New edge : technology and spirituality in the San Francisco Bay Area

Zandbergen, A.D.

Chapter One: The Emic Sociology of New Edge

Celebrating Augmentation and Dissociation

In the first editorial of the magazine *Mondo 2000*, founded in 1989 by Ken Goffman (1952) and Allison Kennedy in Berkeley, the editors describe the magazine as "New Edge, not New Age". As Goffman told me in an interview, with the term 'New Edge' he wanted to articulate a simultaneous embrace and rejection of New Age.[21] Informed by the understanding that New *Age* is largely about the rejection of high-tech, the term New Edge expressed the dedication of the magazine creators and editors to explore New Age spirituality via 'edgy' technoscientific concepts and products.

In this first chapter, I seek to understand how 'technology' and 'New Age spirituality' are made relevant to each other from the perspective of New Edge. What is it about 'New Age spirituality' that invites New Edgers to relate it to 'technology', and what is it about 'technology' that New Edgers deem related to 'spirituality'? And what kinds of 'technology' and what kinds of 'spirituality' are thereby related? Without seeking to answer this question in an all-encompassing way, in this chapter I focus in particular on the gnostic epistemology of New Age and the way this gnosticism is made to correlate with high-tech. Gnosis, as discussed in the introduction, is an epistemological attitude that comprises three aspects: gnosis is, in the first place, about obtaining knowledge of one's 'true being' and the 'true nature of reality.' Secondly, modern gnosis is premised on an antinomian emic sociology. This means that modern gnosis is built on the understanding that forces in society at large, referred to as the 'archons' in the traditional gnostic worldview, are working to engender false images of reality. Thirdly, by means of 'experience', or by engaging in 'mystical states of mind', gnostics can 'unveil' the truth behind the facade of the everyday world and "remember [their] divine origin" (Jonas 1958: 44). Whereas these explanations of 'gnosis' are common understanding, I ask what gnosticism means in the context of a society where information technology largely conditions understandings of reality.

Notions like "cybergnosis" (Aupers et.al. 2008; Bey 2003) or "techgnosis" (Davis 1998) have been launched in recent years to capture the presence of the gnostic impulse in a technological setting. Such concepts are home in and refer to cultural environments where technology is believed to offer gnostic salvation.

[21] Interview Dorien Zandbergen with Ken Goffman, Mill Valley, California, September 30 2005.

Technology, in other words, is imbued with the capacity to offer immediate knowledge and experience of 'reality at large.' However, whereas this is a significant component of cybergnosis, scholars have not yet explored into detail how such cybergnostic fantasies operate in actual social reality. In particular, it has not been made insightful yet how cybergnosis 'works' in the context of a social environment where people endorse contesting claims regarding the nature of reality and regarding the tools and social forms that best mediate reality. The purpose of this chapter is to include such epistemological and ontological contestations in my study of Bay Area cybergnosis.

Central to this chapter is the tension between the New Edge celebration of techniques of *augmentation* and techniques of *dissociation*. In the first instance, I use these terms not to refer to two actually distinct artifacts, but to two different attitudes and emic sociological assumptions involved in the embrace of particular artifacts and practices. Both techniques are informed by different understandings regarding the true nature of reality and regarding the question what and how true understanding is obstructed. Techniques of augmentation are techniques that bring gnostic clarity by revealing the 'true order' of reality underneath 'apparent chaos'; techniques of dissociation bring gnostic clarity by revealing the 'true chaos' of reality underneath false order and simplicity. Both techniques thus show us different, complementary aspects of the New Edge emic sociology, i.e. the way that people employ the New Edge discourse to reflect upon and to position themselves within a larger cultural environment. I will refer to the epistemological and emic sociological tension between these two techniques as a paradox, the first in a series that will be discussed in this dissertation.

The first aim of this chapter is to bring this epistemological and emic sociological paradox of New Edge into view. This means charting the simultaneous New Edge celebration of techniques of augmentation and dissociation. What becomes apparent in this overview is that as part of the New Edge shifting epistemological attitudes, the distinction between 'technological' and 'spiritual' practices becomes blurry.

The second purpose of this chapter is to argue that New Edge cybergnosis, including its simultaneous celebration of augmentation and dissociation and of technology and spirituality, is not a recent phenomenon but can be traced back at least to the 1960s. In order to make this point, I take as a starting point the remark, made by Mondo 2000 founder Ken Goffman, that the Whole Earth Catalog, founded in 1968, is the "respectable older cousin" of Mondo 2000 (Goffman 1993: 16). The Whole Earth Catalog (also 'Catalog' from hereon) was a periodical that catered to the 'back to the land' communes of the 1960s. It discussed the spiritual quests of native Americans, of Tibetan Zen masters and of Human Potential Movement intellectuals alongside space travel, cybernetics, the advent of personal computing and electrically amplified music. In the late 1980s, Mondo 2000 was

showing a same topical eclecticism, combining discussions on gnostic spirituality with discussions on high-tech: Eastern meditation, native American ecstatic rituals and the American psychedelic movement were discussed alongside explorations of Virtual Reality, biofeedback, nanotechnology and plastic surgery.

The genealogical line here suggested - between the Whole Earth Catalog of 1968 and the 'New Edge' concerns of Mondo 2000 since the late 1980s - is one that I will use in this first chapter as a way of arguing that cybergnosis is not a phenomenon that was new when the term 'New Edge' was coined in the late 1980s. Just as *New Age* is a discourse that finds its recent historical roots in the diverse gnostic experiments of the 1960s, so can cybergnosis, which became formative of a 'cultic milieu' that recognized itself as New Edge in the late 1980s, be traced back to the 'techgnostic' (Davis 1998) experimentations of the 1960s.

This chapter consists of three parts: the first part offers an account of the theoretical and sociological context in which to explore the cybergnostic ambiguity of New Edge. The second part studies the way that this ambiguity is manifested in Mondo 2000 and in the rave scenes of the San Francisco Bay Area. In the third part I offer an account of the historical background of contemporary New Edge. In this part I explore the Whole Earth Catalog and the cultural environment in which this Catalog was shaped.

1.1. Studying Cybergnosis

Charting the New Edge Paradox

My study of the epistemological paradox of New Edge differs from the ways in which various other scholars have expressed their 'confusion' about the way in which people in the contemporary Bay Area endorse spiritual aspirations in a high-technological context.

Two types of ‘paradoxes’ have interested scholars of 'Bay Area technoculture' in recent years in particular: some scholars have shown surprise about the political-ideological mixtures that are forged when transcendentalist impulses are tied to high-tech (e.g. Barbrook and Cameron 1995; Sobchack 2001; Pfaffenberger 1988; Robins and Webster 1988). Others focused simply on the way in which the simultaneous celebration of transcendentalism with high-tech confuses the imagined distinction between 'religion' and 'technology' (e.g. Kirk 2002, Roszak 2000). Both types of confusion are informed by historical perspectives and ideological presumptions that I believe are in the way of a full, anthropological understanding of cybergnosis.

Political Idealism and Technophilia

To begin with the first ‘paradoxical theme’: in their critical discussions of the contemporary technocultural environment of the San Francisco Bay Area, scholars

like Kevin Robins, Frank Webster, Bryan Pfaffenberger, Vivian Sobchack and Theodore Roszak employ a historical perspective in which the 1960s counterculture was 'countercultural' precisely because of its anti-consumerist ethos and its communitarian, New Left ideas. The 'paradox' that these scholars find themselves confronted with is that these transcendentalist 'countercultural' notions are nowadays communicated in a corporate, individualistic setting. In her discussion of Mondo 2000, first published in the November 1990 edition of *Art Forum* and later included in many a 'cyberculture reader' (e.g. Trend 2001; Bell and Kennedy 2000; Dery 1994), the media scholar Vivian Sobchack, for instance, expresses confusion about the co-presence of utopian ideologies and "commitment to consumption" in the pages of this magazine (2001: 322). "At first sight", Sobchack writes, M2 (as she calls Mondo 2000) seemed "somehow, important in its utopian plunge into the user-friendly future of better living not only through the chemistry left over from the 1960s, but also through personal computing (…) (Ibid.)". Yet, combined with an "unabashed commitment to consumerism', this political idealism leads to an 'oxymoronic cosmology of the future" (2001: 325).

In Sobchack's view, this 'resolution' between political idealism and consumerism and technophilia defies the potential for critical politics and social responsibility. According to her: "Hiding under the guise of populism, the liberation politics touted in the pages of *M2* are the stuff of a romantic, swashbuckling, irresponsible individualism that fills the dreams of "mondoids" who, by day, sit at computer consoles working for (and becoming) corporate America" (Ibid.).

Underlying Sobchack's writings is a view of history in which the left-wing politics and 'genuine' spiritual exploration of the 1960s have given way to the consumerism and conservatism of later decades. This is also the view that informs the observations made by the British sociologist Richard Barbrook and the Scottish broadcaster Andy Cameron in their critique of Californian technoculture. In their article *The Californian Ideology* (1995) the authors write: "Who would have predicted that, in less than 30 years after the battle for People's Park[22], squares and hippies would together create the Californian Ideology?"[23] With the "Californian Ideology" the authors refer to the "contradictory mixture" of traditional New Left and New Right ideologies that they observe in the technocultural climate of the Bay Area and that they see as a form of 'co-optation' of original countercultural values. "Nowadays", the authors contend, "the cultural divide between the hippie and the organisation man has (...) become rather fuzzy". The Californian Ideology

[22] In May 1969 People's Park in Berkeley was the site of a violent encounter between student protesters and Governor Ronald Reagan's armed police. One man was shot dead and 128 people were hospitalized (Barbrook & Cameron 1995).

[23] http://www.alamut.com/subj/ideologies/pessimism/califIdeo_I.html. Retrieved October 7, 2010.

"reflects the disciplines of the market economics and the freedoms of hippie artisanship". Cameron and Barbrook call this fusion a "bizarre hybrid".

The juxtaposition that is sketched in such and other critical writings is one between an idealistic, anti-consumerist and anti-technological 1960s counterculture on the one hand, and a 'co-opted version' of the counterculture in later decades. Thomas Frank's book *The Conquest Of Cool* (1997) criticizes such "co-optation theories", as he calls them, as being falsely and one-sidedly informed about the 1960s counterculture. "Co-optation theories", Frank criticizes, express "faith in the revolutionary potential of "authentic" counterculture combined with the notion that business mimics and mass-produces fake counterculture in order to cash in on a particular demographic and to subvert the great threat that a "real" counterculture represents" (Frank, 1997: 7).

Instead of this perspective, Frank introduces a history of (pre) countercultural corporate practices, in which corporations were embracing the 'countercultural' values of individual expression, anti-hierarchical organization and self-exploration and in which the boundaries between a 'countercultural sphere' and a corporate sphere were in reality quite blurry. The fact that counterculturalists themselves imagined their modes of living in terms of a juxtaposition with a 'conventional' culture does not mean that this rupture was real in a sociological and anthropological sense. This realization was, furthermore, also something that some countercultural spokespersons themselves arrived at. For instance, in one of his first *Whole Earth Catalog* publications, the founding editor Stewart Brand was quite explicit about the fact that this catalog was an "advantage-seeking" product. In an introductory article to one of the Catalogs, Brand explained how the Whole Earth Catalog was financed through investment aid from his parents, and by means of stock bought in his name. Brand writes: "You may or may not think capitalism is nice, and I don't know if it's nice. But we should both know that the WHOLE EARTH CATALOG is made of it" (WEC Spring 1969: 438).

Rustic Savvy and Advanced Technology

The second 'paradox' discovered by scholars of the San Francisco Bay Area is the extent to which the search for natural authenticity here fuses with celebrations of high-tech. The surprise that this combination evokes owes to the historically shaped understanding that the search of authenticity is inevitably tied to a rejection of technology. This understanding informs in great extend the way in which academic and lay-culture critics look back at the authenticity-searching hippies of the 1960s and is, in turn, informed by the way in which the counterculture has been brought into view in authoritative works produced at the time and by those who identified themselves as countercultural.

Theodore Roszak's *The Making of a Counter Culture* (1969) was one of the works that drove home the understanding that in its search for altered states of

consciousness, natural living and authentic, embodied experience, counterculturalists were opposing a society in which technology played too large a role. Much of the language and practices of the counterculture were indeed self-consciously 'tribal' and 'Romantic.' According to the American historian David Farber (2002), the local newspaper *The San Francisco Chronicle* - whose best-known journalist Herb Caen was largely sympathetic to the 'beatniks' and 'hippies' in the Haight-Ashbury district of San Francisco - explored "Eastern religion and American Indian rituals", promoting a "deliberately naive investigation of the premises of the pre-industrial and non-industrial cultures" (Farber 2002: 29). When by 1967 thousands of hippies were founding communes all over Northern America and elsewhere, they not only *read* about 'tribal cultures', but also attempted to live like them. Many of the communes were modeled after Native American 'tribes', complete with tipis and with communards adopting Native American names. In 1968 the newly founded countercultural periodical the *Whole Earth Catalog* assisted the tribal efforts of the hippies by giving practical advise where to buy or how to build tools that were 'rustic', 'low-tech' and 'hands-on.' The Catalog also discussed works from anthropologists such as Carlos Castaneda, Gregory Bateson and Claude Levi-Strauss on 'primitive cultures.'

The countercultural combination of social critique and celebration of altered states of mind induced various scholars to compare the 1960s counterculture to 19th century Romanticism. In 1974, the sociologist Frank Musgrove wrote that the counterculture "strikingly" resembled 19th century Romanticism, in its combined attack on "technology, work, pollution, boundaries, authority, the unauthentic, rationality and the family" and the interest "in altered states of mind, in drugs, in sensuousness and sensuality" (Musgrove quoted in Heelas, 1996: 67). In Musgrove's understanding, Romanticism is thus typically characterized by an anti-technology attitude, an understanding that he then projects onto the 1960s counterculture. Indeed, as Collin Campbell points out, it has become "established wisdom" to regard Romanticism as a "reactionary element in modern life, a phenomenon with its roots in the past and doomed to extinction at the hands of the rational elements in culture and society" (Campbell, 1990: 4).

Both because of this 'established wisdom', and of the 'tribal' self-representation of proponents of the North American counterculture, scholars have had difficulty making sense of the fact that, in the 1960s and 70s, the same youth that lived in tipis could also be found to enthusiastically embrace advanced technology. Theodore Roszak, the former Berkeley professor of history who had, in 1969, described the countercultural movements as 'anti-technocratic' showed in a later article *From Satori to Silicon Valley* (2000) hindsight surprise about this "odd mixture":

> The truth is, if one probes just beneath the surface of the bucolic hippie image, one finds a puzzling infatuation with certain forms of outrè technology (...) the

> countercultural students I knew during that period were almost exclusively, if not maniacally, readers of science fiction. They were reading more of the genre than the publishers could provide. Side by side with the appeal of folk music and primitive ways, handicrafts and organic husbandry, there was a childlike, Oh Wow! confabulation with the space-ships and miraculous mechanisms that would make Stanley Kubrick's 2001 and the television series Star Trek cult favorites, and which would eventually produce the adult audience for (and the producers of) Star Wars in the later seventies and eighties. The same eyes that were scanning the tribal past for its wonders and amazements were also on the look-out for the imagined marvels of what George Lucas would one day call "Industrial Light and Magic".[24]

Roszak turns to the Whole Earth Catalog as a prime example of this "odd mix of rustic savvy and advanced technology". In the pages of the Catalog, Roszak observes a synthesis of the "anti-industrialist Reversionaries a la Ruskin, William Morris, Prince Kropotkin, and the Romantic artists generally"[25] and "a technophiliac vision of our industrial destiny, a modern current of thought that flows back to Saint-Simon, Robert Owen, and H. G. Wells".[26]

Roszak is not alone in his surprise over the 'strange mixture' of hippie tribalism and high-tech futurism, and this surprise has led various scholars and journalists to explore this theme further. Many of such works zoom in particularly on the alleged cultural and ideological relationship between the 'hippies' and the computer hobbyists of the 1960s and 70s. In 2005 the journalist John Markoff captured some of the counterculture-computer culture relationship in his *What the Dormouse Said. How the 60s Counterculture Shaped the Personal Computer Industry* (2005). In this book Markoff not only argued that countercultural adherents had affiliation with technology, but that the entire personal computer industry owes its existence to the counterculture. Markoff argues that the idea for the personal computer was born in the 1960s under the influence of psychedelic drugs and utopian idealism held by 'enlightened' computer scientists and hobbyists at the West Coast. According to him, parallels can be discovered between "the mind expansion through the use of psychedelic drugs and through the new kinds of computing that were being developed here" (Markoff, 2005: xiii). A few years later, the Stanford communication scientist Frederick Turner made a more nuanced argument in his *From Counterculture to Cyberculture* (2006). In this book, Turner introduced to an academic audience the notion that there were strong overlaps between the Bay Area counterculture of the 60s and the Silicon Valley computer industry.

---

[24] http://www-sul.stanford.edu/mac/primary/docs/satori/index.html. Retrieved October 7, 2010.

[25] According to these anti-industrialists, Roszak writes, "industrialism is the extreme state of a cultural disease that must be cured before it kills us" (Ibid.).

[26] For these "technophiliacs", according to Roszak, the cure for our industrial ills will not be found "in things past, but in Things To Come" (Ibid.).

Roszak, Markoff and Turner phrase their insights in terms of surprise and hindsight revelation: casting their books as replacements of an outdated history of the counterculture by presenting a "previously untold history" (Turner 2006: 3). However, the journalist Steven Levy (1984), the authors Freiberger & Swaine (1984) and the documentarian Robert Cringely (1996) - among others - had all made similar arguments in earlier works. In one way or another, these works had shown already that in the 1960s and 70s an interest in high-tech, and particularly in computing, overlapped with many of the countercultural concerns and practices. Despite these documentations however, the image of the hippie and of the counterculture at large as anti-technological has continued to shape political and popular discourse. This image still informs, for instance, the agenda of neo-conservatives seeking to juxtapose their alleged high-tech mindedness to the "anti-technological bias of the Left". [27] Moreover, it is also a modality through which post-1960s New Edgers have understood their own legacy. Timothy Leary for instance, a 'countercultural guru' in the 1960s and a regular contributor to the New Edge magazine Mondo 2000, sketched in his book *Chaos & Cyber Culture* (1994), an "Evolution of Countercultures". Leary's scheme depicted the 1965-1975 hippies as "Psychedelic, but anti-high-tech", and the 1990s hippies as a "Psychedelic, super high-tech New Breed" (1994: 81). Despite the persistence of this narrative, feeding time and again a sense of 'surprise' over the convergence between countercultural 'Romanticism' and technophilia, the New Edge ambiguity that I explore in this chapter does not begin with this particular kind of surprise.

The Ambiguity Within New Edge

The ambiguity that I seek to address when exploring the historical and contemporary positioning of cybergnosis in contemporary Bay Area culture relates to the ‘paradoxes’ discussed above but does not entirely overlap with it. This means that the New Edge ambiguity I seek to address is not rooted in a-priori acceptance of normative and dichotomous distinctions between counterculture and corporate culture, left wing and right wing political orientations and Romantic and 'technophiliac' sensibilities. Instead, I seek to understand the ambiguity intrinsic to the way in which contemporary cybergnostics *themselves* shape their notions of reality vis-à-vis 'official notions of reality.' In particular, I study cybergnosis as a

---

[27] In the early 1970s when Nixon attained presidency, the governor of California Ronald Reagan depicted a hippie as the archetypical primitive being by calling him someone "who dresses like Tarzan, has hair like Jane, and smells like Cheetah" (Reagan quoted in Don McNeill, *Parents and Runaways: Writing a New Contract*, Village Voice, 14 December 1967, 1, 21-22, 24-27 at 21; cited in Braunstein and Doyle, 2002:6). In 1984, the conservative Georgia Congressman (and speaker of the house in 1993) Newt Gingrich perpetuated this image by writing that "in the troubled 1960s our hippies overshadowed our astronauts and the anti-technological bias of the Left overshadowed the possibilities of the computer age" (Roszak 1994 [1986]: 25).

cultural phenomenon that is married to various implicit theories about 'technoculture' that are at logical tension with each other.

The ambiguities within New Edge relate to epistemological tensions that exist in Bay Area technoculture at large. Therefore, as a way of getting a first understanding of the ambiguity of New Edge, I begin with a discussion of the larger technocultural environment in which New Edge is embedded. I do so by giving an account of a conference that I attended in 2005 at Stanford University. This conference attracted representatives of major corporate and educational institutions in the Bay Area. The 'creative workers' who presented and attended this conference, I noticed, adopt shifting epistemological and ontological understandings vis-à-vis the interface technologies that they create.

The Accelerating Change Conference – Palo Alto September 2005

In September 2005 I attended the *Accelerating Change Conference*, a conference I had heard much about from scientists, engineers and journalists I had thus far met. The Accelerating Change Conference (or *Accelerating Change* from now on), I had been told, attempts to integrate the various technoscientific projects that the 'geek community' of the Bay Area is involved in and to formulate a vision of the technological future.

Accelerating Change was organized in a large auditorium at the campus of Stanford University by the *Acceleration Studies Foundation* (ASF from now on). According to their website, the ASF is an "educational, nonprofit engaged in outreach, education, research, and selective advocacy with respect to issues of accelerating change".[28] According to the same site, the ASF consists of "3,100 future-oriented technologists, entrepreneurs, industry, institutional and government leaders, academics, scientists, strategists, humanists, and others interested in better understanding and guidance of accelerating planetary change".

In the presentations at the conference quite a paradoxical combination of, what I call, 'techno-ontologies' was espoused: on the one hand, it was postulated that information technologies constitute an environment that is incomprehensible and invisible and that frustrates the possibility of having individual human agency. At the same time, information technologies were celebrated as providing the scientific tools that can bring this environment into view and under control, thereby facilitating individual human agency and understanding. In the following sections I discuss these techno-ontologies separately.

Losing Control Through High-tech

With respect to the first 'techno-ontology', at Accelerating Change the notion was posited that because the 'rapid proliferation' of increasingly complex, small and

[28] http://www.accelerating.org. Retrieved September 13 2010.

philosophically confusing forms of technoscience, people have lost a sense of understanding of their direct environment. This is the first understanding of the main metaphor of the conference: that of 'accelerating change.' In his opening address, ASF-founder John Smart introduced this interpretation of 'accelerating change' by sketching the current moment in terms of epistemological crisis. This crisis has emerged, Smart suggested, because the world is transforming "into informational form". Smart called the contemporary world "infopomorphic": "we understand ourselves and the universe in information theoretic or computational terms (...) we live in an infopomorphic paradigm",[29] he told the audience. Anything that exists, Smart continued, is morphing into informational form, thereby engendering a new 'paradigm' for life. This current of change is more likely to produce "future shock" than "future shaping" and leads more likely to "information overload" rather than the ability to have "your filters set".

Smart's understanding of a world becoming more and more 'infopomorphic' did not seem to apply to one particular kind of technological innovation. Speaking to an audience of Artificial Life developers, Virtual Worlds creators, entrepreneurs of social networking websites, founders of bioengineering firms, developers of graphic interfaces, and venture capitalists well at home in the world of stock market brokering, Smart commented upon a world in which all the varied practices conducted by this audience are, each in their own ways, translating 'matter' into 'information' - thereby making the world more difficult to see, to interpret and to control.

Smart's image of an informational world, an 'infopomorphic paradigm', was something that various attendees and speakers at the conference had, in prior decades, been complicit in painting. Present at Accelerating Change were, for instance, venture capitalist Esther Dyson and Republican George Gilder. In the mid-1990s, Dyson and Gilder had co-authored, with the futurist Alvin Toffler[30], the manifesto *Cyberspace and the American Dream: A Magna Carta for the Knowledge Age* (1994). In this manifesto, the authors described cyberspace as an "ecosystem (…) a bioelectronic environment that is literally universal". "The central event of the 20th century", they argued furthermore, "is the overthrow of matter".[31] Another speaker at Accelerating Change, the science fiction author

---

[29] John Smart, opening address at the Accelerating Change Conference, Stanford University, Palo Alto, September 17 2005.

[30] It may have been Alvin Toffler's book *Future Shock* (1970) that inspired John Smart to refer to talk of "future shock" as one possible reaction to the current technological changes. In his book, Toffler announces an imminent "abrupt collision with the future", due to the "rapid transition" from industrial to a "super-industrial" society, causing "information overload" and "too much change in a too short period of time" (1970: 9).

[31] http://www.hartford-hwp.com/archives/45/062.html. Retrieved September 13 2010.

Vernor Vinge, had used a similar imagery – of a new informational environment that fully envelops people– in his story *True Names* (1981).[32]

The Technological Singularity

In the past few decades, such depictions of a world that is morphing into informational form have come with an accompanying sense of epistemological crisis and bewilderment. At *Accelerating Change* this discourse of bewilderment intersected with the metaphor of 'accelerating change' and with the notion of the 'singularity.'

The term 'singularity' originally derives from mathematics and describes a point at which a mathematical object seizes to be well understood or clearly defined. In 1993, in a talk he gave for the American Space Agency NASA, Vernor Vinge used this term to talk about an immanent future in which technological change is causing a situation:

> (...) where our old models must be discarded and a new reality rules, [it is] a point that will loom vaster and vaster over human affairs until the notion becomes a commonplace. Yet when it finally happens, it may still be a great surprise and a greater unknown.[33]

In a variety of publications of which *The Singularity is Near* (2005) is the most recent, the engineer Ray Kurzweil popularized this term further as a way of announcing a technologically transformed future that is dramatically different from the present moment. At the Accelerating Change conference, Kurzweil was one of the keynote speakers. In his talk Kurzweil showed slide after slide that showed asymptotic graphs that signified all kinds of processes of technology-empowered 'accelerating change.' Mixing scientific and mystical narrative, Kurzweil sketched a teleological process of 'accelerating change' in which 'information' increasingly 'escapes' its material substrate, leading eventually to an epoch in which "patterns of matter and energy in the universe become saturated with intelligent processes and knowledge".[34] Kurzweil can only speak about this future in the vague

---

[32] Vinge's story *True Names* is generally understood as one of the first representations of 'cyberspace', before this term came to be popularly used to refer to the internet (See for instance Pesce, Mark. "True Magic." In *True Names. And the Opening of the Cyberspace Frontier. Vernor Vinge*, edited by James Frenkel, 221-38. New York: TOR, 2001).

[33] Vinge's talk is published at: http://mindstalk.net/vinge/vinge-sing.html, retrieved October 8, 2010. Vinge here writes: "The original version of this article was presented at the VISION-21 Symposium sponsored by NASA Lewis Research Center and the Ohio Aerospace Institute, March 30-31, 1993. It appeared in the winter 1993 Whole Earth Review."

[34] The singularity takes place, according to Kurzweil, in 6 steps, 5 of which we have already gone through: Step one is the development of DNA out of physics and chemistry processes leading to the development of the brain through biological processes. Step two begins with the development of 'technology', step three with bioengineering, i.e. "the moment at which technology masters the methods of biology", step four is the integration of biology and technology, and step 6 is the

metaphor of the 'singularity', precisely because, as he predicts, this future moment will not be conceivable in terms people are currently familiar with. The singularity implies a total transformation of the ways in which people think, perceive and interact with their environment.

The metaphor of the singularity captures the contemporary understanding, shared by Silicon Valley entrepreneurs, science-fiction authors and computer scientists, of information technology as constitutive of an epistemological crisis. In the many different forms in which this crisis is presented at Accelerating Change and beyond, this epistemological crisis is linked to various different types of 'technological changes.' For instance, in his book *Out of Control* (1994), former editor of *Wired Magazine* Kevin Kelly – also present at the conference - addressed the fact that even programmers and scientists themselves seem increasingly 'out of control' over the technologies they create. With increasingly large programs being built by globally dispersed teams of programmers, no single person is able to comprehend the entire functionality and structure of programs. In addition, with programs copying themselves and with virtual world environments expanding in unanticipated ways, information technologies seem to attain life-like behavior. Kelly summarizes:

> (...) as we unleash living forces into our created machines, we lose control of them. They acquire wildness and some of the surprises that the wild entails. This, then, is the dilemma all gods must accept: that they can no longer be completely sovereign over their finest creations (Kelly 1994: 4).

In his book *TechGnosis* (1998), described by the writer as "a secret history of the mystical impulses that continue to spark and sustain the Western world's obsession with technology, and especially with its technologies of communication" (1998: 4), the Californian culture critic Erik Davis speaks of the information technological society in similar terms. Davis describes this society as characterized by "velocity" and "mutability" (1996: 4). In terms of social organization, modes of thinking about nature and about 'reality', information technological innovation is radically transforming taken-for-granted ways of being:

> Boundaries dissolve, and we drift into the no-man's zones between synthetic and organic life, between actual and virtual environments, between local communities and global flows of goods, information, labor, and capital. With pills modifying personality, machines modifying bodies, and synthetic pleasures and networked minds engineering a more fluid and invented sense of self, the boundaries of our identities are mutating as well. The horizon melts into a limitless question mark (...) (Ibid.).

'singularity', with 'information' leaving its techno-biological substrates (Kurzweil 2005. *When Human Transcend Biology*. Keynote Speech for Accelerating Change Conference, Palo Alto).

It is time, John Smart concluded in his opening talk at Accelerating Change, to "increase awareness" of this information technological complexity and incomprehensibility. It is in relation to this remark that we can situate the ambiguity of Bay Area technoculture.

Gaining Control Through High-tech

The singularity thesis, as discussed at Accelerating Change and in the larger technocultural environment of the Bay Area, is not *uniquely* informed by a techno-ontology that depicts information technology in terms of a confusing, incomprehensible, environment. A second techno-ontology intersects with it. The singularity, as predicted by Kurzweil, is not only a state of confusion but simultaneously a state of transcendent understanding and ultimate cognitive and perceptual awareness. Precisely those information technologies that are causing the confusion - information technologies - will also lead to better understanding. We will arrive at a future moment, Kurzweil promises, where:

> Information technologies (...) will develop pattern-recognition powers, problem-solving skills, and emotional and moral intelligence of the human brain itself (…) human intelligence and information technological intelligence has merged (...) We will fully understand human thinking and will vastly extend and expand its reach (Kurzweil 2005: 8).

The theory of the singularity thus evokes two different understandings about the epistemological quality of information technology: while moving in 'accelerating pace' into our everyday environments, information technologies - hereby imagined as autonomous agents - make it impossible for people to truly understand their direct life worlds. Simultaneously, as scientific tools that will 'merge' with 'human intelligence' they will largely increase our cognitive and perceptive powers and help us understand our life worlds at a 'meta-level.' 'Information technology' here attains a double, paradoxical, characteristic: it is the 'objective environment' in which we swim and over which we have no control, and it constitutes the tools that we can use to make sense of this environment.

This circularity is a persistent theme in Bay Area technoculture. Kevin Kelly has observed it, for instance, at work in the study of Artificial Life. In the context of Artificial Life (AL) studies - whether performed by computer scientists in laboratories or by computer hobbyists on their home computers - evolutionary development of 'life' is studied through computer models and simulations. In particular, Artificial Life has become a kind of testing field for the theories of 'complexity' and 'chaos theory.' These fields of study, as also explored by quantum physicists and evolutionary biologists, describe 'life' and 'consciousness' in terms of 'complexity' and unpredictable (random) 'chaos.' Therefore, Artificial Life forms that achieve a state of homeostasis, i.e. that don't 'evolve' into ever more complex forms and patterns, are not considered 'alive', whereas those forms that show unpredictable behavior are seen as expressions of real life.

As many authors have pointed out[35], in the context of Artificial Life studies it is difficult to tell whether the 'complexity' that is being studied is a complexity that is *created* on the computer, or whether it is 'objective nature' being studied. This epistemological indeterminacy ties in with an ambiguous understanding of computer technology itself: with the computer functioning both as a laboratory that houses complex creatures, *and* as a scientific tool that studies these life-like creatures, information technology becomes objective environment and scientific tool simultaneously. Kevin Kelly (1998) coined the term "nerd science" to refer to this paradoxical understanding of computers. In nerd science, Kelly writes, "discovery and creation go hand in hand". Kelly doesn't find examples of 'nerd science' only in the study of Artificial Life, but in the scientific use of computer models in general. Kelly writes for instance about the creation of dynamic computer models of, for instance, "the global atmosphere". Such a model "is like a theory that throws off data, or data with a built-in theory" (Kelly 1998: 992).

What Kelly here identifies as 'nerd science', however, is better understood as a much broader phenomenon that is not unique only to the cultural experience of 'nerds.' 'Nerd science', I maintain, is only one example of a society in which 'reflexive technologies' – i.e. technologies that reflect a particular form of reality - simultaneously constitute 'objective environments' (artificial life, virtual worlds, etc.) and are used to 'study' these environments - as 'scientific tools' – as if these environments are representations of a deeper, more fundamental form of reality.

This circularity can also be recognized in John Smart's proposed solution to the loss of understanding in an 'infopomorphic society': Smart referred to the Accelerating Change audience as a "community of practice" that moves the dialogue "beyond that simple reactionary perspective that you get from lots of people" and that moves to "policy and action". Smart addressed an audience of entrepreneurs, programmers, journalists and 'industry leaders' as "ambassadors of the future". With the rapid changes taking place today, Smart said, "it is easier to get future shock, rather than to take part in future shaping; it is easier to get information overload rather than to set your filters to get *just that* type of information that you need". We have to know, Smart said, "how to filter". Paradoxically then, these 'filters', in Smart's rhetoric, are information technological tools, precisely those tools that have caused the confusing 'infopomorphism.'

---

[35] See for instance: Pickover, C. A. (1990). *Computers, Pattern, Chaos and Beauty. Graphics From an Unseen World*. New York: St. Martin's Press; Pickover, C. A. (1991). *Computers and the Imagination. Visual Adventures Beyond the Edge*. New York: St. Martin's Press; Rucker, R. (1999). *Seek*! New York: Four Wall Eight Windows; Wright, R. (1995). Towards a Poetics of Knowledge. *Leonardo*, 28(5), 395-98; Wright, R. (1996). Art and science in Chaos. Contesting readings of scientific visualization. In G. Robertson (Ed.), *Futurenatural. Nature, science, culture*. (pp. 218-36). London: Routledge.

Referring to (then) recent technical innovations such as Google Earth, Flickr, online social worlds such as Second Life and Artificial Intelligence projects, Smart celebrated these technologies as enabling people to see and understand the complex changes that are going on. Through Second Life one can *study* what happens when the social and the informational worlds merge; with the whole earth being simulated in Google Earth one can see what happens when the material realm is fused into informational form and through the modelling of the human brain onto a computer one can *study* the patterns that a human brain and a computer share. "That thing is educating you", Smart summed up this paradoxical notion that the same technologies that are causing confusion will train people to perceive and think in new, comprehensive ways.

High-tech Life in the San Francisco Bay Area

By means of a discussion of the Accelerating Change conference I have sought to give a first impression of an aspect of the technocultural environment in relation to which the discourse of New Edge has been shaped. The 'techno-ontological indeterminacy' that I described above, is a general theme in Bay Area technoculture. Its 'indeterminacy' lies therein that information technologies are simultaneously considered to be constitutive of a world that is 'out of control' and of the means that can bring this world back into control.

The two themes of the conference - the notion 'accelerating change' and the idea of the contemporary moment as an 'informational paradigm' - resonate with the daily lives of many Bay Area creative workers I met. In particular, the notions of living in an 'informational' environment that is also rapidly changing combined in an all-pervasive sensibility of 'information overload.' This sensibility characterizes for instance the nature of information technological work. One aspect of such work is that it is typically interdisciplinary. Development and research teams typically consist of people with a large variety of disciplinary backgrounds.[36] As the walls of the houses and offices of my interviewees, many of them aligned

[36] Electronics engineers and computer scientists but also people trained in ecology, physics, linguistics, art, law, cognitive and behavioral psychology, medicine, anthropology and economics cooperate in globally dispersed and institutionally overlapping teams. Psychologists, artists and anthropologists are hired, for instance, to work for computer science labs and corporations to study human-technology interaction and to work out how to translate technological problems and principles into 'user-friendly interfaces'; lawyers and economists study ways of applying copyright protection laws to the online informational space; programmers increasingly employ metaphors and insights from ecological and evolutionary biology to learn to orient themselves in a network environment that seems 'out of control', unoperable and unmanageable by one person alone and that can hardly be understood through logical thinking only. Also artists and science fiction writers are employed, given residencies or invited for 'lunchbreak lectures' at corporations or research labs to inspire new modes of 'creative' thought and practice as a way of coping with a fast-paced, complex technological environment.

with meters of books on highly varied topics, testify to; for team members this often means that they have to juggle lots of different perspectives, paradigms, epistemological assumptions, and disciplinary habits.

Another aspect of information technological work is that it is characterized by ongoing fluxes of hypes and downfalls. Typically, new corporations ('start-ups') form fast and may tumble equally fast; just as new products, innovative concepts and visions may translate into massive hypes for brief periods and just as quickly crumble into forgetfulness. To illustrate, in 2005 the memory of the so-called 'dot.com crash' was still fresh in the minds of those who had been employed in the late 1990s and early 2000s within the Bay Area 'creative industries.' These people qualified both the hype before the 'crash' and the collapse of the stock market itself as 'surreal', 'crazy', 'over the top' and 'insane.' One moment it seemed possible for CEO's of start-ups to organize costly corporate 'networking' or 'launch' parties financed by Venture Capital investors who believed a 'pet supplies delivery service' or an online monopoly game would reap large benefits; the other moment the ergonomic chairs and high resolution screens of such corporations were up for auction with their former owners looking for new housing. Only a handful of the computer engineers I met - only those who had become wealthy long before the 'bust' - were relatively unaffected.

The dot.com crash was an extreme expression of the speed with which innovative ideas, technical concepts and products are churned out by the high-tech industries of the Bay Area. At a more mundane level, other signs of the speed of hardware and software 'turnover time' can be found in the many warehouses, garages and Computer Museums of the Bay Area that are stacked with old computer hardware and computer paraphernalia (fig 2). These warehouses, garages and museums are sanctuaries for computer engineers who harbor an emotional connection to the products they engineered and for which there is no longer use on the market place.[37]

The understanding cultivated among the Bay Area creative elites that they live in a fast-changing, information-rich environment also informs the way that social relationships are shaped and maintained. Cross-cutting online and offline spheres, social networks of people keep each other informed, on a non-stop basis, about innovations, cultural trends and places to check out. Nik (1954), a graphics designer from Santa Cruz, copes with this felt necessity to keep up with 'what's new' by producing pages-long and never-finished 'To Do' and 'To Go' lists. (fig 3) The Open Source software developer Gary (1973) permanently interjects himself into the never-ending stream of information exchange by being - whenever and where-ever possible - logged onto several laptops at once, each of which opens up

[37] See also Finn, C. A. (2001). *Artifacts. An Archaeologist's Year in Silicon Valley*. Cambridge, Mass: MIT Press.

to several screens simultaneously. Another Bay Area friend told me that all the social and technical information that he receives gives him not merely "information overload"[38] but also "choice fatigue". The ongoing demands made on him as a software developer to choose from an endlessly expanding set of available technical solutions makes it extremely difficult for him to choose at all. A similar sense of 'choice overload' characterizes heavily mediated communicative moments during which there is an overload of choices regarding the information channels to 'tap into.' An example of such a moment can be found in the presidential elections of 2008.

In September 2008, just as the presidential election debates began between the candidates John McCain and Barack Obama, *Twitter* was just in the process of becoming a mainstream public media platform. In the months of the election, Twitter gave new impetus to the already heavily mediated social world of Bay Area computer programmers, social activists, media entrepreneurs, journalists and academics. One evening I watched the first debate between McCain and Obama together with thirteen other people. We had gathered in the house of Gary, who had two large screens in his living room. One was a large-sized television flat screen, which showed Keith Olbermann introducing and commenting on the debate on the news channel MSNBC. The other screen was projected on the wall above the television, by a beamer connected to Gary's laptop. On this screen we saw the website election.twitter.com, onto which an endless stream of comments relating to the debate scrolled down in fast speed. In addition to these two screens, thirteen other displays were in the room: on their cell phones, 'PDA's' (Portable Digital Assistants) or laptops, the friends exchanged thoughts on the debate with other circles of friends while also keeping track of business and other threads of chat they were involved in.

The experience was dissocational: while Obama and McCain were talking on the television screen, the laughter in the room, the expressions of indignation and the swearing going on, were not generally related to what Obama and McCain were saying. They were related either to the meta-commentaries that sped by on the beamed screen or to lines of communication that occurred on the personal media devices. This experience of dissociation was not merely my own: referring to both the speed of the communication and the impossibility to focus on single threats of discussion, one person present called the experience "somewhat of an ADHD experience". To him, this informational environment caused an experience of information overload. He told me to 'cope' with this overload by "scanning" all

[38] Recent discussions in the Dutch and International press about 'infobesitas' illustrate that Bay Area culture is not unique in this sense. (see for instance van Trigt. "Infobesitas is Nieuwe Ziekte" ["Infobesitas is New Illness"]. *Trouw*, 2010.

the information that came by and by only focusing on those threads that seemed particularly interesting.

As exemplified by the dot.com crash, the many to-do lists, the stacked warehouses and the many screens on Bay Area kitchen tables, as well as remarks about "information fatigue" and "ADHD communication"; for some, living and working in the high-tech industries of the Bay Area means having to cope with unmanageable information overload. This sense of unmanageable information overload manifested in turn in rather chaotic life-environments. Such chaos was reflected in the rooms, offices and cars of some of my interviewees (fig 4) and in the stories of displacement resulting from the dot.com crash.

At the same time I also observed quite some signs of the notion that information technology leads to a sense of increased understanding, clarity and control. Gary and the programmer Jonathan both told me how computers taught them 'critical thinking.' When you program, Jonathan explained, you have to think in terms of a system with formal, abstract rules. This invites a way of thinking that Jonathan calls "rational" and "objective". Another programmer told me how he likes to engage in meta-thinking and that ever more abstract "high-level" programming languages fulfill this purpose for him. This technique gives him a feeling of transcendence and meta-perspective. [39] Several of these computer programmers were quite enchanted by the Morrison Planetarium in the California Academy of Sciences that reopened in September 2008. Here the augmenting effects that information technology can have became instantly clear. Sitting in a 65 feet (19.8 meters) dome fully covered with digital projection systems, we were visually transported through the roof of the theatre, rising high above San Francisco, Northern-California, Northern-America and eventually entering space from where we watched the whole earth. "This", my friend remarked, "really gives you the big picture".

In the daily lives of those who work with information technology, it seems, information technology both has the significance of being dissociational and augmenting. Scholars of the 'information society' generally acknowledge only one of these cultural correlates of information technology: they either discuss the cultural correlates of information technology in terms of increased control, or in terms of loss of control. What seems to be the question in such academic discussions is whether these technologies reproduce the central tenets of modernity or whether they are constitutive of a new, *post*modern period.

In their discussion of the history of the information society, Kevin Robin and Frank Webster for instance uniquely discuss information technologies as the "mechanisms for social management, planning, and administration" and as being at heart of "surveillance and control strategies" (Robins and Webster 2004: 64). They

[39] Interview Dorien Zandbergen with Benjamin Feen, Pescadero, California, September 20 2008.

see the cultural effects of information technology to lie in the extent to which they continue the development of "modern social forms" (2004: 75). Other scholars, by contrast, evaluate information technology in *post*modernist terms, i.e. as uniquely capable of breaking away from a culture of control and of generating a cultural climate that cannot be held together by overarching 'grand narratives.' Mark Poster's *The Mode of Information and Postmodernity* (2004) is an example of such a validation of information technology. With other 'post-structuralist' and postmodern scholars like George Landow (1992) and Donna Haraway (1991), Poster celebrates the extent to which information technologies disable clear, unambiguous readings of reality. "Poststructuralist perspectives" enabled by information technology, Poster writes, promote "a new configuration of the subject that may be termed postmodern in the sense that it is structurally different from that of the modern era" (2004: 407).

In the context of the Accelerating Change Conference and in the brief examples that I gave of the daily lives of Bay Area technology workers, we saw how not only one of these, but both validations of information technology play a role in the way in which people relate to their technologically constituted environments. Two different techno-ontologies, linked to two different notions of the epistemological position of people, are at competition with one another. In the one techno-ontology, that brings out tendencies that are often thought of as constitutive of 'postmodernism', the technological world causes confusion and the human individual is not capable of rational comprehension of her environment. In the other techno-ontology, featuring tendencies that are often associated with modernism, technologies establish a sense of control and comprehension and constitute the human individual as rational and autonomous and as having a firm grasp of the objective conditions of reality. Taken together, these two cultural schemes create a cultural environment that is 'indeterminate' in the sense that one can endlessly shift between the two repertoires.

1.2. Studying New Edge

The New Edge epistemological ideal of cybergnosis, I argue, is shaped in close conversation with the techno-ontological indeterminacy that characterizes the general technocultural environment of the San Francisco Bay Area. If we want to understand *how* exactly cybergnosis is shaped in relation to this indeterminate techno-ontology, we first need to recognize the extent to which New Edge is a *subversive* discourse and gnosis a subversive epistemology. People who employ the New Edge discourse juxtapose themselves against a larger society that is, in the process, defined as representative of the 'mainstream' or dominant cultural form. More specifically, from the New Edge perspective this mainstream society is

accused of deliberately obstructing the possibility for people to discover the full nature of reality.

If 'gnosis' calls for the removal of externally imposed barriers against 'true understanding', it follows that when these barriers are differently defined, gnosis also obtains different ontological and epistemological qualities. Indeed, as we will see, depending on the particular axis across which distinctions vis-à-vis a mainstream society are defined, the New Edge points to different ways in which gnosis can be obtained and how technology should play a role in it.

Within the larger setting of the Bay Area technocultural environment, the New Edge assumes a special significance in two ways. In the first place, we saw that in the context of Accelerating Change there is more appreciation for the ordering and controlling qualities of technology than for the 'chaotic' ones: the confusion caused by technology was here denounced as a temporary state that will eventually be overcome by the opposite capacities of technology. By contrast, the New Edge also celebrates chaos and confusion as sacred qualities. Secondly, whereas a conference like Accelerating Change is predominantly focused on high-tech, the New Edge focus lies also on non-technological spiritual practices.

With a brief discussion of Homey, whose life I find exemplary of the shifting epistemological repertoires of New Edge, I illustrate how also chaos can be celebrated as sacred, and how spirituality can be made relevant to a high-technological life.

Homey's Technospirituality

Homey (1978) works as a programmer for the San Franciscan based Virtual Worlds Corporation Second Life. He has an ambivalent relationship with computers and with technology in general. On the one hand, he hates information technology for the way in which it gives him a sense of being out of control of his own life. Homey tells me that, having to juggle so much code at once and molding it into a more or less workable programming environment, he suffers "information fatigue". At the same time he uses this technology as a way of bringing his life back into control.

Homey's life in the computer world has many reverberations for his lifestyle. His work involves long days and weekends of tedious programming, with few breaks and unhealthy eating. Homey has struggled for quite some time with his weight and he is also a smoker. For a long time, Homey has wanted to transform the "unhealthy lifestyle" that he feels computer work imposes on him, but he expresses difficulty in doing so.

Homey's health is only one of various aspects of his life that he feels he should be able to control but feels unable to do so. It also accounts his financial life, his bookkeeping habits, and his material well-being. Both in appearance and in the way Homey talks about such aspects of his life, Home's life is chaotic. His personal technological items - his notebook, his phone, his car, his bike - are broken most of the time yet 'patched up' enough so that he gets by in creative ways. In his bedroom it is often difficult to discern the contours of his mattress underneath the pile of

books, clothes, food, cigarette butts and other rubble. The same goes for his car that is littered with torn work contracts, pieces of manuals of machines or software programs, with pills and coins, with food and clothes and more cigarette butts each day. And in financial terms, Homey has not yet hit a steady curve up the mountain of big wealth. He has known periods of "surreal", as he calls it, financial well-being, as well as periods of deep financial downtimes.

Homey regularly tells me that he needs to get his life "in order". He wants to lose weight, quit smoking, be financially independent, be more focused, have a peaceful mind, and he wants to have more time to travel. There are many tools and techniques that Homey employs to invest in these goals. Some of these tools and techniques involve scientific software, others can be characterized as New Age-related therapies.

With respect to the first, Homey is always interested in new 'gadgets' that help him visualize and analyze his lifestyle behavior. The latest gadget that Homey wrote me about was a device that "tracks your metabolic rate in real-time". As he wrote in an email: "it will display a nice graph of it, which was really useful for me. I was able to see that sitting down in a chair is pretty much metabolically equivalent to being asleep".

Besides this technoscientific equipment, Homey also relies on the special perceptual capacities that he has developed in the course of trainings he once received at the 'School of Magick' in Albuquerque. Although Homey does not really "belief" in magic, he says, he cannot ignore his extraordinary vision. Homey has telepathic capacities: "I feel what people feel, feeling other peoples bodies, their pain, their joy, their emotional states". Late at night when he returns home with his car in the busy San Franciscan Mission district, his special sight helps him find parking spots. Even though accidental use of the wrong cleaning substance has made his front windows irreparably difficult to look through, particularly when it is dark, Homey simply "knows", in a way he cannot rationally explain, where to find parking relatively quickly.[40]

Homey thus embraces spiritual and technological techniques as augmentation tools amidst unwanted chaos. There is however also a very different component to his technological and spiritual interests. In addition to wanting more control, Homey also uses technology and spirituality as a way of celebrating chaos. Chaos, in Homey's life, is not only an unwanted state of affairs that he needs to get rid off, but Homey also celebrates chaos, literally, as a sacred entity. Homey is, for instance, affiliated with two 'churches', both of which celebrate 'chaos' and 'confusion' as sacred qualities. One of them is a parody cult, called the *Church of Subgenius*, the other is more 'serious' and is called the *Discordian Society* - in reference to 'Discordia', the 'Goddess of Chaos.' Both 'cults' were founded in the late 1970s, and since then, under the auspices of both, surrealistic, chaotic 'happenings' have regularly been organized across the USA. Homey told me of one meeting organized

[40] Of course, I am not the one to judge whether Homey 'really' has magical powers or not or whether 'magic' objectively exists. It does so for Homey as for many others we will encounter in this dissertation.

by enthusiasts of the Church of Subgenius. In a hall in San Francisco, lots of 'weirdo's' allowed for the 'spontaneous emergence' of chaos. There was a stage where participants could perform any kind of weird ritual that would come to their minds. Homey told me that he got on stage, undressed and dripped fake blood all over his body. At one point, Homey passed out, being literally out of control, a state of being that no one in this church would call an ambulance for.

When I asked Homey about this celebration of chaos and disorder, he told me it had everything to do with deconditioning and with the desire to be as weird as possible. Homey:

> The Church of Subgenius is really concerned with group behavior, with society that adheres with norms more than with reality, and it is about investigating the question what happens to you when you don't subscribe to any norm, any norm at all. It is a kind of experiment, and so a lot of people are attracted who are really really weird. Like, there is one woman who was a prostitute for many many years, and another guy who is this small midget, and there is also a geek concentration here, a lot of nerds. But still, they are not like other nerds.

Homey's alternating celebration of chaos as an unwanted state of affairs and as a sacred ontology, link to two different ways in which he experiences empowerment. Homey's scientific gadgets as well as his magical capacities empower him by offering him a sense of control amidst otherwise chaotic daily circumstances. At the same time, his deliberate embrace of 'weirdness' and his celebration of Chaos as a sacred entity in a setting like the Church of Subgenius empower him by offering him a way out of conditioned, externally ordered everyday reality.

Homey's technospiritual epistemological shiftings are illustrative of New Edge. In Homey's life as well as in the New Edge cultural environment at large, both technological and spiritual techniques, both augmenting and dissociational, play the empowering role of enabling true perception and deep understanding. In the following I discuss how augmentation and dissociation are the components that characterize the epistemology of New Edge at large. I do so by discussing the ethnographic environment in which the New Edge discourse finds its full expression: 'rave culture' and the magazine Mondo 2000.

Rave Culture

One way of understanding what a 'rave' is, is to think of it as a semi-legal big party, with electronic music, high-tech visuals, lighting and synthetic drugs. Raves have also been described to me in other terms: 'Bill', the founder of a rave community was adamant in calling raves not 'parties' but 'celebrations.'[41] Raver Gary refers to raves as a moment of reconnection with his "community".[42] And many participants of contemporary 'raves' avoid the use of the term 'rave' altogether because of its

[41] Conversation with 'Bill', San Francisco, August 8 2008
[42] Conversation with Gary, San Francisco, August 8 2008

association with commercial events and nightclubbing.[43] What is important for my understanding of raves is that they form occasions where gnostic spirituality is celebrated in proximity to high-tech experimentation.

Around 1985, raving became a global popular cultural phenomenon that was strongly influenced by the introduction of the synthetic 'love-drug' ecstasy (XTC) and electronic house music. In places like Ibiza, London, Manchester, Berlin, Amsterdam, Dallas, Chicago, Los Angeles and San Francisco raves were organized as underground events in abandoned warehouses, garages or open-air environments in the countryside or on beaches. A rave could last from one to several days and nights. By 1989 British ravers had migrated to California, and particular the 'Zippie' (which stands for "Zen inspired pronoid[44] pagan", Graham 2004: 220) Fraser Clark is credited as being an early and influential proselytizer of rave culture in California (see also Fritz 1999; Hesmondhalgh 1998; Collin 1997).

Tense debates have ensued among Californian ravers who have been part of the foundational moment of raves (they call themselves ironically "geriatric ravers") over the authenticity of contemporary raves. In the context of 'house parties' or 'club nights', raves have been transformed into commercialized mass-events, thereby losing their association with cultural subversion and authenticity.[45] Currently, such debates shape also the narratives around the *Burning Man* festival. 'Burning Man' is organized each year in the Nevada desert and has attracted up to 50.000 attendees in recent years. A significant portion of its participants is drawn from former 'rave collectives', hence Burning Man can be considered one large rave: in the course of ten days, tens of thousands of people move around in this temporary 'city' that is 'interactive' with its many mechanical and electronic art-installations and that, at night, houses many 'villages' where DJ's 'spin' their music and VJ's ('Visual Jockey's') present their visual art. Many of these former rave participants see in Burning Man a potential continuation of the smaller events that they organized two decades earlier.

---

[43] I will continue to use the term 'rave' to describe one of the ethnographic homes of New Edge, because of the continuity that can be traced, particularly with regards to its subversive narrative, between electronic-music events in the late 1980s and early 1990s - which were then called 'raves' by participants - and the contemporary electronic-music events that I studied.

[44] The term "pronoia" has allegedly been coined by Fraser Clark as denoting the opposite of paranoia. I will discuss this term in more detail in the chapters two and four.

[45] See for extensive accounts of such debates for instance: Collin, M. (1997). *Altered State. The Story of Ecstasy Culture and Acid House*. London: Serpent's Tail; Hesmondhalgh, D. (1998). Review: Club Culture Goes Mental. *Popular Music*, 17 (2)(2), 247-53; Graham, J. (Ed.). (2004). *Rave Culture and Religion*. London: Routledge.

"Letting Go": Gnostic Realizations at a Rave

Each year, prior to the Burning Man festival, hundreds of 'pre-Burning Man' events are organized all over the USA (and elsewhere) by the individual 'camps' or 'villages' that have a presence on 'the playa', the area in the Nevada desert where the festival is organized. These pre-Burning Man events are often fundraising events, helping the organizers to buy equipment, food, water and art supplies for the festival. They are also occasions where one can get to know the people of the camp and 'tune into' the Burning Man 'vibe' in anticipation.

In 2008 I attended a pre-Burning Man event that was organized by a camp that some friends of mine considered joining. The event was organized near a beach south of Santa Cruz. When we arrived, some people were dancing, others were ‘lounging' on benches or in the caravans that they had brought with them and parked on the terrain in front of the venue. Walking past one of those caravans, I saw two men and two women lying on comfortable cushions inside. They were all heavily dressed-up with glitters, feathers and floppy hats. My friends knew one of them, and we were invited inside.

The group had just been in the middle of a conversation about spiritual transformation. One woman, who told me she was an artist, told us about a major spiritual break-through she recently had. All her life she had thought that 'suffering' simply is part of life. Teachers of her art-school had told her for instance that in order to create meaningful art, one has to have suffered. Recently, however, she had met "this charismatic guy", who had asked her: "Are you willing to let go of that part of your story?" The question had bugged her for weeks, but finally it had hit her: all that time she had been holding on to a false understanding of reality, an understanding according to which suffering was necessary in order to have a meaningful life. The remark of this man made her realize that it wasn't necessary to suffer in order to be happy, and that she could simply 'let go' of this idea. When she 'let go', she said, she felt so much lighter: "I told my Christian neighbors that I had found God", she said smilingly.

The experience that the woman shared with us is typically gnostic: she postulates her prior self as having been imprisoned by a false consciousness. Her contemporary self, after the 'realization' is a 'liberated one', one that is free from the ballast of self-imposed suffering. The woman self-consciously describes this transformation as 'finding God', now she is at one with whom she originally is meant to be. In this narrative, the 'archons' - the forces that have inhibited the woman from seeing the true reality - are identified as 'rigid thought systems', systems that she had taken for granted in the course of her upbringing and socialization. The gnostic experience itself is postulated as one of 'breaking through' and 'letting go', thereby freeing aspects of herself that had thus far been suppressed (e.g. Heelas 1996: 18, 19).

This example shows the presence of gnosis in the environment of raves. In this particular example, gnosis is not manifested as an attribute of technology, nor is a rave brought into view as a particularly technological event. Because various ravers consider technology to be quite an essential aspect of raves, however, a rave offers a cultural context in which gnosis is easily wed to high-tech. This 'marriage' however, is not sealed in a very straightforward way. Gnostic insight is associated both with 'deconditioning' and with controlling technologies, and tied to each understanding of gnosis is a different image of the way in which a conventional society obstructs gnosis.

In order to show both these sides of the cybergnostic experience as fostered in the context of raving, I will discuss how the magazine Mondo 2000 associated itself with raving - as well as with 'cybergnostic' technologies in general - in this ambiguous way. I will first sketch some of the cultural background in which this magazine was founded.

Mondo 2000

Ken Goffman, whom I first met at Mindstates 2005, came to California in 1982, when he was in his early thirties. After obtaining a major in English literature at Rochester University, Goffman wanted to pursue a career in fiction writing and won an award from New York state University to obtain a masters in fiction at Berkeley University. Prior to coming to California, he didn't know much "in particular" about Silicon Valley, but had a sense that the "psychedelic culture was happening here".[46] From the outset Goffman intended to launch a "psychedelic magazine". He put some advertisements in various local newspapers looking for people who wanted to work on the "neo-psychedelic magazine". One of the people who reacted was Mark Frost with whom he hit off the first issue of *High Frontiers* which they announced as "a space age newspaper of psychedelic science, human potential, irreverence, and modern art". Goffman took the name 'R.U. Sirius' and Frost adopted the name 'Sumerset Maomao.' The magazine published interviews with people such as Albert Hoffman (Swiss scientist who first synthesized LSD), Terence McKenna and Timothy Leary (both representatives of the psychedelic counterculture) about psychedelics.

The first publication of *High Frontiers* attracted a specific audience that would form the editorial staff for the subsequent issues of High Frontiers, which would later transform into *Reality Hackers* which eventually became *Mondo 2000* (fig 5). In between the latter two magazines, Goffman ‘hooked up’ with Allison Kennedy, who gave herself the name ‘Queen Mu’, with whom he shaped *Mondo*

[46] Interview Dorien Zandbergen with Ken Goffman, Mill Valley, California, September 2005. Unless noted otherwise, all subsequent quotes by Goffman in this section on the history of Mondo 2000 are drawn from this interview.

2000 and who brought Goffman in touch with an even wider circle of technologists and scientists and psychedelic explorers. Goffman: “she was a great hostess, throwing parties and she had lots of friends". Some of the people 'Queen Mu' introduced into the sphere of the magazine were NASA engineers, others were quantum physicists or computer hackers. "When we published our 2nd issue in 1985", Goffman recalls, "we were invited to a lot of parties in Silicon Valley where the people who were making computer culture were hanging out". As Mondo historian Jack Boulware wrote: 'There was little division between Mondo House living, Mondo House parties,and Mondo the magazine. Mondo partied with the people it wanted to write about and have write for the magazine.'[47] Some of these parties were full-blown raves, many of them organized in the abandoned warehouse *Toon Town*. Other such parties took place in the homes and offices of the San Francisco Bay Area.

A small group of regular contributors formed in this period. Some of them were people who had written for the Whole Earth Catalog, such as Stewart Brand and Kevin Kelly, others were John Perry Barlow (former lyricist of the Grateful Dead and co-founder of the ‘free speech’ organization the Electronic Frontier Foundation in the early 1990s); Timothy Leary and Terence McKenna (psychedelic ‘guru’s’), Robert Anton Wilson (conspiracy theory and science fiction writer); Bruce Sterling and Rudy Rucker (‘cyberpunk’ authors); ‘St. Jude’ aka Jude Milholn (former hacker and 'computer activist' in the 1970s); Nick Herbert (‘fringe scientist’); Bart Nagel (art director); Jas Morgan (Music and Art director); Duke Pearson & Sandy Shaw (experts on ‘smart drugs’), technology reporters Gareth Branwyn and Allen Lundell and culture critic Mark Dery. Most of the pages of the magazine were filled with articles by this incrowd group; with interviews conducted among each other (position of interviewee and interviewed changed regularly); and with interviews by Mondo interviewers with a special guest – such as Cryogenics experts[48], musicians such as Dee-Lite, Smashing Pumpkins, Talking Heads or other artists, writers, security experts and scientists. Each issue had at least 100 pages – and many were over 150 – each of which contained a tremendously wide variety of subjects, themes, issues and opinions – varying from life-extension to ‘designer drugs’, conspiracy theories, virtual reality, computer security, heavy metal, fashion and the Iraq war.

---

[47] Boulware, J. (1995). *Up and Down With the Next Millennium's First Magazine*. http://www.totse.com/en/ego/literary_genius/mondo2k.html. Retrieved November 15, 2010.

[48] Cryogenics is the study of behavior of materials at extremely low temperatures. For Mondo 2000 Cryogenics was relevant in the context of the activities conducted by the *Cryonics Institute*. This institute uses insights and techniques from cryogenics to preserve the bodies of deceased people by infusing them, as their website states, with a "substance to prevent ice formation, cooled to a temperature where physical decay essentially stops" and by storing it "indefinitely in cryostasis (ie, stored in liquid nitrogen) (http://www.cryonics.org. Retrieved July 2009).

According to Mondo-historian Jack Boulware (1995) *High Frontiers* started out with a circulation of 1,500 issues which grew out to 15,000 to nearly 100,000 circulations when it became *Mondo 2000.* [49] Mondo announced itself as a quarterly magazine but published very irregularly and only started to publish quarterly since 1992.[50] In this year R.U.Sirius and cyberpunk author Rudy Rucker also edited a compendium of the Mondo 2000 magazines, called *Mondo 2000. A User's Guide to the New Edge*. In early 1993 RU Sirius left the magazine but he continued contributing articles. The last issue of Mondo 2000s appeared in 1998.[51]

"The Sound of Panting"

One image that was generally conjured up in Mondo 2000 was that of a world out of control. Information technology featured thereby as one of the causes for this situation. For example, the Winter issue of 1991 features an interview with entrepreneur Mitch Kapor and former psychedelic hippie John Perry Barlow, who go so far as to compare the experience of living in an information technological society to a psychedelic trip. Whereas, according to Barlow, in the 1960s only a small group of people was "dislocated" because of their experimentations with psychedelics:

> (...) now we're talking about that dislocation that occurs when an *entire* society looks up and finds that it doesn't know where it is, and it doesn't know how anything works anymore, and doesn't know how to deal with the reality that most of the standard, nurturing concepts that have managed to provide for us since the Neolithic Age-things like place and embodiment and community-are basically suddenly gone.[52]

More recently, in a collection of interviews held by R.U. Sirius with science-fiction authors, scientists and technologists, *True Mutations* (2006), the science-fiction author Robert Anton Wilson argues:

> (...) the acceleration of change is coming faster and faster all the time. There are more patents every year; more internet websites opening every month ... change is happening faster and faster everywhere. (...) By the time I learn about a model to the point where I can talk about it, I have to replace it with a new one. It gets harder as

---

[49] Boulware, J. (1995). *Up and Down With the Next Millennium's First Magazine*. http://www.totse.com/en/ego/literary_genius/mondo2k.html. Retrieved November 15, 2010.

[50] The first issue of Mondo 2000 – an issue that numbered '7' because the editors counted upwards from Mondo's predecessors *Reality Hackers* and *High Frontiers* - was published in the Fall of 1989. The second issue (which was numbered issue '2' as well as '8') came out in the Summer of 1990 and issue no. 3 (also numbered '9') in the winter of 1991. The next issue is neither numbered nor dated. In 1992 issues 5-8 were published.

[51] For this analysis I use the magazines 1-3, 5-11, 13 and 15 as well as Rucker, Rudy, R.U. Sirius, and Queen MU, (eds.) *Mondo 2000. User's Guide to the New Edge*. London: Thames and Hudson Ltd, 1993.

[52] Mondo 2000 Issue 3 (also numbered #9) Winter 1991: 46.

> you get older. Isaac Asimov wrote an article called "The Sound of Panting". It's about how it's harder and harder to just keep up with his own field which is biochemistry (...) (2006: 248).

Wilson doesn't even hold on to the model of the singularity, proposed by Vinge and Kurzweil as a model that grasps accelerating change, because also "the models are changing so rapidly" (Ibid.).

Whereas these observations point to technology and science as forging an increasingly complex, fast-changing reality, the New Edge discourse of 'out-of-controlness' is formed in close conversation with the New Age understanding that there are also processes outside of technology that propel a rapid evolution of consciousness. This notion is illustrated by Daniel Pinchbeck, a speaker for conferences on psychedelics, such as Mindstates. At the *Synergenesis* conference – a conference that overlaps in organizers and attendees with Mindstates – Pinchbeck presented the audience with an evolutionistic vision that is similar to Ray Kurzweil's idea of the singularity. However, where Kurzweil attributes the anticipated transformation to intrinsic qualities of technology and science, Pinchbeck discerns a transcendental process that extends beyond technoscience. In his talk, entitled *Channeling the Galactik*, Pinchbeck told the audience how he underwent a shift from a "materialist worldview" to a "shamanic one", and how this was the result of his encounters with Hopi Indians and other "tribal groups" such as the Bwiti of Gabon and the Secoya in the Ecuadorean Amazon. Also, the intake of psychedelic substances, his participation at various festivals such as Burning Man, his interest in crop circles and the Mayan calendar and his readings of countercultural guru and mushroom expert Terrence McKenna made him realize that "the shamanic and mystical view of reality and the intuitive and supersensible elements of reality have validity", and that "humanity is experiencing an accelerated process of global consciousness transformation, leading to a new realization of time and space and, possibly, a harmonic planetary civilization within the next six years".[53]

The New Edge discourse is thereby characterized that it does not exclude anyone of these readings of transformation. A statement made by Terrence McKenna in his book *The Archaic Revival* (1991) is therefore typical of New Edge. "The transformations of consciousness", McKenna writes, "are simultaneous with the transformation of technical culture. These two are, in fact, expressions of each other" (McKenna 1991: 32). The New Edge idea that technological and psychedelic culture are expressions of one another translates into different cybergnostic practices, premised on differing ideas of what it is that obstructs true knowledge and what the 'true reality' is composed of. In the following I discuss

[53] Pinchbeck, Daniel. *Channeling the Galactik*. Presentation for Synergenesis, October 8 2005, San Francisco.

these differences through the juxtaposition of the New Edge celebration of 'dissociation' and of 'augmentation.' Techniques of dissociation, I argue, are typically employed to celebrate 'chaos' as the true nature of reality, and to reject a mainstream cultural environment that allegedly employs technology as a means of cultivating false notions of order and control. Techniques of augmentation, in addition, are typically employed to celebrate meaningful order ('patterns') as the truth that underlies apparent chaos, and to reject a mainstream cultural environment that allegedly cultivates ignorance and chaos and that discourages people from seeing these meaningful patterns.

Opposing Factory Culture

> For several thousand years it has seemed obvious that the basic nature of the universe is extreme complexity, inexplicable disorder-that mysterious, tangled magnificence popularly known as Chaos. The poetic Hindus believed the universe was a dreamy dance of illusion *(maya)*. The paradoxical, psycho-logical Buddhists spoke of a void too complex-maybe a trillion times too complex-to be grasped by the human A-B-C-1-2-3 word-processing system *(mind)*. (...) The standard way to tame and domesticate the impossible complexity that surrounds us is to invent a few "tooth-fairy" Gods, the more infantile the better, and to lay down a few childish rules (...) The rules are simple and logical. You passively obey. You pray. You sacrifice. You work. You believe (Leary 1994: xiii).

In this celebration of Chaos by the former psychedelic hippie Timothy Leary in his book *Chaos and Cyberculture* (1994), Leary accuses religion of institutionalizing false, and simplified notions of reality. Moreover, Leary resists the way in which technology is used in mainstream society to maintain order and control. To refer to this use of technology, Leary uses the notion of "Factory Culture" and juxtaposes it against a 'subversive' "Cyberculture" or "Chaos Culture". In the dominant 'Factory Culture', information technologies are employed in an outmoded way, in a way more fitting to an "industrial age". The 'industrial age' is driven by "Newtonian Law-and Order" and by a culture that is "institutionalized, socialized, formalized". With 'cyberculture' Leary refers to people such as Virtual Reality pioneers, ravers and readers of Mondo 2000 who are comfortable with the post-industrial disorder offered by information technologies. Leary feels closely affiliated with this cybercultural environment because his ultimate purpose is to be freed from 'Factory Culture brainwashing', and to appreciate chaos and complexity without seeking to impose rules and interpretations onto it. It is this epistemology that Leary values in immersive environments such as raves and Virtual Reality. In these environments, he writes, "we don't know who, why, where, what, when we are" (1994: xiii, xv).

In a rave manifesto published in the early 1990s by the raver 'Ken' (1957), a similar distinction is evoked by means of different metaphors. Ken juxtaposes rave culture against a technocultural order that he characterizes as 'C3I' - it is a 'Dominator culture' that is guided by the paradigm 'Command, Control

Communication and Intelligence.' C3I, Ken writes, was developed as a way "to manage and control everything from the outcome of battles to the deployment of disaster forces, to the missions of the space shuttle". C3I is "vertical control structure" and Ken celebrates rave culture as the chance to "transform and mutate this technology of control and domination" into one that fosters a non-vertical culture. In rave culture, by means of "creative and dynamic use" of information technologies each person will "be 'individually responsible for their piece of the whole".[54]

Leary and Ken's emic sociologies are characteristic of a larger New Edge resistance of a 'mainstream' cultural environment that seems unable to cope with complexity and chaos. In his interview with Goffman in *True Mutations* (2006) the science fiction author Robert Anton Wilson evokes just such a discourse by saying:

> Most of the culture here is running on a sheer terror of how rapidly things are changing. (...) People are screaming, "Go back go back! Let's have simple answers". It's very difficult to have useful answers to everything that's going on. There aren't simple answers. Things are complex. We need precise knowledge of complex systems. We don't need simple answers. Most of the public wants simple answers (...) (2006: 249, 250).

In showing comfort with chaos, complexity and incomprehensibility, New Edgers like Leary, Ken and Robert Anton Wilson situate themselves ahead of an alleged 'stagnant' mainstream culture and at the heart of an alternative sub-cultural environment positioned on the forefront of a rapidly changing world.

Bypassing the Reducing Valve

In the New Edge discourse, it is not only a stagnant mainstream culture that is blamed for concealing true reality in everyday life. Blame also befalls the human brain. In *Mondo 2000. A User's Guide* (1993) Ken Goffman writes about the 'filtering' function of the brain:

> When too much information enters the brain, it becomes difficult to focus on basic tasks. One might, in the rush of vastly fascinating and complex mindstuff, put the baby back in the refrigerator and the turkey in the crib (1993: 202).

Goffman argues that these "limits to information", are "important to us" but may also be accountable for the "overall "smallmindedness" of modern man". (Ibid.) Goffman compares this view to what has earlier been proposed by the British author Aldous Huxley (1894 - 1963) in his *Doors of Perception* (1954). In this collection of essays, Huxley advanced the idea that in normal, everyday life humans use only a fraction of their full cognitive potential. Huxley cited the "eminent Cambridge philosopher Dr. C.D. Broad" who had stated that: "The function of the brain and nervous system and sense organs is in the main

[54] http://www.essentia.com/book/inspire/cybertribe.htm, retrieved November 12 2010

eliminative and not productive". (Huxley, 1961 [1954]: 21, 22) Following Bergson, Huxley depicted the human brain and nervous system as a "reducing valve" which only allows a "measly trickle" of consciousness. According to Huxley, this "reduced awareness" is taken by most people to be the one and only reality.

Just as Huxley did in his *Doors of Perception* - which was a collection of essays about his experiences with the psychedelic drug mescaline - so does Goffman celebrate psychedelic drugs as the tools that can 're-open' the human reducing valve. Goffman writes that one might "look upon psychedelics as temporarily allowing the human brain to process greater quantities of information". (1993: 202) It is this celebration of psychedelics as a tool that allows large quantities of information to be processed by the brain, that forms an important component of what Goffman calls the "deep and subtle relationship" between "psychedelic drugs and the New Edge culture". (Ibid.) Both psychedelics and high-tech are embraced within 'the New Edge culture' as techniques whose dissocational effects bring people closer to an understanding of the full, chaotic nature of reality.

Celebrating Dissociation: Raves, Rollercoasters and Virtual Reality

The New Edge celebration of dissociational techniques need to be understood against the background of this resistance against a 'Factory Culture' and the 'reducing valve' of the brain. Psychedelics and intrusive dissociational technology are embraced for the way that they work as deconditioning techniques, bringing people into a state of 'not-knowing' and freeing them from simplified versions of reality. This celebration of dissociational techniques, to a significant extent, also informed the Mondo enthusiasm for raves.

One of the rave venues where the 'Mondo crowd' could be found regularly in the early 1990s was Toontown in San Francisco. On a 'Rant and Rave evening', organized by Mondo-founder Ken Goffman in 2005 as a moment of historical reflection on 'rave culture', one organizing member of the Toontown raves, 'Earth Girl' was present. In her reflections, Earth Girl illustrated the extent to which raves were seen as technological unreflective environments. In particular she emphasized the capacity of loud intrusive music to silence thought: "You are not ... you *can't* think because the music is kind of taking over that aspect". [55] In another comment on raves, a raver writes how through the "all-night long pulsation of bodies to the same sound source", rave culture creates a context "where layers of armoring and conditioning are shed, where those willing can find the joyful and mysterious realm of their bodies free of oh-so many enculturated egotrips and bullshit".[56] Numerous

[55] "Rant & Rave: Dance Culture -- Past, Present and Future", an evening of reflection on 'rave culture, organized by Ken Goffman in the Community Center of Mill Valley.

[56] Rave Manifesto entitled *The Imaginal Rave* written by 'Cinnamon Twist', date unknown but estimated by one of my 'raver informants' as an early 1990s publication. Re-published online

other celebrations of raves, published for instance on the website 'Hyperreal',[57]perceive raves as unreflective, dissociational environments, and intrusive technology plays thereby a key-role. One commentator describes the high-tech set up of a typical rave:

> (...) the 200-ft wide, screens drenched with projection, the 10-watt green lasers bouncing off the disco balls giving the effect of laser rain, the miles of fluorescent tubing, the computer graphics which can blow your mind away.[58]

These technologies, the writer concludes, are a "very large part of the 'mindfuck' factor of raves" (Ibid.). In such accounts of raves, the event is presented as a full-blown high-tech event. The speed of the musical beats, the visual bombardment of the color polygones on the screens, the pulsation of the sounds and the frequency of the lights are all generative of a cybergnostic experience: when immersed in this loud, intrusive, confusion machinery, the brainwashing mechanisms of society are replaced by an experience of reality that is much more real, acute and sensible.

In the context of the magazine Mondo 2000 an appreciation of confusing technologies extended beyond raving alone. In the winter issue of 1991 a certain 'Louis M.Brill', for instance, writes ecstatically about rollercoasters in theme parks:

> Rollercoasters have become high-tech. This means faster cars, cars that go backwards, more imaginative track layouts, overhead gondolas, and coasters in which patrons, safely coupled to the ride car, actually stand up. The rides are not only pushing the physical limits of track physics, but they're also pushing the limits of a more elusive envelope-reality (1991: 20).

Also psychedelics are celebrated for their 'deconditioning' capacities. In his speech for Mindstates, Lorenzo Hagerty says:

> (...) Psychedelic thinkers never assume that their current answers are final (...) people who believe they have uncovered the one and only answer to the eternal mystery of life form religions. Psychedelic thinkers have developed the ability to move beyond such earthly absolutes. [59]

Here Hagerty identifies the psychedelic experience as one that makes people comfortable with 'not-knowing.'

Celebrating Augmentation

The New Edge celebration of raves, rollercoasters and psychedelics seems informed by an embrace of 'not-knowing', of acceptance of chaos and complexity and of a rejection of modernist forces in society that seek to impose a 'factory culture' of simplified reality onto an actual 'raw', chaotic existence. Technological

---

November 8, 2008 http://www.gashaus.com/component/content/article/55.html, retrieved October 15 2010

[57] http://hyperreal.org/, retrieved October 8 2010

[58] http://hyperreal.org/raves/altraveFAQ.html, retrieved November 12 2010

[59] Psychedelic Thinking, Lorenzo Hagerty at Mindstates IV held at Berkeley 2001

environments like raves and 'tools' like psychedelics are, in this sense, embraced for their deconditioning, dissociational effects. This celebration of dissocation is counterbalanced by quite a different New Edge epistemological attitude: its validation of techniques of augmentation that discern the deeper truth underneath apparent chaos.

The paradox that these two epistemological approaches manifest is illustrated in the Mindstates 2001 speech of Lorenzo Hagerty. Above, from this speech I quoted Hagerty's statement that psychedelics are tools that teach people that answers can never be "final". In the very same speech, Hagerty also celebrated the way that psychedelics give an experience of "absolute truth":

> While in deep entheospace[60] there is seldom any doubt about what we know to be true, and this knowledge comes from the deepest levels of our being. (...) that wonderful time in deep entheospace when you absolutely know the truth. (...) It is this higher state of consciousness that brings us to the clear realization that our personal concerns are intimately entwined with the fate of the planet and of our species. It is in this dimension, where psychedelic thinking is considered baseline, that we will eventually uncover the truth about our existence and our reason for being. [61]

This latter embrace of psychedelics as bringers of higher understanding is an example of a general New Edge embrace of augmentation techniques. The New Edge infatuation with smart drugs stands symbolic for this.

When I first met Ken Goffman he was operating at Mindstates as a vendor of 'designer food' and 'smartdrinks.' The term 'smart drugs' already explains a lot of what these chemical and organic substances intend to do: it is a generic term for chemicals or nutrients, injected in drinks, powders or pills that are sold with the intention of making the user 'smarter.' 'Smarter' hereby generally refers to the augmentation of both mental and physical capacities. In the aforementioned collection of interviews *True Mutations* (2006) Will Block, CEO, President and Founder of Life Enhancement Products, calls the "mental and physical enhancement nutrient formulations and personal care products" that he produces "nootropics" (Goffman 2006: 141). Nootropics are "substances that enhance intelligent, purposive consciousness (*noos* = consciousness, *trope* = a turning)". When you ingest smart drugs, so is the message, you are better able to grasp reality, to make fast, complex connections in your brain, to perform multiple tasks, to focus and think straight.

Ever since its founding, Mondo 2000 became a platform for the advocacy and sale of smart-drugs. In particular, the magazine advertized the 'designer drugs'

---

[60] Hagerty defines 'entheospace' as "the sense of place that you feel when you do a real inner exploration of your inner landscape" (Psychedelic Thinking, Lorenzo Hagerty at Mindstates IV held at Berkeley 2001)

[61] Ibid.

that were created by the couple Durk Pearson and Sandy Shaw. In an advertisement placed in the third edition of Mondo2000 (Winter 1991), a picture of the couple - dressed in lab coats holding plastic containers in their hands - accompanied the text:

> We formulated our psychoactive Designer FoodsTM for our own daily personal use. We wanted to make our brains function better: to have more energy, to work longer and harder days without being tired out, and to play harder during the evening (Mondo 1991: 18).

Pearson and Shaw's smart drugs are thus celebrated for the extent to which they give the user physical and financial control. Another advertisement of 'designer drugs' exemplifies the extent to which these 'tools' purport to enhance also perceptual and cognitive capacities. The Summer 1990 issue of Mondo 2000 featured an article on smart drugs by John Morgenthaler, founder of the Cognitive Enhancement Research Institute (CERI). In it, Morgenthaler described how one particular type of smart drug, 'Piracetam' had enhanced his ability to listen to music:

> Last year a friend took me to hear Sun Ra and his Intergalactic Arkestra as a birthday present. I had just received a bottle of 800 mg tablets of Piracetam from Interlab. My friend and I each took NINE of the tablets (...) before entering the hall. The music began thirty minutes later. I found myself able to concentrate as never before. I was completely lucid with absolutely no sense of intoxication. (...) For the first time in my life I could hear each individual horn's timbre (Sun Ra has about ten horn players, often all playing massed harmonies). I was enthralled (Mondo 1990: 150).

Smart drugs are thus celebrated as 'technologies' that enhance cognitive as well as perceptual ability - it helps people to hear, see, think and focus better.

This celebration of augmentation techniques is characteristic of a larger New Edge cultural environment in which both psychedelic/spiritual and technological techniques are embraced as a way of gaining a deeper understanding of the truth. With respect to such high-tech techniques, Mondo 2000 advertised for instance software programs that help you draw a "mind-map" of your personality, that "generate ideas" for you, or that generally work for "self/enhancement". With respect to psychedelics, the psychedelics advocate and computer engineer John Gilmore illustrates the New Edge notion that psychedelics can have augmenting effects. He depicts them as tools that help him "understand the rules about himself":

> You really get a good use out of psychedelics if you can see those internal processes when you are using the drug and you can bring some of those insights back to watch how you act in normal life. (...) It is a way of insight in a literal sense, of seeing inside yourself, understanding yourself better. In a lot of ways I think that life really

> is a journey of insights, of getting to know yourself, not so much the world but yourself, you and the world are interrelated.[62]

The raver and computer programmer Gary told me about an instance in which technology and psychedelics converged in their augmenting effect. He told me about a mailing list that was active in the early 1990s. Gary:

> People who were subscribed to this list, called the 'Leri-list', were under the influence of all kinds of drugs and [they would] basically talk about it. They were doing all kinds of experiments - changing the setting in which they took it, changing combinations of different kinds of drugs etc. - to see how this would affect them and how it would help them bring out a different understanding of themselves. The premise of the list was 're-programming': you would discover the rules about yourself and learn how to change them.[63]

For a certain rave DJ who wants to remain anonymous, his musical performances at raves were not merely aimed at creating dissociational settings. For him, they were also experiments of social control. It gave him an incredible feeling of power and control when the large crowd in front of him on the dance floor reacted ecstatically to the slight changes in music produced by him.

Opposing Anchors On Development

Whereas the New Edge celebration of dissociation and chaos is opposed to a 'factory culture' that uses technologies to impose a false sense of order, the New Edge celebration of 'smart drugs' and augmentation techniques in general is posed against a larger society that inhibits technological and scientific self-exploration; a political culture that, in other words, wants to keep its citizens ignorant.

Lorenzo Hagerty voices the suspicion that permeates through many a Mindstates presentation:

> The war on drugs is not a war on substances; it's a war on states of mind. Entheogens are not illegal because a loving government is concerned that you're going to hurt yourself by smoking pot or tripping in your bedroom. Entheogens are illegal because they make you question authority. They break down socially constructed fables and cleanse the doors of perception. They make you question the wrongs of society in a fundamental way, making you dangerous. You're like Neo in *The Matrix* when all of the illusions of reality have been irrevocably stripped away.[64]

---

[62] Interview Dorien Zandbergen with John Gilmore, San Francisco, April 24 2005
[63] Interview Dorien Zandbergen with 'Gary', San Francisco, May 6 2005
[64] *Psychedelic Thinking and the Dawn of Homo Cyber* presented by Lorenzo Hagerty on May 27 2001 at the Mindstates conference: http://www.matrixmasters.com/speaking/mindstates/mssun01/hc01/hc01.html, retrieved September 29 2010.

Robert Anton Wilson uses similar arguments to explain why government agencies like the Food and Drugs Administration (FDA) seek to regulate the scientific study of sciences and technologies of augmentation:

> They're going to try to stop developments in science (...) It's a game these politicians play. It's a permanent anchor on development but it never stops it (Robert Anton Wilson in Goffman 2006: 245).

Various institutions in the larger New Edge cultural environment are dedicated to removing these alleged corporate and government-imposed barriers against self-exploration. For instance, present at Mindstates was Rick Doblin, the founder of the Multidisciplinary Association for Psychedelic Studies (MAPS). MAPS, with its headquarter on the East Coast seeks to obtain government approval for the scientific study of medicinal use of psychedelics, particularly MDMA. In this effort, they feel regularly inhibited. A text of a recent advertisement of MAPS illustrates this:

> THE FEDS SAY THEY WANT SCIENTIFIC PROOF THAT MARIJUANA IS MEDICINE.
>
> BUT DO THEY?
>
> Three years ago scientists from the University of Massachusetts and the Multidisciplinary Association for Psychedelic Studies applied to the Drug Enforcement Administration (DEA) for a license to grow a research plot of marijuana. (...) No response. (...) A year ago, they asked the DEA for permission to import 10 grams from the Dutch Office of Medicinal Cannabis. (...) No response. (...) Then they asked the National Institute on Drug Abuse (NIDA) to sell 10 grams from NIDA's marijuana farm at the University of Mississippi. (...) Still no response. (...) The researchers could, of course, get all the marijuana they need from any high school or college campus in the country but that's not legal. NIDA has a monopoly on the supply of marijuana that can be used for research. The Institute seems to be using that monopoly to obstruct the very research they're supposed to be facilitating. (...) So the scientists are suing the DEA, NIDA, Health and Human Services and the National Institutes of Health for "unreasonable delay" resulting in the obstruction of scientific research. (...) Science should be in the hands of scientists, not political ideologues.[65]

This advertisement reflects the general New Edge suspicion that the 'feds', in intimate cooperation with corporations wanting to monopolize drugs, want to frustrate all civil acts of scientific exploration. In rejection to such monopolizations of 'techniques of understanding', the New Edge discourse celebrates a Do It Yourself culture. This DIY culture is manifested, among others, in the organizational ideal of raves as taking place in non-hierarchical and ad-hoc ways. It also shows in the New Edge celebration of artists and engineers, of Do It Yourself

[65] Advertisement published at: http://www.csdp.org/publicservice/obstruction.htm, retrieved October 16 2010

'designer food' producers, of Do It Yourself education and the all-round validation of wisdom achieved through personal experience.

The Ambiguity of New Edge

Depending on how exactly an understanding of the full nature of reality is believed to be obscured, the New Edge celebrates both 'not-knowing' and 'ultimate knowing' and embraces for both these objectives high-tech, psychedelics and other 'gnostic techniques' such as dancing. In opposition to a larger society that imposes false notions of order and simplicity, the New Edge celebrates complexity and not-knowing. In opposition to a larger society that prevents people from becoming smart, the New Edge celebrates ultimate truth and higher understanding. Psychedelics is thereby celebrated as a smart-drug as well as deconditioning tool, and similarly are information technologies celebrated for their augmentational qualities as for their dissociational, deconditioning capacities.

Considering all these ambiguities, New Edge cybergnosis surfaces as a highly flexible epistemological attitude; keeping its promise of eventual objective understanding and awareness alive amidst conditions that challenge the possibility for objective understanding in many ways. Because of this ambiguity, it is highly problematic to define the ideological 'home' of New Edge: its epistemological position can neither uniquely be associated with those features generally attributed to postmodernism, nor uniquely with features generally associated with modernism, and neither can the New Edge unambiguously be characterized, after Bruno Latour, as 'non-modern'.

The philosophical stance that Mondo 2000 and many rave participants I interviewed associate with most strongly is postmodernism. Several of the rave participants I interviewed pledged an affinity with postmodernism. Benjy, who helped Ken Goffman write a chapter on rave culture in the latter's book *Counterculture Through The Ages* (2004) told me about creative writing classes he had taken in which "postmodernism was sort of assumed. (...) It was all about being ironic and self-aware".[66] Another raver told me about his interest in "postmodern anthropology".[67]

If postmodernism is the celebration of confusion regarding one's subject position, then this label makes much sense for describing the shifting epistemology of New Edge. In this understanding, the 'postmodernity' of Mondo 2000 manifests therein that readers could never be quite sure whether the authors of a particular article were 'serious' or not: hyperbolic language, the faking of 'letters to the

[66] Interview Dorien Zandbergen with Benjamin Feen, Pescadero, September 20 2008
[67] Conversation with raver 'Earth', San Francisco, August 12, 2008

editors' and the seeming larger validation of appearance (lay out) over readability all made it difficult to grasp the cultural significance of the magazine.[68]

This New Edge interest in postmodern referential instability is informed, at least in part, by the understanding that modern thought and practice have been dispended with. The Bay Area culture critic Erik Davis, for instance, argues in his book *TechGnosis* (1998) that developments in science and technology have caused the blurring of modernistic distinctions between technology and nature, science and religion, announcing an era of confusion, in which the future has become a "question-mark" (1998: 4). Davis refers to the French philosopher Bruno Latour (1993) to support this argument (1998: 15-17). In his well-known *We Have Never Been Modern* (1993), the Science and Technology Studies scholar Bruno Latour argued that while modernity is characterized by ongoing attempts to separate Nature from Technology, Politics from Religion and Body from Mind, it has rendered invisible the actual and simultaneous proliferation of 'hybrids' that form as part of this process of distinction-making. However, Latour writes, now the world of "frozen embryos, expert systems, digital machines, sensor-equipped robots, hybrid corn, data banks, psychotropic drugs, whales outfitted with radar sounding devices, gene synthesizers, audience analyzers and so on" is increasingly upsetting this "Modern Constitution" (Latour 1993: 49, 50).

As suggested by Davis' habitual reference to Latour and by the fact that, in 2005, Latour addressed an audience in a packed-to-the-roof auditorium at the Berkeley campus of the University of California, Latour's message of networks, hybrids and 'non-modern' confusion finds one of its homes in the San Francisco Bay Area. Latour's analysis seems, for instance, to link straightforwardly to the New Edge discourse. What is proclaimed by Latour seems a political stance for New Edge: the New Edge celebration of dissociational technologies and its rejection of 'Factory Culture' is employed to juxtapose against an older, modernist age that one seeks to transcend.

However, whereas New Edgers are self-consciously postmodern (or 'non-modern' as Latour called it), they are less self-conscious about the way that they manifest features that are generally attributed to modernist thought. Indeed, the New Edge post- or non-modernist self-reflection needs to be nuanced by the fact that, amidst its celebration of boundary-blurriness between the real and the artificial and between nature and technology, it holds on to the prime referent in relation to which the 'Modern Constitution' has achieved its cultural power: the notion that there *is* a nature out there that can be known objectively by rational, autonomous individuals. Whereas the New Edge celebration of dissociational technologies points ideologically to a 'postmodernist' transgression of modernism,

---

[68] In Chapter Three, where I discuss the style of New Edge, I will discuss this irony of the magazine in greater detail.

the New Edge embrace of 'augmentation technologies' emphasizes the perseverance of notions about the individual that are generally associated with the modernist ideals of 'the west' (cf. Piot 1999: 16).

By both challenging and affirming the modernist ideal of objective knowledge and of rational, autonomous individual agency, the New Edge discourse endorses modernist and postmodernist ideologies simultaneously, navigating between both philosophical ideals through the instrument of reflexivity (fig 6).

1.3. A Historical Perspective:

The Whole Earth Catalog and the Merry Pranksters

As discussed earlier in this chapter, several scholars and spokespersons have expressed surprise over the embrace of high-tech by spiritual seekers (e.g. Barbrook and Cameron 1995; Timothy Leary 1994; Sobchack 2001; Pfaffenberger 1988; Robins and Webster 1988; Kirk 2002; Roszak 2000). As I argued, much of this surprise is informed by the misguided notion that 'the 1960s counterculture' was essentially anti-technological and anti-corporate (Frank 1997: 7). Informed by such a notion, scholars often perceive the embrace by high-tech corporations of 'countercultural' values as acts of 'co-optation.' In this section I seek to show *why* such 'co-optation' theories are falsely informed and why it is necessary to understand the contemporary New Edge not in terms of a 'break' with a former counterculture, but as a continuation of it. More specifically, I seek to trace the ambiguity that I discussed in the second part of this chapter, back to the cultural environment of the 1960s counterculture. As announced, I will use as a guideline in this exploration the connection that has been forged by *Mondo 2000* editors between the late 1980s magazine Mondo 2000 and the late 1960s periodical *The Whole Earth Catalog* founded by Stewart Brand (1938). Prior to founding the Catalog, Stewart Brand had been part of a group of psychedelics explorers, The Merry Pranksters.

Both the Whole Earth Catalog and the activities of the Pranksters offered a critique against 'mainstream culture' through a particular embrace of high-tech. There are similarities in the forms of critiqued espoused by the Merry Pranksters on the one hand and by editors and readers of the Whole Earth Catalog on the other. Nevertheless, when discussing the technological practices of the Merry Pranksters I emphasize their embrace of dissociational technologies. When discussing the Whole Earth Catalog, I emphasize its celebration of techniques of augmentation. In this way, I want to illustrate how both techniques of dissociation and augmentation characterized countercultural practices in the 1960s and 70s: the first technique challenges a 'technocratic' mainstream, accused of simplifying an

otherwise complex reality; the second technique critiques the way that mainstream culture cultivates complexity and incomprehensibility.[69]

The Merry Pranksters: Celebrating Dissociation

> What's the annual Burning Man festival -- with all its costumes, modern pharmaceuticals, spacey music, bright lights, and tribal noise -- but a grander, updated acid test? (Shafer 2006: 57).

The 'acid test' that the journalist Jack Shafer here refers to is an invention of a group who called themselves the *Merry Pranksters* (fig 7). The Pranksters are the subject of *The Electric Kool-Aid Acid Test* (1968) written by the American author Tom Wolfe.[70]

The Merry Pranksters gathered in the early 1960s around the writer Ken Kesey and lived an 'experimental lifestyle' in the woods south of San Francisco.[71] Prior to 'founding' the Merry Pranksters commune, Kesey - who was a Stanford University major of literary studies - had volunteered for medical experiments with LSD in the Veteran's hospital in Menlo Park, California. His experiences at the Veteran's hospital inspired him to write *One Flew Over the Cuckoo's Nest* (1962), which criticized the institutional and technological 'techniques of control' as employed at mental hospitals at the time, and which made him a key-figure in the

---

[69] My discussion of the Merry Pranksters is informed first and foremost by Tom Wolfe's *The Electric Kool-Aid Acid Test* (1968), in addition to several articles that have been published on the Merry Pranksters (Shafer 2006; Konas 1994). In addition to my interview with Stewart Brand and to the writings of John Markoff, Frederic Turner and others, my subsequent discussion of the Whole Earth Catalog is based on a close reading of four catalogs: Spring and Fall 1969 (both 128 pgs), Spring 1970 (139 pgs.), *The Updated Last Whole Earth Catalog*, May 1974 (449 pgs.) and *The Next Whole Earth Catalog*, 1981 (610 pgs.).

[70] Tom Wolfe only met the Merry Pranksters in 1966 just before Ken Kesey was released from jail after the latter was arrested for possession of marihuana and fled to Mexico after the second arrest. While awaiting Kesey's release, Wolfe met the Merry Pranksters who, for the time being, lived in a warehouse in San Francisco, when he decided to shift his focus from Kesey alone to Kesey and his group of 'followers.' The Electric Kool-Aid Acid Test thus describes three years of the Merry Pranksters' existence that Wolfe did not witness himself. He employed several methods however for getting under their skin and into their minds: besides hanging out with the Pranksters in 1966 and 1967, attending some of their parties and trying LSD once to understand "what the fuss was all about" (Shafer 2006). Wolfe held long interviews with all parties involved, collected letters written by Kesey from Mexico, gathered long written accounts by Pranksters of their experiences with the group, had access to the many diaries that the Pranksters produced and gained access to 40 hours of film and many more hours of tape recordings made by the Pranksters in these three years. In these ways Wolfe sustains, as Shafer writes "a "you are there" intimacy (...) taking you directly into the heads of his subjects." Wolfe calls his literary genre New Journalism (Wolfe 1973), a style based on the conduct of interviews, the careful observation of non-verbal language, and on "what anthropologists would call 'participant observation" (Wolfe, 1973: 32).

[71] The later founder of the Whole Earth Catalog, Stewart Brand, was also closely associated with the Merry Pranksters.

ensuing 'anti-psychiatry movement.' This anti-psychiatry movement, as defined by the British sociologist Nick Crossly (1998), was an international movement of professionals and lay-persons who radically criticized the very grounds on which psychiatry was based:

> They questioned whether the "adjustment" that professionals and lay members alike take to be central to "mental health" is not ultimately more harmful to human potentialities and more "false" than the distortions of personality and falsifications of self that psychiatrists claim to find in their patients (Crossley 1998: 878).

Kesey's experiences with psychedelics at the Veteran's hospital, moreover, led him to celebrate this drug as the quintessential tool for liberating oneself from internalized social conditioning.

As Wolfe's *The Electric Kool-Aid Acid Test* details, after Kesey obtained some wealth and success through the publication of his first book, he and a group of hippie-friends who called themselves *The Merry Pranksters* moved into a house in the woods of La Honda, a place south of San Francisco.[72] Kesey's intentions with the Prankster was to explore an experimental lifestyle that was entirely geared towards overcoming the 'brainwashing forces' of society through non-rational, sensuous, intuitive and spontaneous living.

With their exploration of alternative, spontaneous living, the Merry Pranksters were home in a larger cultural environment in which artists, intellectuals active for the Human Potential Movement at Esalen and 'drop out' New Left students from universities like Berkeley built up a cultural momentum that would later be reflected on as constitutive of the 'counterculture.' However, reporters at the time had difficulty situating the Pranksters in the larger countercultural environment. Wolfe describes a visit that was paid to La Honda by a playwright author, Norman Hartweg and his friend, Engbert. Hartweg wanted to write an article about the Pranksters for the Los Angeles Free Press and had been invited over to *La Honda* by Kesey. Coming from LA at a time when an interest in Buddhism and meditation was entering popular culture, and knowing that the unofficial leader of the Pranksters, Ken Kesey, was "into" Eastern spirituality, he "somehow (...) got the idea that the people at Kesey's were like, you know, monks, novitiates; a lot of meditating with your legs crossed, chanting, eating rice, feeling vibrations, walking softly over the forest floor and thinking big" (1968: 141). Yet, Norman had great difficulty making sense of the circumstances at La Honda and of the objects he found scattered throughout the house and the property of La Honda:

> Inside, bright green-and-gold light streams in through the French doors onto the damnedest clutter. There are (...) dolls hanging from the rafters, re-assembled dolls, dolls with the heads sticking out of a hip joint, a leg out of the neck joint, arm out of other leg joint (...)

---

[72] One of these Pranksters was Neal Cassady, the protagonist-hero in *On the Road* (1957) written by the Beat poet Jack Kerouac.

> and tape recorders, and pieces of tape recorders, and pieces of pieces of tape recorders, and movie equipment, and pieces of pieces of pieces of movie equipment, and tapes and film running all over the place, plaited in among wires and sockets, all of it in great spiral tangles, great celluloid billows' (...) In the midst of all this, sitting toward the side, is a gangling girl, looks very Scandinavian, idling over a guitar, which she can't play, and she looks up at Norman and says: 'We've all got our hangups...and we've got to get rid of them' (...) (Wolfe 1968: 141, 142).

For the reporter Norman, the Prankster environment was quite disorienting and confusing. To him, the objects seemed ultimately displaced and unrecognizable in their given settings, and the things the Pranksters said to him and the way they acted were incomprehensible.

Also Wolfe himself had great difficulties understanding the cultural environment of the Pranksters (1968: 21) and builds, in his book, and understanding of the intentionality behind this technological and expressive confusion. With their dissociational environments, Wolfe made clear, the Pranksters sought to oppose social and physical conditioning.

Opposing Social and Physical Conditioning

In various briefings the intellectual Kesey told the Pranksters about his motives and worldviews. During one such briefing, Kesey told the Pranksters for instance that people are, in ordinary reality, prevented from being in the present moment because of the various "lag systems" that are built into them. Many of these 'lag systems', Kesey explained, are social, cultural and historical in nature:

> people are living by what their ancestors or somebody else perceived, and they may be twenty-five or fifty years or centuries behind, and nobody can be creative without overcoming all those lags first of all (Wolfe 1968: 132).

By taking on new names, new costumes, new roles, new identities and a new place to live, the Pranksters sought to distance themselves from social conditioning, and developed a lifestyle, techniques and methods all aimed at "moving beyond the walls of conventional logic" and "socialized living". Music, speedy technologies or forms of exercise and deconditioning media equipment played a role in these practices.

One practice deviced by the Pranksters as a method for 'waking people up' from their socialized behavior was to 'tootle' bypassers: tootling meant getting on top of a bus in which they made road trips, with their flutes - or other instruments - and playing people 'like they were music':

> If a guy looked at you fat and pissed off, you played on the flute in dying elephant tones. If a woman looked up nervous and twittering, you played nervous and twittering (1968: 93, 94).

In these ways, the Pranksters sought to wake up what they referred to as "the poor comatose world" outside (1968: 93). In addition, the Pranksters offered such by-passers an awareness of the connection between their assumed subjective state (e.g.

'nervous', or 'pissed off'), and their objective surrounding, represented by the music made by the Pranksters.

Another method the Pranksters devised for overcoming this 'lag system' was by being continuously alert. One practice they devised for this purpose was throwing red rubber balls at one another when they were outside the bus:

> The idea of the red rubber balls was that every Prankster should always be ready to catch the ball, even if he wasn't looking when it came at him. They should always be that alert, always that alive to the moment, always that deep in the whole group thing, and be deadly competent (Wolfe 1968: 92).

Also high-tech equipment played such deconditioning roles. In the Summer of 1964 the Pranksters purchased a 1939 International Harvester school bus that once belonged to a man with 11 children. "It had bunks and benches and a refrigerator and a sink for washing dishes and cabinets and shelves and a lot of nice features for living on the road" (1968: 65). The Pranksters painted the bus with Day-Glo paint, and made two signs: one on the front that said *Furthur* and one on the back that read *Caution: Weird Load*. They also wired the bus with speakers, microphones and amplifiers and cut a hole in the roof so that the speakers and microphones could be attached on top of the bus. The Pranksters could sit there and play music. Besides the bus, also the entire property of La Honda was 'wired':

> Kesey (...) had (...) the very woods wired for sound. There were wires running up the hillside into the redwoods and microphones up there that could pick up random sounds. Up in the redwoods atop the cliff on the other side of the highway from the house were huge speakers, theater horns, that could flood the entire gorge with sound. (...) boxes and machines and things (...) glowed, winked, hummed, whistled, bellowed, and microphones that could pick up animals, hermits, anything, and broadcast them from the treetops (...) (Wolfe 1968: 126, 127).

Also the bus was wired in such a way that sounds that were made inside the bus were picked up and broadcasted to the outside, and sounds made outside the bus were broadcasted inside. The broadcasting system in the bus could also be used to record one's own sound and to feed this back through headphones into one ear, while one could rap off one's own voice, which was again recorded and fed back into the other ear (1968: 66).

As such, the Pranksters created a 'cacophonous' multi-media environment, in which there was no room and space for rational contemplation and for attachment to thought systems and conventional modes of being. The culmination of this cacophony was the 1966 Acid Test, a three-night event that was co-organized by Stewart Brand and that would bring together, as Brand envisioned it, "all the new forms of expression that were kicking around in the hip world at that moment" (Turner 2006: 224). Brand and friends hired the Longshoremen's Hall in San Francisco, where the Pranksters would organize a huge Acid Test. The result was one multi-media immersive environment:

> Audience members painted in Day-Glo colors danced and watched their dancing rebroadcast live on a series of closed-circuit televisions. The hosts had arranged for live microphones and sound gear for anyone to play with. Five slide projectors splashed images on the wall; light machines scanned the room. Two bands played: the Grateful Dead and Big Brother & the Holding Company. Above it all hovered Kesey. Stationed on a balcony and wearing a space suit, he wrote messages on acetate slides and projected them onto a wall below (Turner 2006: 66).

According to Wolfe, this Acid Test launched the "Haight Ashbury era", and along with it, the journalist Shafer (2006) claims, the Prankster way of experiencing and interpreting psychedelics ascended into popular culture.

However, the later rave environment took inspiration not from the Pranksters alone, but from a larger 1960s cultural environment in which 'art happenings' embraced deconditioning capacities of electric technologies in similar ways to the Pranksters. Frederic Turner describes, for instance, the 'art tribe' USCO in New York (Turner 2006: 48). The art performances of USCO were, "psychedelic celebrations of technology and mystical community". USCO used projectors, oscilloscopes, music and strobe light to create, what they called "theatrical ecologies" in which the audience was entirely involved. As such, USCO continued the legacy of "environmental art" as had been pioneered by the musician John Cage, the painter Robert Rauschenberg and the performance artist Allan Kaprow.

Opposing the Technocracy

With their embrace of dissociational technologies, the Merry Pranksters offered a form of social critique that was self-consciously different, yet complementary with, the anti-technological strand within the counterculture.

This strand was represented, among others, by early 1960s Berkeley student protesters. In 1964 Berkeley students protested the bureaucratic powers of the university, and particularly the use of mainframe computing in asserting this power. With their protest, the students conveyed their understanding that the computer was the main engine of a stifling and dehumanizing machine world, imposing its cold, rational logic onto an otherwise warm and human world. Students at Berkeley University also mocked an administrative culture that treated computers as the high priests of social order. At that time, computers needed careful treatment and broke down at the smallest violation of ritual procedure. They needed to be 'operated' by trained experts, kept in air-conditioned environments and executed calculations only when they were fed instructions through punchcards that were kept in perfect condition.

Students at Berkeley came to see these social procedures that adapted to the material requirements of computers as one more sign of the way in which machines imposed their logic onto the social world. During one demonstration by Berkeley University students in 1964, a student had pinned a sign on his chest, that

read: "I am a UC student. Please do not fold, bend, spindle, or mutilate me" (Turner, 2006: 2).

This critique of rational, cold technology was a theme of the counterculture at large. In 1969 the Berkeley historian and protagonist of the counterculture, Theodore Roszak, summarized this as a critique of the 'technocracy.' With the 'technocracy' Roszak meant:

> (...) that social form in which an industrial society reaches the peak of its organizational integration. It is the ideal men usually have in mind when they speak of modernizing, up-dating, rationalizing, planning (Roszak 1969: 5).

Roszak's writings on the 'technocracy' comprised only one of many other influential literary critiques that influenced the counterculture at the time, challenging the marriage of technology with corporate practice and the state (e.g. Berger 1973; Reich 1970; Marcuse 1964; Goodman 1959).

Considering this countercultural critique of high-tech, scholars generally take it as paradoxical that many of the student protesters and drop-out hippies of the 1960s were simultaneously enthralled by the "post-war economic boom" (Braunstein & Doyle 2002: 11, 12; see also Roszak 2000; Markoff 2005; Turner 2006). The enthusiasm of the Merry Pranksters for speedy driving, electrically amplified sound and screaming visuals is however exemplary of a general enthusiasm among American youth for a fast consumerist life-style, made possible by post-war economic prosperity. Although strands within the counterculture were drawn to rustic, non-high-tech living, a large part of the 'energy' of the counterculture came from this marriage of 'youth irreverence' and technological consumption. This strand was not characterized by an all-together rejection of technology, but by attempts to 'appropriate technology' for the purposes of 'breaking free' from an older, stagnant, conservative mainstream culture. Wolfe sketches the spirit of the time in which the Pranksters embraced high-tech as follows:

> It was very Heaven to be the first wave of the most extraordinary kids in the history of the world – only 15,16, 17 years old, dressed in the haut couture of pink Oxford shirts, sharp pants, snaky half-inch belts, fast shoes – with all this Straight-6 and V-8 power underneath and all this neon glamour overhead, which somehow tied in with the technological superheroics of the jet, TV, atomic subs, ultrasonic-Postwar American suburbs-glorious world! One's parents remembered the sloughing common order, War & Depression – but Superkids knew only the emotional surge of the great payoff, when nothing was common any longer – The Life! A glorious place, a glorious age, I tell you! A very Neon Renaissance... (Wolfe 1968: 38).

Technology, Wolfe suggests, imbued the direct life-environments of the Pranksters with a sense of sacred importance. Wolfe describes for instance the way in which Kesey's prayer was also a communication with electricity:

> [Behind their old house] back a ways, is the radio tower of station KORE with a red light blinking on top-and at night he used to get down on his knees to say his prayers

> and there would be the sky and the light blinking-and he always kind of thought he was praying to that red light (Ibid.).

It was this love of technology, married to the New Left social criticisms and to gnostic mysticism that gave way to the 'techgnostic' notion that high-tech can bring about a new, liberated consciousness.

One of the images that captured, for the Pranksters, such high-tech mysticism came from Arthur C. Clarke's science fiction novel *Childhood's End* (1953). The Pranksters used this book, which was present in the Prankster house, as a way to reflect on their own 'story-line'. In this book, Clarke describes the so-called "Breakthrough Generation", comprised of "the Children of the Earth [who] ultimately rise from their bodies, and set out for the stars". The children of the Breakthrough Generation are born on Earth, but already as infants showed "powers of mind far beyond their parents" (1968: 150). While still living on Earth, the children had formed their own colony from where they eventually "returned" to the stars to become part of the Overmind. The Pranksters identified with this Breakthrough Generation, partially because Clarke's story resonated with their own sense of being at the leading edge of a 'mind-powered', spiritual evolution. Yet, another reason for their identification resides in the fact that the story of the Breakthrough Generation was framed as a science-fiction story, rife with extremely fast and powerful machines (spaceships), capable of breaking through time into the future.

The Whole Earth Catalog: Celebrating Augmentation

In a recent study of the Whole Earth Catalog, the Stanford communication scientist Frederic Turner (2008) calls Stewart Brand a "network entrepreneur" who moved from project to project, and who linked a variety of academic and countercultural scenes to one another. Indeed, the Merry Pranksters comprised only one of the many groups that Stewart Brand acquainted himself with in the course of the 1960s and 70s. In the early 1960s, Brand was a biology student, a freelance photographer, he had joined the army and had shown interest in the computer science projects then conducted at Stanford University. By the late 1960s, Brand conceived the idea of creating a magazine that would combine all his interests and make it available for a larger audience. This became the Whole Earth Catalog (fig 8). Brand phrases his incentive of founding the Catalog as follows:

> The catalog in 68 was partially a response to what I thought was one of the limitations of the hippies. (...) The thing I was trying to deal with was that all these educated young people were heading off to start colonies and reinvent civilization and they didn't know anything. They had all English majors basically. So, this was a way to sort of purveying the how-to, we were technology-friendly from the start,

> this was just another tool. And a lot of the counterculture were anti-technology, 'do not fold, spindle or mutilate' was what they were saying of computers. [73]

Turner considers the periodical 'one of the defining documents of the American counterculture':

> It catered to the thousands of communes that arose all over the United States in the late 1960s, would appear biannually for four years, ballooned to more than 400 pages and sold more than a million and a half copies. (...) The Catalog was popular in San Francisco's bohemia and the back-to-the-land movement (...) scientists and computer technologists from the Bay Area, East Coast artists and engineers, environmentalists, and, ultimately, even do-it-yourself suburbanites (Turner 2006: 488, 489).

The Portola Institute was the home base from where Stewart Brand produced his Whole Earth Catalog. The Portola Institute was a non-profit institute that was founded in 1966 by the computer programmer Dick Raymond in Menlo Park, a suburb of Silicon Valley. Portola spawned various 'consciousness-raising' projects that would continue to run well into the 1970s.[74] Thanks to the friendship that Brand maintained with the computer programmer Bob Albrecht, who ran one of the Portola initiatives,[75] Brand could use the resources of Portola to produce his Catalog. With the Portola Institute as its home base, Brand and other Catalog editors used a van to distribute the Catalogs and the orders made through the Catalog to subscribers. Many of these subscribers lived in communes that were scattered across the country.

Sensorial Anesthesia

Like the magazine Mondo 2000 would do decades later, so did the Whole Earth Catalog construct a narrative that described everyday reality as quite incomprehensible. And like the later Mondo 2000 would do, also the Catalog conveyed the notion that this incomprehensibility emanated from the increasingly small and complex fields of science and technology that govern everyday life.

---

[73] Interview Dorien Zandbergen with Stewart Brand, Sausalito, California, December 2005.

[74] Among the initiatives that were supported by Portola were the *Briarpatch Network* and the *Farallones Institute*. The Briarpatch Network was founded in 1974 by Michael Phillips as a network of people who wanted to use business to "learn about the world", to "share business know-how" and be "open about financial records" (http://www.well.com/~mp/briars.html. Retrieved December 16 2008). The Farallones Institute was founded in 1969 by Sim Van der Ryn as a non-profit "Ecological Design Institute". It is "dedicated to research and education that applies ecological principles and practices to the redesign of our environment". It focuses on a "whole systems approach", and works with the principles of "appropriate technology", seeking to integrate "architecture, human and natural ecology". The institute still exists today (http://www.ecodesign.org/edi-portfolio.html. Retrieved December 16 2008).

[75] Bob Albrecht was the founder of a spin-off of Portola, the publishing company *Dymax*, that published the magazine People's Computer Company (PCC) and that supported the walk-in computer center, the Community Computer Center (CCC).

Particularly the section "Understanding Whole Systems"[76] contained discussions on fields of science and technology that allegedly pointed to the invisible and complex interconnection of all existing things. The field of cybernetics was particularly often discussed in the Catalog, which drove this holistic worldview home.

The study of cybernetics was pioneered in the context of a series of conferences organized in the late 1940s and early 1950s in California by the 'Macy family' (hence these conferences were referred to as *The Macy Conferences*). Biologists, physicists, mathematicians, psychiatrists, sociologists and anthropologists who attended these conferences placed cybernetics on the map as a field of study that treats the world as an integrated system of information: animals, humans, machines, and nature, in the cybernetic worldview, are united in their informational essence (e.g. Boden 2006; Hayles 1999). In the course of these gatherings and in conclusion to them, the mathematician Norbert Wiener presented the subject to a larger audience through his publications *Cybernetics; or, Control and Communication in the Animal and the Machine* (1948) and *The Human Use of Human Beings: Cybernetics and Society* (1950). Both books were discussed in various Catalog editions.

As we can deduce from the way that Catalog editors discussed cybernetics, this field of research affirmed the ontological notion that the world is more and more governed by invisible and non-material processes. In the May 1974 edition Stewart Brand reviewed W. Ross Ashby's *An Introduction to Cybernetics* (1958) and wrote:

> (...) we are migrating from a world governed primarily by the laws of thermodynamics to a world governed primarily by cybernetics- a weightless world (...) whose events are the impinging of information on information.

Another entry in the Catalog reviews Norbert Wiener's *The Human Use of Human Beings* (1950, 1954). The anonymous reviewer concludes: "We are not stuff that abides, but patterns that perpetuate themselves".[77]

As each Catalog stated, Buckminster Fuller was one of the main inspirations for Stewart Brand, and his voice was among several others in the Catalog, which sketched the consequences of this 'new ontological order' for the ability of people to 'master' their world:

> In World War I industry suddenly went from the visible to the invisible base, from the track to the trackless, from the wire to the wireless, from visible structuring to invisible structuring in alloy. All major advances since World War I have been in the infra and the ultrasensorial frequencies of the electromagnetic spectrum (Fuller in Sontag 1966: 301).

---

[76] Other sections in the Catalog were entitled "Shelter and Land Use", "Industry and Craft", "Communications", "Community", "Nomadics" and "Learning".

[77] WEC, Spring 1969: 15

As a result, Fuller wrote, engineers and scientists have "lost their true mastery, because from then on [since World War I] they didn't personally understand what was going on. If you don't understand you cannot master" (Ibid.).

Such understandings extended beyond the Catalog and fed into a larger sense of technoscience-related alienation. In reference to Fuller, the art critic Susan Sontag (1966) postulated for instance that the "present cultural condition" is one in which "Western man (...) has been undergoing a massive sensory anesthesia" (1966: 302). Sontag ascribes this 'anesthesia' to the fact that scientific and technological developments have changed the daily environment of human beings in one "that cannot be grasped by the human senses" (Ibid.). As also the Californian therapist Peter Marin wrote: "What is real becomes still harder to touch, to sense, to act upon" (Marin, 1970: 58).

In resonance with Aldous Huxley's notion of the brain as a "reducing valve" (Huxley 1961), so did Fuller propose that the inability of people to perceive the full nature of reality was due in large part to "frayed capability valves". In his *Operating Manual for Spaceship Earth* (1969), a book regularly reviewed in the Catalogs, Fuller described the human race as "full of shortcomings and completely ignorant of the real situation in which it lives". This is due to social brainwashing. Or, as put in his own intricate language:

> We could, of course, hypothesize that all babies are born geniuses and get swiftly de-geniused. Unfavorable circumstances, shortsightedness, frayed nervous systems, and ignorantly articulated love and fear of elders tend to shut off many of the child's brain capability valves.'[78]

Fuller saw himself as a person who was "lucky enough to avoid too many disconnects during his upbringing" and set himself the task of leading the scientific and technological way to overcome such brainwashing.

Whereas the Catalog deemed it difficult for people to grasp the true nature of reality in large part *because* of technoscientific developments, the Catalog also presented technoscience as the means that Catalog readers could use to counter this condition. Brand subtitled the Catalog *Access to Tools*, with information itself being the prime 'tool' that the Catalog had to offer. With its pages ballooning to sometimes over 400 (Turner 2006: 488), the Catalog offered a dazzling amount of information on a large number of topics. The Catalog itself did not so much contain the information itself, but provided as a pointer to information: it reviewed hundreds of books on a wide variety of topics, published lists of tool distributors, pointed to events to attend and sketched portraits of individuals who were inspiring to the Catalog editors. Each of the editions of the Catalog began with the statement:

> We are as gods and might as well get good at it.

---

[78] Fuller in WEC, Spring 1969: 4

> (...) a realm of intimate, personal power is developing- power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested. Tools that aid this process are sought and promoted by the WHOLE EARTH CATALOG.
> (printed on the index page of most Whole Earth Catalogs)

Whereas in the context of the Acid Tests that Brand had taken part in, one could 'be a god' - to experience one's true self - through the use of dissociational technologies, 'being a god', in the context of the Catalog required quite a different technoscientific approach. Here it meant the ability to use technology and science not to create disorder, but to see through the otherwise incomprehensible patterns of reality. Many of the technologies advertised in the Catalog were to have the purpose of helping people become 'as gods', by being independently capable of using technology and science to get outside the social and physical constraints placed on knowledge and to see the interconnection between the otherwise invisible patterns of reality. In particular three techniques proposed in the magazine symbolize this augmentation quest: space photography, biofeedback and computers.

Space Photography

Brand's interest in space photography plays a foundational role for the Whole Earth Catalog. A by now almost mythical account has it that, while earning his money as a free-lance photographer before founding the Catalog, Stewart Brand had started wondering why nobody had ever seen a picture of the whole earth yet, even though satellites had been present in space for years. Brand then designed a button with the text "Why Haven't We Seen a Photograph of the Whole Earth Yet?" and distributed copies of it throughout the country.[79] As the New York Times journalist John Markoff put it: "He [Brand] realized that an image of the whole earth might inspire others to have a more complete sense of man's place within the planet's ecology and all of the implications that flowed from such a view of the world" (Markoff 2005: 154).[80] This realization inspired Brand to name the periodical the 'Whole Earth Catalog', and each edition carried a picture of the earth on its cover. In addition, several Catalogs contained picture albums from NASA; photo albums with aerial photography of the earth that features as a reminder of the "patterns in nature"; and a picture book of the 'surface anatomy' of the human body that

[79] Markoff, 2005: 154; Turner, 2006: 69

[80] Through this understanding, Brand can be placed squarely in a long tradition in which geographical mapping is embraced as a practice of understanding/grasping "the whole of reality". As discussed by Denis Cosgrove in his article *Contested Global Visions: One-World, Whole-Earth, and the Apollo Space Photographs* (1994), this tradition began with Ptolemeic cartography and was rediscovered in the fifteenth century, marking the "beginnings of European Modernity" (1994: 271).

reminds one of the comparisons between the large-scale patterns in nature and the intimate patterns of the human body.[81]

Comments from readers - both at the time and in hindsight - suggest furthermore that the Catalog was *itself* perceived as a technology of augmentation: in one letter printed in a Catalog, a subscriber depicted the periodical as a tool that helped people "become less Blind (…) [and to bring] special sight [and] much needed lenses or Aids [to give us] extra eyes and ears to help us make our Way in the Dark".[82] For this subscriber thus, the Catalog itself was a vehicle for extended perception. Another subscriber whose letter was published in a Catalog, wrote that the Catalog was an "Expanding Universe in his mailbox".[83] In an interview with me, a former subscriber referred to the Catalog as a magazine full of "secrets",[84] revealing the "hidden principles" that operate in society. Also reflecting in hindsight, another former subscriber called the periodical the "foundation" to his "world model".[85]

Biofeedback

Biofeedback was another technology that was advocated in the Catalog as enabling the discovery of otherwise unperceivable patterns of interconnection. A biofeedback setting typically consists of small sensors attached to the body that measure heart rate, blood pressure, perspiration or brainwaves. These sensors are furthermore connected to 'output devices' that 'feed back' this information to the subject. In the early 1970s, various biofeedback self-help manuals appeared on the market and also the editors of the Catalog and volunteers at Portola were highly enthusiastic about it[86] (fig 9).

Whereas 'professional' biofeedback manuals at the time seemed to struggle with the terminology to describe the process being measured ("consciousness", "awareness", "intent", or "will"), other manuals did not hesitate to present biofeedback, in characteristic gnostic terminology, as a technique for obtaining a "real knowledge of the self" – a knowledge that "has been lost by humanity over

---

[81] The WEC, Spring 1969 Catalog carries titles such as *Cosmic View* (Kees Boeke 1957); *Man's Domain Atlas* (General Drafting Co. 1968), *Apollo 8* (a film by NASA showing space as recorded from the Apollo 8); *Earth Photographs* (NASA 1967); *Exploring Space with a Camera* (NASA 1968); *The World From Above* (Hanna Reich 1966); *Surface Anatomy* (containing pictures of the surface of the human body, Joseph Royce 1965) and *Geology Illustrated* (John S. Shelton 1966).

[82] WEC, May 1974: 441

[83] WEC, May 1974: 440

[84] Interview Dorien Zandbergen with "Lee", San Francisco, January 2006.

[85] Gareth Branwyn in the Whole Earth Review, quoted in Turner 2006: 81

[86] Interview Dorien Zandbergen with the Portola volunteers Bob Albrecht (using the internet conversation program *Skype*, January 2006) and Phillis Cole, Scotts Valley, California, November 2005.

centuries by civilization".[87] In this latter category of biofeedback celebrations, the paradoxical notion is advanced that fast, high-tech consumer products can be used to cure the ills that have been caused by a consumerist, technology-loving fast-paced culture. In his *Biofeedback, Fasting and Meditation* (1974) author Gary Null stated, for instance, that biofeedback is needed because people have become estranged from their "true feelings":

> The fact is that most of us are not aware of how we feel at all, a consequence of the sort of society in which we live, dominated by stresses and strains, by considerations of time, money, status, subject to problems of an exceedingly complex nature; a society in which it is almost impossible to relax. It is beginning to be generally recognized that many people are "out of touch" with their feelings, an abnormal state which once recognized should not be accepted as inevitable (1974: 188).

Null presents biofeedback technology as a technique that "many claim to be capable of producing the same effect as meditation but at a considerably accelerated pace" (1974: 78, 88):

> It is (…) considered by some people to be a means of reaching, in a matter of hours, that state of inner awareness and peace, spiritual and mental, which the practitioners of yoga, Zen and other forms of meditation reach only after many disciplined years. (…) Perhaps this is one very positive contribution that biofeedback can make. For to get in touch with the inner workings of one's psyche requires far more time and discipline than many Americans are able to put in after an exhausting day. For many the process of meditation is incomprehensible and, for many others, the nearest they can come to satori is a few minutes spent on yoga exercises every week or so (1974: 88).

Gary and Steve Null thus interpret biofeedback as being congruent with a consumption-oriented society:

> (...) the gadgetry involved in biofeedback makes it highly sympathetic to the American character. Rather paradoxically, that gadgetry may be one product of the very technology that has made our lives so complex, which will lead us to a reconsideration of the quality of life (1974: 17).

The writers predict that the "powers of mind" that are "freed" through biofeedback, will lead humanity in an accelerated pace towards a new level of evolution. Another biofeedback manual expresses the same idea as follows:

> Biofeedback is a new tool in developing the energies of the mind, body, and emotions. These energies, once brought under control and integrated with the wisdom of our higher minds or Spiritual selves may help bring mankind into a new level of evolution. It's an exciting world! (Payne and Reitano, 1977: 17).

---

[87] Null, Gary, and Steve Null. *Biofeedback, Fasting & Meditation*. New York: Pyramid Books, 1974, pp. 188. See for a discussion of the problem of defining what is measured by biofeedback technology: Schwartz, Gary E., and Jackson Beatty, (eds.) *Biofeedback. Theory and Research*. New York: Academic Press, 1977, pp. 105.

The Whole Earth Catalog advertised the *Bioscope*, one of the many biofeedback brands that were available for sale, so the review says.[88] In the review, the Bioscope is advertised as a "short-cut to meditative skill".

Computers

Computer corporations that operated in the 1960s did not build computers for the larger public and, as we saw, countercultural activists resisted the 'cold logic' of the existing generation of large-sized mainframe computers. Nevertheless, Stewart Brand and others at the Portola Institute were among those counterculturalists who embraced computers as augmentation tools, enabling people to grasp an otherwise complex reality. Brand's enthusiasm for computing was reinforced by two computer innovative environments that he spent time in. One was the Stanford University Research Institute (SRI) where the computer scientist Douglas Engelbart led the Augmentation of Human Intellect Program. The other environment was the Xerox Parc research lab.

Engelbart began his work on the *Augmentation of Human Intellect Program* in the 1960s at the Stanford University Research Institute. According to Engelbart's biographer Thierry Bardini (2000), the scientist was driven by the desire to use computer technology to solve, what he thought of as, the most pressing problem of his time. For Engelbart this problem was:

> (...) we have built a civilization beyond our understanding and we are finding that it is getting out of hand. Faced with such problems, what are we to do? (Engelbart 1956, 215).[89]

Engelbart was interested in devising techno-social systems that allowed groups of people to share thoughts and information in constructive ways. This interest translated into his attempts to develop a human-computer interface that would engage humans and computers into the same 'feedback loop' of information sharing. Engelbart received a grant to conduct such a study, which he used to found the Augmentation Research Center (ARC) and to begin the *Augmentation of Human Intellect Program*. Engelbart formulated the agenda of this program as an attempt to "improve [the] human capability to cope with 'the complexity/urgency' factor" (Bardini 2000: 10). When Engelbart, in 1968, held his first demo of the interactive computer system that was the result of his project, Stewart Brand volunteered as a technical assistant.[90] This experience proved to be foundational for

---

[88] Besides a Bioscope, one could also try an “Alphawave kit”, a “Toomim Alpha Pacer”, an “Aquarian Alphaphone”, a “Cyberscope” or a “Psychophysics" (WEC, May, 1974: 421).

[89] Engelbart still perceives this to be a major contemporary problem (Interview Dorien Zandbergen with Douglas Engelbart, Atherton, California, May 2005).

[90] This demo is still referred to as "The Mother of all demo's" and Douglas Engelbart is still honored as a founding father of contemporary interactive computing. To illustrate, Engelbart was the 'guest of honor' at the 2005 Accelerating Change conference that was organized at Stanford University. His

Brand's ensuing understanding that computers can 'augment' people's reflexive capacities.

Another place regularly visited by Brand in the early 1970s was the Xerox Palo Alto Computer Research Center (Xerox Parc). Based on the activities of the programmers that Brand witnessed "playing" here on computers late at night, Brand wrote an article entitled *Spacewar* for the magazine *Rolling Stones*. Brand started the article with the proclamation: "Ready or not, computers are coming to the people. That's good news. Maybe the best since psychedelics".[91] In the activities of the Xerox Parc programmers, Brand saw the contours of a future in which computers would, for the first time in history, be made useable for and accessible to the general public. In his article, Brand characterized the computer programmers at Xerox Parc as the heirs of the counterculture:

> These are heads, most of them. Half or more of computer science is heads. (..) The rest of the counterculture is laid low and back these days, showing none of this kind of zeal.

Just like the Pranksters, who were busy inventing a high-tech life style that was posed against 'mass normality', Brand depicted the creation of personal computer technologies at Xerox as "leading away from hugeness and centrality, toward the small and the personal, toward putting maximum computer power in the hands of every individual who wants it".

Brand's enthusiasm for the projects of Engelbart and the Xerox Parc programmers is informed by his critique of a 'technocratic' society that uses science and technology in wrong and limited ways and that keep people away from scientific understanding and technological empowerment. This critique was informed by the fact that established computer corporations only created computers for financial, bureaucratic and military organizations, and that much computer science was conducted under the auspice of military secrecy. The Catalog protested against such secrecy and sought to 'appropriate' science and technology for the average individual. One edition of the Catalog cites the cybernetician Norbert Wiener in support of such critique. Quoted from *The Human Use of Human Beings* (1950, 1954) is Wiener's allegation:

> It is the great public which is demanding the utmost of secrecy for modern science in all things which may touch its military uses. This demand for secrecy is scarcely

---

demo is still celebrated because many of the major applications that would come to define interactive computing were pioneered in Engelbart's system. For instance, for the first time a computer was shown working with a "mouse", and it was for the first time that people saw the idea of long-distance conferencing (through video), the use of email, the idea of hypertext and the use of several "windows" in action.

[91] www.wheels.org/spacewar/stone/rolling_stone.html

> more than the wish of a sick civilization not to learn the progress of its own disease.[92]

In the same Catalog edition, Stewart Brand also lamented the inaccessibility of computers for average users. In a review of the book *Music by Computers* Brand wrote: "Music by Computers. Goddamn right. When can we get our hands on them without having to tiptoe around some 18th century Department Chairman?"[93]

A History of New Edge

Having sketched the ambiguous techno-ontology of New Edge in part two of this chapter, with this third part I have sought to argue that the New Edge discourse is prefigured by forms of countercultural activity in earlier decades. With respect to these historical precedents, the different subversive technological practices that I described reflect various different understandings of the way gnostic realization can be reached and about the forces that inhibit such comprehension.

Like in the later New Edge discourse, for the 1960s and 70s countercultural 'gnostics' it is unclear whether the 'reducing valves' of the human body, technocratic domination or technoscientific incomprehensibility are the 'archons' that inhibit gnostic awareness. And just as in the later New Edge discourse, also earlier forms of gnosticism are characterized by a simultaneous celebration of technologies that confuse and that create clarity. Furthermore, just as in the later New Edge, earlier forms of gnosticism are characterized by an ambiguous epistemological understanding: on the one hand, the 'true reality' that is celebrated consists of ordered and interconnected patterns which can be brought into view by visualization and measurements tools. At the same time chaotic, cacophonous technologies are used as a way of disrupting false, super-imposed notions of order.

Conclusion

In the course of the three parts of this chapter, I explored the question what gnosticism means in the context of a society where information technology largely conditions understandings of reality.

The first part offered an understanding of the theoretical and cultural background in which to situate the cybergnostic aspirations of New Edge. By means of an account of the Accelerating Change conference, I argued that Bay Area technological culture is characterized by quite an ambiguous techno-ontology: the rapid proliferation of technologies and sciences is experienced as instilling a cultural environment that is 'out of control' and that causes disorientation and chaos. Simultaneously, these same technologies and sciences are

---

[92] WEC, Spring 1969:15
[93] WEC, Spring 1969: 77

used for reality augmentation: offering the promise of eventual transparent understanding.

In the second part I argued that New Edge is characterized by a similar ambiguity. In addition, the New Edge discourse is characterized by the fact that it does not distinguish between technological and 'spiritual' mediation and that it celebrates chaos as a sacred ontology. Both psychedelics and information technology condition the New Edge exploration of the ultimate truth. In opposition to a 'Factory Culture' that uses technologies to impose a false sense of order, and in rejection of the brain that filters reality, New Edgers embrace psychedelics and high-tech for their deconditioning and dissociational capacities. Furthermore, in opposition to a 'mainstream' society that allegedly prevents individuals from exploring their own reality and that leaves people in ignorance, New Edgers embrace psychedelics and high-tech as augmentation tools.

In the third part I countered the prevalent understanding that in its embrace of high-tech, contemporary New Edge breaks with a preceding non-technological counterculture. The psychedelic and technological celebrations of augmentation and dissociation that can be observed in the Whole Earth Catalog and among the Merry Pranksters form, I argued, a relevant recent historical background of contemporary New Edge.

In conclusion we may argue that gnosis, in the context of New Edge, is a situational and relational epistemological stance that sustains the gnostic quest for authenticity, naturalness and 'realness' in a cultural environment that seems to defy any possibility for laying lasting claims on ultimate knowledge.