airbrush gleams on the leather bodysuit and mirrorshades worn by Cherry Poptart. She's Larry Welz's big-eyed shapely blonde hero of adventures published by Last Gasp and now, in *MONDO*, friend of Ellie Dee in Cyberland, a new comic cyberpunkess. One peruses the cheery clamor of the marketplace, small garage tech as mail order

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[6] From informational handouts distributed at FISEA '93.

products. In the exuberance of a Renaissance Faire, the Homebrew Computer Club or Jim Warren's annual West Coast Computer Fair there proceed numerous ads for UFO Detector, ELF Generator, Multi-Wave Oscillator "for direct stimulation of any part of the body with the high frequency high voltage Tesla Coil output", an Orgone Energy Blanket from Super Science of Dayton, and a catalog of books from Borderland Sciences. One is reminded of the Star Wars cantina, many planets' species shoulder to shoulder, as the magazine commits to be "the leading edge in hyperculture . . . the latest in human/technological interactive mutational forms as they happen" (Sirius 1989, p. 11).

"Quark of the Decade" by Timothy Leary begins with the back-scratching assertion "On my screen, Bill Gibson is the MVPP (Most Valuable Performing Philosopher) of the decade as a prelude to "High Tech High Life: William Gibson and Timothy Leary in Conversation" they talk fondly about Burroughs, Pynchon (whose LSD use Leary notes), Sterling, and the characters in Gibson's Neuromancer. Leary asks if Gibson would describe cyberspace as the matrix of all the hallucinations; Gibson replies "Yeah, it's a consensual hallucination that these people have created. It's like, with this equipment, you can agree to share the same hallucinations. In effect, they're creating a world. It's not really a place, it's not really space. It's notional space". (Leary 1970, p. 61) Rudy Rucker is interviewed, followed by "Rudy Rucker on What Is Cyberpunk", where he praises Punk as fast and dense, Cyber (mathematics) progressing from Infinity's quantum mechanics and LSD to Information, driven by computers into a time of fast, dense, info-rich Cyberpunk SF. (p. 78.) Vernor Vinge (p. 114), and John Shirley (p. 88) are interviewed, and Bruce Sterling tells Jude Milhon, "What Shirley said about writing—science fiction especially—is that it's a mirror you can edit". (p. 100). In a thoughtful "PARTING SHOT: Have We Missed the Revolution?" Lee Felsenstein, organizer of the Community Memory Project, an early computer network in Berkeley ponders. "Let's develop a little punk computing, folks!" (p. 153). This dialectic, of technology as media of community or class-defining commodity, persists to this day.

Two years later, in MONDO #4 (Sirius 1992), Larry McCaffrey interviews Kathy Acker, Durk Pearson and Sandy Shaw, Life Extension advocates, talk about neurotransmitters, aphrodisiacs and Beta Carotene. In *MONDO* #5, Larry McCaffery and Duncan Bock talk with Mark Leyner (a sort of pop-punk style analogous to bouncy New Wave rock music, also out of New York), absurd connections of surrealism, a dense and funny stream often peppered with product names and celebrity tropes (Leyner 1990, 1995). "Maybe I'm the first Cyberpunk writer who's not a science fiction writer". (McCaffrey and Bock 1991, p. 49) Issue #6 has a review of Beyond Cyberpunk HyperCard stack by Gareth Branwyn, Mark Frauenfelder and Peter Sugarman, noting its contributors Bruce Sterling, Richard Kadrey and others. In *MONDO* #13, Rudy Rucker contributes "15 Tech Notes Towards a Cyberpunk Novel", (Rucker 1994, p. 52) while Douglas Cooper hopes to return to "proto-hypertext" novel Hopscotch by Julio Cortazar for inspiration for new literary forms. Bruce Sterling cynically reviews (Sterling 1994) Arthur Kroker's *Data Trash: The Theory of the Virtual Class*, a political scientist's optimistic description of exactly the kind of over-educated, plugged-in *MONDO* reader.

Another Cyberpunk organ of the time—still publishing in online form[7] is *bOING bOING* "Mutating Simian Brains Since 1988", out of Colorado, then Los Angeles. Black and white, desktop published, enlivened by editor Mark Frauenfelder's cartoon graphics. Comics were reviewed, as were zines. Books reviewed (Frauenfelder 1991, pp. 36–42) included the nonfiction *Cyberpunk: Outlaws and Hackers on the Computer Frontier* by Katie Hafner and John Markoff. Rudy Rucker books *Transreal!* and *All the Visions* are reviewed, as are zines and comic books. bOING bOING Issue 9 features Rucker and Bruce Sterling, and is dedicated to recently deceased MAD publisher William Gaines; there was an appreciation of humorist Roger Price in #7 (Frauenfelder 1991). There is in issue #9 a tame (OK, lame) but affectionate parody "Mondo Mondo" with "R.U. Delerious". Might not an appropriate label for Cyberpunk humor be "Jest Propulsion Laboratory" . . . ? *bOING bOING* published a nascent genre of cyberpulp fiction by Paul Di Filippo, Gareth Branwyn and others, and the magazines' mix of

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7   https://boingboing.net. Accessed on 5 May 2018.

provocative, alarming science and political information, and tomfoolery echoed nineteenth-century old west California, the era of Mark Twain, Bret Harte and Ambrose Bierce. Warren Hinckle's *War News*, a short-lived San Francisco tabloid published during the Gulf War in 1991, had similar heated rhetoric and snide asides sparkling in its journalism.

5. *Cigarette Boy* and the Limits of Cyberpunk

All of this artistic ferment circled around and interpenetrated the writings. If Gibson's foundational trilogy comprises Cyberpunk's *Huckleberry Finn* then *Cigarette Boy* (Darick Chamberlin's Site for Cigarette Boy 2018) by Darick (1991) is its *Finnegans Wake*. I was immediately reminded of the Language Poets active in the Bay Area the decade before . . . but Chamberlin's is machine language. It spatters out a programming code or technical transmission bursts, including printer instructions, bracketed and entered as if by a nerd Burroughs or Ballard. The book is printed in all caps, a sternly horizontal monospaced font, words often separated by colons. Its colons suggest coding syntax, its brackets recall formatting tags inserted in SML or HTML to shape the document. Its punctuation, repetitive use of colons like a punch press, is fatiguing, breaking its sentences into baby steps.

The book is like the essential operating manual for a piece of equipment or complicated software suite. The cover of *Cigarette Boy*, designed by the author, bears a high-contrast black and white image of an astronaut-like high-altitude test pilot in flight suit and aviator sunglasses, framed in black and yellow warning stripes atop faint technical drawings in the background. The flyboy's glove graces the back cover. The book is spiral bound with a black plastic spiral spine, like a convenient documentation for a product's end users, and published in 1000 copies. Like the self-erasing poem "Agrippa (A Book of the Dead)" by William Gibson, illuminated by Dennis Ashbaugh and published on encrypted diskette in 1992,[8] *Cigarette Boy* is a well-designed fetishization of a book; the cyberpunk narrative as the jewel-encrusted tortoise on the floor the aesthete Jean des Esseintes' library in Joris-Karl Huysmans' 1884 *Against Nature* (Huysmans 1969).

There are shiny words, references more buried than Mark Leyner's,[9] but they bubble amid data seemingly disorganized, like dropped or randomized files. In the 1970s Laurence Miller, guitarist-songwriter in Michigan band Sproton Layer and a middle-period version of Destroy All Monsters, published psychedelic poetry reminiscent of Chamberlin, in a self-published zine called *EMPOOL* (Miller and Yaco 1976, 1978). Chamberlin's is a linear paper book as syntactically ambitious as any of its pre-World Wide Web era of hypertext literature.

> [INTERCUT EXTRACT CODED AS "B103": START PRINT OF B103: "HERE IN THE BIOMA HUSH FIELDS OF THE MERCURIAL DUSTER, NOTE THE ZOLO NOON RIGGERS VIAT VOTARIES OF THE ASTIN GETH: UPGRADE FUTURES ON THE 65-ELEVENTIES: STRICT SENTRIES: THICK STATIONS: GOLD DIODA SONDES AT LEAST 50% REDUNDANT: FANATIC: EGYPTIC: THAT'S PROTONILECODA . . . " STOP ON CALL VIAT STOP/STOP]: NOW "START": DEREPRODUUX LUX "D" ON A GO RAVE OF GODELLA AUTOMATICA: SHOOT "GODELLA GEDANKEN": SHOOT 'ADENINE': 'CYTOSINE': 'GUANINE': 'THYMINE': ADD: 'INFRANINE': 'ZOLONINE': 'NOVASINE': [CUE SHOOTS CONTROLS: TRIPLE HELIX CONTROLS CRUSHED VIA THE EXPEDITION FRACAS: THE SO-CALLED "INFRACAS"]. [10]

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8 Gibson, William, http://www.williamgibsonbooks.com/source/agrippa.asp. The poem, running on a 1992 Macintosh from its $3\frac{1}{2}$" disk, is at https://www.youtube.com/watch?v=41kZovcyHrU. Accessed on 15 July 2018.

9 "And you put a very flammable substance down the front of my trousers and I tried to represent words with frantic gestures & your relatives guessed Under the Volcano, The Carpetbaggers, Black Macho and the Myth of the Superwoman, naked and Fiery Forms, No Time for Sergeants, and The Three Faces of Eve". "Bedtime Story for My Wife" (Leyner 1995).

10 (Darick 1991) "presented as a proposal to The Mackert Corporation", <Rogue/Drogue>, edition of 1000 copies, © 1991 Darick Chamberlin. Excerpt of p. 16.

It as if James Joyce were now an assembler at Apple's manufacturing plant in Cork, Ireland. Gareth Branwyn praises *Cigarette Boy*'s pseudo-AI search results, "a horrific mass of jargon, ephemera, and frustratingly tiny fragments of useful information". what Cocteau called his own earlier experiments "machines for the generation of meaning". Interviewed by Branwyn, Chamberlin cited inspiration in being "daily barraged by bureaucratic forms, unintelligible receipts, obscure techtalk and other exotic language ecologies that we don't understand" (Branwyn 1992). Perhaps we have evolved in the past quarter century in a *Cigarette Boy*-beckoned post-meaning. Artist-theorist Hito Steyerl has written appreciatively of "Spamsoc" (a coinage like the "Ingsoc" of Orwell's 1984), the online broken neo-English spawn of, in Hal Foster's description, "bots and avatars, translation programs and heartache scams" (Hal 2018).

Into the 1990s artists worked on low-end virtual worlds, and *Garage Virtual Reality: The Affordable Way to Explore Virtual Worlds* claimed to be "Perfect for PC, Macintosh, a & Amiga Users!" (Linda 1994). Yet the decline of hegemonic Cyberpunk might be marked by three phenomena: the failure to fully address VR and sexuality in "Lawnmower Man"; attention by mass (read: mainstream, square and unhip) press; and by the misguided efforts at relevancy by Punk rocker Billy Idol. By the mid-1990s, Cyberpunk in-this-world seemed tired, spent, passé.

If the 1990s were to be less sexist, more inclusive—Brenda Laurel guided a girl-empowering games company Purple Moon—then its visionary movies should have reflected that ideal. While effective demonstrations of future human-machine interfaces appeared in "Johnny Mnemonic" (1995, based on a Gibson story), Brett Leonard's problematic "Lawnmower Man" (1991) was a high-water mark of Hollywood Cyberpunk cinema, a memorable visualization of virtual reality (and especially its teledildonic trope), yet where philosophical imagination came to its cramped end. Set somewhere in Silicon Valley, it featured a memorable Frankenstein's Monster of a villain, and visualized the concept of teledildonics (then a hotly debated topic on the WELL, the Whole Earth 'Lectronic Link) (Dery 1996) immersive virtual sex to the movie-going public. In as sexist story turn, a vibrant, sex-positive woman's mind is destroyed by the intensity of virtual sexual experience with Jobe, the mentally challenged lawn care worker enhanced by a researcher's guided virtual reality sessions. In *Electronic Eros: Bodies and Desire in the Postindustrial Age* (1996), Claudia Springer laments Jobe's exaggerated and violent hyper-masculinity, contextualized by Mark Dery's observation in *MONDO* #5 that "Man-machine miscegenation—robo-copulation, by any other name—may seem a seductive alternative to the vile body, locus of a postmodern power struggle involving AIDS, abortion rights, fetal tissue, genetic engineering, and nanotechnology" (Dery 1991). Rather than the miserable "Lawnmower Man 2: Beyond Cyberspace" how many other viewers would have rather relished sequels about the woman's continued adventures, erotic and otherwise, after her transcendental/carnal virtual knowledge? Lamentably, Brett Leonard missed his opportunity to visualize techno-feminist experience as a realm of progress and fulfillment.

Mass media took a dim but intrigued view of Cyberpunk, older and more conservative neighbors wondering how these new kids were getting all the action and buzz. In a 1991 Newsweek story on Cyberpunk, reviewer Michael Rogers is amazed how *MONDO's*, "first three issues roamed across cyber-lifestyle, with articles that ranged from artificial sex via computer to how to legally purchase drugs that make you smarter". A sidebar glossary for Brave New Words defines Cyberspace, Virtual Reality, Teledildonics, Hackers, Crackers and Smart Drugs". Paul Saffo of the Institute for the Future in Menlo Park predicted its effect would be felt decades later by teenagers who become engineers who encounter it now. "By 2000, magazines will be obsolete. We'll be the last magazine". asserts Sirius, while Mu is proud nearly half its readership (unlike the preponderantly male tech industry) are women (Rogers 1991). Traditionally, recognition in the mainstream TIME magazine was a signal that a fad or cultural strain was pretty much over, no longer hip and cutting edge. TIME magazine ran a cover story on Cyberpunk in its 8 February 1993 issue (Anonymous 1993).

Another sign of the end of Cyberpunk was Billy Idol's well-intentioned but late-to-the-party mid-1993 album Cyberpunk, on Chrysalis Records. His street credibility from London 1977 singing

with band Generation X might have shattered with popularity and heavy rotation on MTV in the early 1980s, but he was a video-friendly image of Punk: sneer, spiky hair, boots, black leather garb and jingly metal accessories. In the "Adam in Chains" video[11] he sports dreadlocks like Jaron Lanier, swings a Vase pendulum like Ai Weiwei's 1995 performance drop of a Han dynasty vase.[12] In its video, blond, shirtless, longhaired, he resembles Iggy Pop, the video begins with a spoken word section "in 3D audio" by Timothy Leary, evocative of his "You can be anything you want this time around" spoken word album for the short-lived boutique label Douglas. Leary interviews Idol on ABC-TV's In Concert, and gushes that Idol has "uncanny laser-like vision of what's happening next"[13] singing "No Religion" where he leaves out Lou Reed's lyric "When I'm rushing on my run/Then I feel like Jesus' son" and instead repeats Patti Smith's "Jesus died for somebody's sins but not mine". As the WELL (Whole Earth 'Lectronic Link) was lauded—by Howard Rheingold (1993) and others—as "the digital community", perhaps in hopes of Cyberpunk community Idol published his WELL email address, and readily conversed online with fans until he soon gained an inbox full of too many of them.

6. Spiritual Ancestors

Proceeding from Billy Idol's "No Religion" to moldering issues of MONDO, I shall still trace a spiritual element in Cyberpunk.

Returning to tech artwork, in an interactive display at ISEA that addressed religion with technology, Greg Garvey programmed a Macintosh into "The Automatic Confession Machine: A Catholic Turing Test". The user presses the AMEN key to start, then follows the usual procedures of Confession in the Catholic church, but each step entered with mouse commands or keyboard typing, or delivered, onscreen. For Penance, "The priest will total your sins and calculate your penance running the expert priest software system utilizing the most advanced neural net algorithms", reminding the user to practice the Hail Mary and Our Father prayers. Inspired by Alan Turing's 1950 essay "Computer Memory and Intelligence", "the work challenges the sinner in the confessional to decide whether or not a priest or a computer programmed to act like a priest is hearing the confession". Menus include the seven deadly sins and the Ten Commandments. Garvey intended the piece to contrast the "two mutually exclusive belief systems" of Artificial Intelligence and Catholic dogma, contemplate technology's potential encroachment on the realm of the personal and spiritual. He called for the Vatican to consider whether "software/hardware separately or together can or should be ordained and thereby given the imprimatur of the Church and fully vested in the spiritual power of the priesthood". A proposed Papal Bull towards that end might further the Church's membership, funding through credit cards, influence and distribution of Sacraments in "The New Marketplace of Faith". A mobile Personal Pocket Penance Assistant, "for the busy sinner on the go", was also proposed, effortlessly reciting 200 Hail Marys or Our Fathers "necessary for salvation and reduced time in Purgatory". The artist's biography lists him a President and CEO of the (all capitals) DIGITAL RELIGIOUS AND ELECTRONICS CORPORATION (DREC) and teaching in the Department of Design Art, Concordia University, Montreal.[14]

Yet the spiritual element in *MONDO* was essentially psychedelia. Many of its practitioners may have hoped that networked technologies (especially VR) would bring the ecstasy and *agape* they had known from psychedelic drugs, prevalent among high school[15] and college students about twenty years before. Psychedelia provided a metaphor of ecstatic universal connectedness. That may be

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11 (Billy Idol, "Adam in Chains" 1993). The video for another song on the Cyberpunk album, "Shock to the System" was directed by Brett Leonard, and is discussed in (Foster 2005).
12 https://www.guggenheim/org/arts-curriculum/topic/ai-weiwei. Accessed on 5 May 2018.
13 https://archive.org/details/Timothy_Leary_Archives_007.dv. Accessed on 5 May 2018.
14 Informational hand out by Greg Garvey, A user's guide to: The Automatic Confession Machine Version 2.1, Montreal.
15 Author's recollection, though research at the University of Michigan Institute of Social Research, published as (University of Michigan Institute of Social Research 1983), shows a figure of only 4.7% of the Class of 1975 had used hallucinogens within past thirty days http://monitoringthefuture.org/pubs/monographs/mtf-vol1_1983.pdf, p. 160. Accessed on 15 July 2018.

why Timothy Leary, then in his mid-sixties, was ubiquitous in MONDO 2000. "The Seven Tongues of God", Leary's 1964 lecture at psychological conference session sponsored by the Board of Theological Education, Lutheran Church in America, recounts experiments upon divinity students (Leary 1970, p. 13), proceeding (as his capitalized sub-chapter headings form a precis) "LSD Can Produce a Religious High", (p. 16) then asserts "Drugs Are the Religion of the People—The Only Hope is Dope". (p. 37) His book *The Politics of Ecstasy* contains sections "LSD Turns You on to God" (p. 7) cites an LSD study where "90 per cent of the subjects claimed 'a greater awareness of God or a higher power'", and "over two-thirds of a sample of sixty-seven ministers, monks and rabbis reported the deepest spiritual experience of their lives". The final pages of the book command "Start Your Own Religion", (p. 299) "Write Your Own Bible" and "Write Your Own Ten Commandments". (p. 300) "The . . . psychedelic celebration was based on the life of Christ, and we used the Catholic missal as the manual for it. But each one of these great myths is based on a psychedelic experience, a death-rebirth experience . . . We hope that the Christian will be particularly turned on by our Catholic LSD mass, because it will renew for him the metaphor with for most of us has become rather routine and tired". (p. 239) In his 1966 Playboy magazine interview Leary states "Psychedelic drugs are the medium of the young . . . A fifteen-year-old is going to use a new form of energy to have fun, to intensify sensation, to make love, for curiosity, for personal growth". (pp. 102–3) This author was fifteen and attentive when rhetoric by Leary, and others, was published. It stuck in the mind of Cyberpunk writers, publishers and celebrants.

The spirituality that infused both optimistic and pessimistic tendencies in Lifestyle Cyberpunk is nostalgic psychedelia. About Ignatius of Loyola's Spiritual Exercises, novelist Italo Calvino wrote: "Certainly Catholicism of the Counter-Reformation possessed a fundamental vehicle, in its ability to use visual communication through the emotional stimuli of sacred art, the believer was supposed grasp the meaning of the verbal teachings of the Church . . . The believer is called upon personally to paint frescoes crowded with figures on the walls of his mind, starting out from the stimuli that his visual imagination succeeds in extracting from a theological proposition or a laconic verse from the gospels" (Calvino 1985). That is to say, from a virtual reality. In an evocation of the Baroque, *MONDO* Issue #10 has a robed cover girl derived from Catholic martyr St. Lucy, a pair of round eyeballs not on a plate but rolling in her hand like a pair of dice.

The early days of World Wide Web seemed to dissipate the Cyberpunk moment, democratize and mid-Americanize what was once elite and coastal. Following a short-lived *ACCESS* magazine of "Music · Cyberculture · Style" from San Diego, *WIRED* magazine appeared in 1994, and after the first year or so settled down into an eminently readable, but more predictable, format. It might have called itself "Popular Cyberspace", in a fine 20th c. tradition of techie newsmagazines, then aimed at an audience of smart, inquisitive, mechanically adept boys (today's hacker ethic is less gendered, at least since the aforementioned YLEM, ISEA and SIGGRAPH artists). *WIRED* declared early on that it was dedicated to evangelizing the World Wide Web, and by riding the tsunami of new participation upon it, *MONDO*'s fringe science and culture was tamed, brought indoors, popularized. *WIRED* spread all manifestations of cyberculture with enthusiasm, borrowing breathiness, some stylishness and Cyberpunk writers from *MONDO*. It also furthered a revived interest in Marshall McLuhan.

Terence McKenna's review in *MONDO* Fall #7 of *The Letters of Marshall McLuhan* (1987, Oxford University Press) is titled "MARSHALL MCLUHAN the cognitive agent as CYBERPUNK GODFATHER", who in the 1960s "seemed to be giving permission, permission for youth culture, rock and roll, and post-print libidinal tactility to finally, mercifully dismantle linear stuffed-shirt Western Civilization". "Fucking in the streets was, of course, the ultimate symbol of the end of privacy and rule by gentlemen". McKenna goes on to ponder if McLuhan took LSD, laments how even his defenders tend to misunderstand him, as McLuhan warned Canada's Prime Minister Pierre Trudeau in 1972 that harsh anti-drug legislation's "key to the drug panic is TV. TV intensifies the already numerous forms of inner-tripping. Color TV is psychedelic input. The kids are simply putting jam on jam when they take to drugs". Timothy Leary reported to McKenna that McLuhan once said to him "Drugs that accelerate the brain won't be accepted until the population is geared to computers". McLuhan

wrote "The suddenness of the leap from hardware to software cannot but produce a period of anarchy and collapse in existing establishments, especially in the developed countries. That is our immediate prospect and our present actuality" (Wolfe 2003). McLuhan's mid-life nostalgia in the 1960s for values, *verités* of rural 1930s Alberta might be akin to my own in 2018 for late-1980s California Cyberpunk moment, of overworked tech corporation employees and underpaid artistic tech enthusiasts amusing themselves in festive events, psychedelics and glossy magazines like *MONDO 2000*, the transition from literary Cyberpunk science fiction to visual and multi-sensual networked community or communion.

The Roman Catholic McLuhan did not evangelize a Trinity, but a Tetrad, where a medium of any kind forces questions of what it replaced, what it amplified, what it turned into and what if flipped. One might fruitfully apply McLuhan's Tetrad to Cyberpunk, contemplating what Cyberpunk advanced, augmented, supplanted and flipped into. William Gibson told David Wallace-Wells in his Paris Review interview " . . . cyberspace is everywhere now, having everted and colonized the world. It starts to sound kind of ridiculous to speak of cyberspace as somewhere else" (Murphy 2018). The mid-1990s era of the popularized, ubiquitous Internet, then the Y2K confluence of cell phones, productivity software, then the 2007 revolution of the iPhone and Android app phone all mark the successful end of Cyberpunk as something separate from mundane life, where now your grade-school niece and your grandmother both inhabit all its phenomena. Aging Cyberpunks might muse on fun, then fairy-dusted with exclusivity, a quarter century ago, but the subsequent development and popularization and access to tools seems less a decline than an apotheosis. Perhaps a technological Omega Point, the goal of progress articulated by Pierre Teilhard de Chardin.

Teilhard de Chardin may have influenced McLuhan's thoughts on global media that prefigured cyberspace—and Cyberpunk—though McLuhan, faculty at Catholic colleges, could not formally acknowledge the scientist-turned-Jesuit priest. In 1911, year of McLuhan's birth, Teilhard was officially branded a heretic when he defended Darwinian evolution of humanity towards God's plan of unification of all human nervous systems and thought through technology. Teilhard theorized a "natural, profound evolution of the nervous system" through global electronic media, "etherized human consciousness" linked via TV, radio towards one civilization, which he called the noosphere. McLuhan wrote "The Christian concept of the mystical body, off all men as members of the body of Christ—this becomes technologically a fact under electronic conditions". (Wolfe 2003, p. xvi) Which is to say, jacked in to the matrix. Is the iPhone or Android app phone the portable unifier, the Omega communicator? My university students seem to think so, though new tech will inevitably supplant it.

One can extend Punk aesthetics and ethics to late 1990s file sharing, and Cyberpunk fiction tropes to the fears of dystopia upon Y2K network breakdowns. Was Gibson's trilogy speculative *non*-fiction? To read it today no longer shows a different world's logic. Does literary Cyberpunk speak to the transformation of daily life since 2005 with Google, YouTube, Facebook and its Cambridge Analytics? Roman Catholic dogma asserts that every and all Sin is known by God, whether it is performed in thought, word or deed. In 1987, upon joining Apple, new employees were warned to never say anything online that we wouldn't want to see subpoenaed, brought into a court of law as evidence. In this century, Detroit Mayor Kwame Kilpatrick was unaware the text messages about a governmental cover-up sent on his phone to his mistress could be retrieved, leading to his arrest and imprisonment. Facebook users are shocked their posts were mined by Cambridge Analytics for political persuasion. Perhaps I'm jaded at notions of "privacy" intact in our time.

Graham J. Murphy noted Cyberpunk fiction's emergence was contemporary with the 1980s rise of Christian revivalism and growing fundamentalism, while Samuel Delany found "Religion rumbles all over the place in Gibson, just below the surface of the text".[16] Among computer scientists, Jaron Lanier compared VR to Christian ritual, Virtual Reality Modeling Language (VRML) developer Mark Pesce compared it to pagan ritual, Nicole Stenger compared it to angels (Wertheim 1999). In his

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16   (Murphy and Schmeink 2018), "Emerging World Orders"; or, Cyberpunk as Science Fiction Realism, op. cit, p. 191.

1991 New York Times editorial "Confessions of an Ex-Cyberpunk", Lewis Shiner lamented that Cyberpunk's "newfound popularity ... shows our obsession with material goods, and technical, engineered solutions ... There seems to be a national need for spiritual values ... I find myself waiting—maybe in vain—for a new literature of idealism and compassion that is contemporary not only on the technological level but also the emotional ... I believe that this—not cyberpunk—is the attitude we need to get us into the 21st century" (Shiner 1991).

As in Catholic dicta, suicide is a mortal sin, so it can be contrasted with MONDO 2000's maximum interest in extending life, as well as Rucker's flickerclad personae (and, presumably, souls) downloaded into "Boppers", life-extending robots. Punks wore the skull as a proud symbol: the pirates' skull and crossbones, or the warning of toxicity on the bottle of cleaner under the sink. California Chicano artists Asco (Nausea) used it in their murals and performances (Chavoya and Gonzalez 2011) in the tradition of pre-Columbian Mexicans predating Catholicism, as Day of the Dead celebrants, or like the early 20th century broadside illustrator Posada. The Punk skull spread through shopping-mall vendors like Hot Topic across America. California Cyberpunks soon rejected the skull in exchange for the optimistic symbol of a baby. Like the fetus in the finale of the 1968 movie "2001: A Space Odyssey", the quizzical awakening of MONDO's t-shirt logo of a light-bearing baby, rays emanating from his head like a Baroque representation of the Sun might appear to the spiritual Cyberpunk as Teilhard's noospheric Omega Point.

Spiritu vobiscum. Et cum Cyberpunc tuo.

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