"THE HACKER DEMO SCENE AND IT'S CULTURAL ARTIFACTS"

George Borzyskowski

School of Design

Curtin University of Technology

Perth, Western Australia

rborzysk@cc.curtin.edu.au

ABSTRACT

The paper reports on a study undertaken into vernacular forms of multimedia production referred to as "demos" or "intros" and variants of these terms among adherents of a computer oriented subculture identifying itself as "the scene". The cultural and technological factors which are thought to have influenced the evolution of the genre since the early 1980's are discussed as are observations which distinguish a specific, almost exclusively male gender, internationally dispersed anarchistic youth subculture which holds this form of cultural production as a principal objective. An analysis of a number of examples of the genre provides tentative information on the dynamics of the subculture which survives on the basis of liberty and co-operation in the absence of coercive or cohesive structural influence, and presents an overview of the "demo" genre form in terms of function and audio visual syntax.

INTRODUCTION

The study was undertaken from 1992 to 1994 and resulted in an account of a cyberculture which evolved before the current widespread availabilityof access to the world wide web via graphical browsers such as Mosaic, Netscape or Internet Explorer. It was and is a subculture whose transactions are created and delivered through the computer screen, though in it's formative years the transmission and exchange of the data was by means of floppy disk passed on by hand or through the international postal service. Files were also maintained and distributed on private *scene* bulletin board systems. These were operated by keen amateurs while the internet was still the exclusive domain of government instrumentalities and research institutions. It is also a subculture about which very little has been written or reported outside of its own internal

communications in the form of diskzines, and *demo scrolltexts* and the author acknowledges the useful information in the book by Phil Shatz *Walkthoughs and Flybys* and the more recent article *Digital Graffiti* which appeared in the UK edition of WIRED magazine, issue 1.03 in June 1995, by Dave Green, and republished in the US edition, issue 3.07 in July 1995, retitled *Demo Or Die!* (the unacknowledged slogan of demo group SANITY). The resources accessed at the time of the study included:

Aminet:

Scandinavia ftp.luth.se 130.240.18.2 pub/aminet/

Switzerland litamiga.epfl.ch 128.178.151.32 pub/aminet/

Germany ftp.uni-kl.de 131.246.9.95 pub/aminet/

Germany ftp.uni-erlangen.de 131.188.1.43 pub/aminet/

Germany ftp.cs.tu-berlin.de 130.149.17.7 pub/aminet/

Germany ftp.uni-paderborn.de 131.234.2.32 pub/aminet/

USA ftp.etsu.edu 192.43.199.20 pub/aminet/

USA wuarchive.wustl.edu 128.252.135.4 pub/aminet/

UK src.doc.ic.ac.uk 146.169.2.1 pub/aminet/

Australia splat.aarnet.edu.au 192.107.107.6 pub/aminet/

Funet: Located in Finland, Funet (nic.funet.fi) contains a large collection of Amiga demos. The majority of demos are in the directory /pub/amiga/demos.

(Weiss A, *An Amiga User's View of the Internet*, Internet World, Mecklermedia Corporation, USA, May 1994, p 44-54)

(Speton J G, *aminet/text/hyper/adl1129.lha*, Aminet Amiga CD ROM, Walnut Creek, USA, Feb. 1994)

As a result of the meteoric popularisation of internet, dramatic improvements in lodgement and access to online information which have occurred in the short time since the completion of this authors preliminary study and in addition to the publication of several CD ROM compilations of demos now available, today information on the subject under discussion is readily available by simply entering the word *demo* into the requestor of a favourite search engine. Useful suggested starting points are:

http://www.iprom.com/amigaweb/amiscene.html - (The Amiga Demo

Scene)

http://www.cdrom.com/pub/demos/hornet/html/index.html - (PC Demos Explained)

ftp://ftp.funet.fi/pub/amiga/demos/ - (large archive of Amiga demos for download)

In this paper the *demo* and *intro* genre of computer based audio visual production, is shown to be the primary sign equipment of groups within a subculture usually referred to from within, as *the scene*, the *demo scene* or the *Amiga scene*. The scene is an aspect of a wider information technology related cultural environment which has it's origins with the beginnings of the automation of national and international telecommunications, and is characterised by an impetus among its adherents towards the discovery and exploitation of features available within the technological environment which are not publicly documented. The hacker ethos within Today's information culture has been journalistically incorporated within a once fashionable, now passe *cyberpunk* image, which while sharing some philosophical positions and possibly providing attributes in terms of personal accessories which might be adopted by individuals, is not however representative of the *demo scene*. It is shown that in terms of traditional sociological criteria, the *demo scene* can be regarded as a distinct subculture in it's own right, and that the body of audio visual production is substantial and constant enough in purpose to warrant recognition as a distinct category of cultural artefact. The complexity of this cultural production however, and the incremental development of sophistication raises questions of motivation beyond it's immediate functionality.

REASONS FOR THE INVESTIGATION

The investigation into this vernacular form of multimedia was undertaken in order to gain knowledge about the extent of this form of cultural production, some understanding as to the motivation involved, and to explore the possibility of applying elements of the audio visual syntax observed in the production of audio visual communication directed at a youth audience.

The investigation was undertaken following the casual observation and collection of these materials since 1986 following the acquisition of an Amiga computer system. When this study commenced in 1992, some 70 examples of the genre had been collected on 3.5 inch micro floppy disks, their normal means of distribution. Although the extent of this form of production was not known at the time, a number of the examples contained sufficient material of a technical and audio visual sophistication not possible to easily replicate using the conventional audio visual and multimedia software of the day, coupled with apparently international origins and the use of obscure pseudonyms or *tags* by the authors, to indicate that further investigation of the phenomenon might be worth

while. During the following period until March 1993, a total of 765 examples of the genre were collected and database catalogued according to the criteria listed below. Analysis of the collected data revealed 391 different groups as being responsible for this production. Speton's data revealed a further 320 groups (Speton J G, *aminet/text/hyper/adl1129.lha*, Aminet Amiga CD ROM, Walnut Creek, USA, Feb. 1994). Though not definitive, 711 groups internationally, involved in cultural production of a particular audio visual genre is thought to be significant..

Other factors prompting the investigation were the apparent absence of this sometimes irreverent though frequently spectacular genre of production associated with the two market dominant personal computer types of the day, the Apple Macintosh and the IBM PC or its clones, and paucity of any discussion of the genre in either culturally or computer oriented literature with the exception of passing acknowledgment of specific examples and their special effects but exclusively within the Amiga computer oriented leisure press.

OBSERVED EXAMPLES

Of the materials at hand at the commencement of the study which could be attributed to the demo or intro genre, a number of characteristics were evident which distinguished this type of production from the several thousand commercial and non commercial software titles available. These can be enumerated thus:

a. The programs are not commercially produced for sale.

b. The authors and contributors if identified almost always use pseudonyms.

c. The items generally allude to a syndicated allegiance with a group name.

d. The programs' overt function is message passing and skill exposition.

e. Kinetic qualities were unachievable using commercial multimedia software.

f. Real time computer generated music is part of the presentation.

g. Visual effects push the supposed limits of the machine's capability.

h. Chronologically developing repertoire of visual kinetic effects.

i. If included, frequently uninhibited, egotistical, vernacular text.

k. Visual presentation generally non narrative, often linked to or by music.

l. Evidently almost entirely male gender produced.

m. The software code is inaccessible without highly specialised knowledge.

n. The software frequently employs a non standard disk operating system.

o. Graphic design content is often skilfully executed.

p. Graphic style frequently derived from science fiction or fantasy genre.

q. Visual effects often copied from other demos with increased sophistication.

r. International origins attributable, predominantly to northern Europe.

s. Evidence of cross national co-operation in production.

t. Evidence of predominantly adolescent male youth participation.

u. Distribution by mail, modem, PD software libraries and personal contact

v. . Minor acknowledgment, only in Amiga computer specific leisure press.

## AVAILABLE LITERATURE

A literature search conducted at the time with the aim of determining both the extent and motivation behind the production of the materials under investigation revealed no direct or significant critical commentary on the artifacts here referred to as Demos or Intros published prior to 1993. There were however numerous references to the materials in a variety of Amiga computer specific, mainly leisure oriented magazines. These references usually within columns discussing PD or public domain software are limited to announcements of new examples with brief descriptions and subjective assessments by the editorial staff. This approach to the subject has been common in a number of British magazines for some years. A regular item for example in the British publication *Amiga Format* since 1990, has been *Demos Corner*, currently *PD Demo Zone*. Typical of the style of critique offered follows:

INTROS DISK #23 17 Bit Disk 550

Six superb mini demos from the likes of D-Mob, Level 4, Red and Black, Powerlords, Jester Brothers and Unique. Just when you thought you were safe from any further Batman hype, the Jester Brothers spring on you the remix of the Batdance Remix. Meaner, moodier and more manic than before.

You'll love it to bits.

(Amiga Format, March 1990, p. 93)

Subsequently such sections in magazines have frequently been accompanied by *Top Ten* charts provided by public domain software distribution companies supplying the review software, although the titles listed usually include many items of a more general nature such as slide shows, music disks and utilities not falling within the remit of the characteristics enumerated above. This is a typical listing provided by *Telescan Computer Services*:

1. Fit Chix II AGA

2. Bodyshop

3. Point of Sale AGA

4. Heliopolis AGA

5. World of Manga AGA

6. Clairvoyance

7. Boris Vallejo

8. Vomit

9. Dreamtripping

10. Technological Death

[*AGA denotes advanced graphics architecture, a colour display mode*.] (Bradley S, PD Demo Zone, Amiga Format, January 1994)

It must be said that little information is to be gained from such reviews and while acclamation is in evidence for the effects achieved, insight into the motivation behind the productions is extremely scarce, if not none existent. As essentially marketing vehicles for commercial software and hardware vendors, a general observation concerning the leisure press available for overview without detailed scrutiny, indicates this source not to be particularly fruitful as a focus of insight into the material under investigation.

WALKTHROUGHS AND FLYBYS

In his book (Shatz P, *Wakthroughs And Flybys* CD, Waite Group Press, 1993), Shatz usefully touches on the nature of demos and provides some insight into the reason for their production. The "flashy bits" he writes, are written in custom assembly language and that the creators have "broken every rule and used every trick necessary to squeeze the maximum performance out of your PC". This confirms the view arrived at in this study since the history of the genre appears to be strongly characterised

by an irreverence for the official performance specification of the hardware used. Three further characteristics drawn from Shatz's small sample are significant and in line with the observations of the present study. The age distribution of the producers, the teamwork involved and the issue of attitude. The ages of members of the *Future Crew* are reported as ranging from 16 to 21. They "intend to keep creating demos and distributing them for free because they have so much fun doing so". Shatz states that the groups, referring to the message networks of Europe, "exude a spirit of co-operation that is quite difficult for the average secretive Silicon Valley software developer to understand" and that for "these kids" it's all "just a hobby". Finally Shatz usefully describes the division of labour, due to the complexity of the process required to complete a *demo* project which can take up to a year to produce, the division of labour being amongst graphics specialists , music specialists and programmers.

IDENTIFICATION AND SOURCING OF THE STUDY MATERIAL

An understanding and definition of the descriptors "demo", variant "megademo" and "intro" as well as well as the comprehensive descriptors for the source, the "demo scene" or just the "scene", relevant to this study based upon common usage in the relevant leisure press, common self reference within the texts incorporated in the study materials themselves, and confirmation within electronic publications, *DISKZINES* or disk magazines distributed within what revealed itself to be the international community of demo producers, and occurring in commercial PD libraries, ftp sites and on Bulettin Board systems. Some 400 disks were collected for the study yielding 743 examples of the genre and more than 20 titles of underground diskzines including: *FREEDOM CRACK, EUROCHART, INFANT DISK MAG, FRAUD, GRAPEVINE, RAM JAM, ZINE, ICE, HACK MAG, MCDISK, STOLEN DATA, TRADER, TOP SECRET, SLIME, FREE 'N' EASY, CRACKERS JOURNAL, CHIT CHAT, MAGGY, PLAYBYTE and BLIPVERTS*. Other materials were music disks, animation disks and a variety of miscellaneous utility software and picture disks generally emanating from the demo community, used for reference but not strictly part of this study. The diskzines are the exception since in addition to texts embedded in the demos and intros themselves, they constitute the prime source for a view of the fabric of a subculture.

STUDY SAMPLE ANALYSIS

The collected genre examples were videorecorded and a database was constructed in order to extract information useful to the study objective pertaining to the extent of this form of cultural production as well as facilitating access to specific examples within the collection for further study. A number of database searches revealsed the following:

391 differently named groups were identified as having produced the collected 743 examples of the genre between 1987 and 1993.

Of the genre sample collected, 1 item was produced in 1987, 14 items in 1988, 85 items in 1989, 246 items in 1990, 271 items in 1991, 125 items in 1992 and 1 item in 1993.

Of the 391 groups identified in the sample, 265 produced only 1 demo each, 64 groups produced 2 each, 26 produced 3 each, 13 produced 4, 6 produced 5, 4 produced 6 each, 5 produced 7 each, 1 group produced 9, 3 groups produced 10 each, 3 groups produced 11 each and one group *Anarchy* of the UK, had produced 20 demos or intros in addition to 10 issues of *Stolen Data* disk magazine by the time of the survey.

Out of the 743 collected, 339 genre examples were identified where a country of origin was readily evident either by direct statement of contact address or given international telephone number. Of these 64 were produced in the now United Germany, 47 in Finland, 45 in Australia, 38 in Sweden, 38 in Norway, 30 in Denmark, 26 in the UK, 21 in France, 10 in Switzerland, 8 in the USA, 8 in The Netherlands, 8 in Austria, 6 in Holland, 5 in New Zealand, 5 in Italy, 5 in Belgium, 4 in Poland, 4 multinational, 3 in Turkey, 3 in Hungary, 1 in Iceland, 1 in Luxembourg and 1 in the former Yugoslavia. (NB. Many of the examples of the genre, indicated within scrolling texts and greeting lists that groups had members and chapters active in more than one country and review of the material suggests that international cooperation on projects is substantially more prevalent than the 4 identified examples suggest).

DYNAMICS OF THE SUBCULTURE

The database analysis suggests that demo groups are in the main ephemeral entities, two thirds of the sample producing only one example of the demo or intro genre. Taking into account Speton's data, the indication is that probably closer to three quarters of identified groups have created no more than one production. Further conclusions which may be drawn from the data and scene disk publications are that groups, which are often very small, consisting of as few as two individuals consist essentially of fairly transient alliances; that members are not necessarily limited in their allegiance exclusively to one group, it not being uncommon for individuals from one group contributing to the productions of another or simply changing groups (this is confirmed in scene disk publication articles such as the news section of *Grapevine #12*, and that individual active membership of the scene is in the majoroty of cases relatively short term, one or two years.

Of the 391 groups identified from the 743 genre examples collected in this study only 24 have productions whose dates of origin have been identified as spanning more than 2 years. Of the 24, 3 groups, Alcatraz, Fairlight and Kefrens have been identified as having productions spanning the 5 years from 1988 to 1992. The productions of 9 groups, Crionics, Defjam, Razor 1911, Rebels, Red Sector, Scoopex, Silents, Spreadpoint and Zenith span 4 years; and from 12 groups Anarchy, Complex, Decay, Dual Crew, Majic 12, Mystix, Paralax, Sanity, Share

And Enjoy, Slipstream, Zaphod (an individual) and Zero Defects span 3years.

SOFTWARE PIRACY

Media reporting, anecdote and hearsay suggest, that among others, elements within the demo scene have been associated with software piracy, as referred to above, that is the duplication and/or distribution of commercially produced software in contravention of copyright legislation and other aspects of the criminal code in various countries. This has been borne out in examination of the text legends in the category of productions known as intros. Intros to what? A question with a frequently obvious answer confirmed in an article *Hoist the Jolly Roger* by Kelly Beswick (Amiga Games, October 1991, p46-48) with the explanation:

"When you first load a copy of a game that's been pirated by a team of crackers, you usually see a list of names running across the bottom of the screen. These are the pseudonyms the hackers like to give themselves. It's all part of the bravado, with messages being sent to fellow pirates and sly digs being made at the people who provide the technical protection."

Anecdotal and journalistic evidence suggests that computer software piracy as a social phenomenon generally pervades the growing international community of computer users, though numerically probably to a lesser extent than broadcast media and music piracy in the context of domestic off air video and audio copying and re-recording. It seems nevertheless that official and commercial interests need a focus for blame. Hackers as a generic entity emerge as prime candidates, an ill defined subgroup of society more sharply and fashionably called cyberpunks following William Gibsons imaginative nomenclature "cyberspace" in his book *Neuromancer* (Victor Gollancz publ. 1984) and Marianne Trench's 1990 documentary film *Cyberpunk* .

Certainly in the Amiga world this association is clear and seemingly blatantly confirmed. Many supposed teenage exponents of copy protection code breaking, *crackers*, purposely attract attention to themselves or at least their adopted and ominous pseudonym entities through the inclusion of cynical announcements in their distributed illicit entertainment products. Cooperative endeavour in obtaining, cracking and redistributing illicit software appears to be one of the focus activities of demo groups.

Breaking copy protection schemes while in itself a challenge is inevitably also a form of industrial sabotage and it is clear that there are determined elements within the international hacker and demo subculture whose anti corporate disposition gains an aberrant satisfaction from the causation of overt destruction of commercial protection. The issue of this form of impersonal violence against organisations through their commercial property is perhaps usefully enlightened by Laurie Taylor and Paul

Walton's essay *Idustrial Sabotage: Motives and meanings* (Ed. Cohen S, Images of Deviance, Pelican 1971, p.219-245). Walton and Taylor examine both sabotage as fun and as individualistic destruction. They describe industrial situations "where there appears to be almost a hysterical atmosphere in which every opportunity for `cocking' up the works will be taken". They conclude "collective messing up of the commodity is another occasion for a gleeful release of tension".

THE HACKER SUBCULTURE

In terms of this study an appropriate general definition of hacker is to be found in The New Hacker's Dictionary (Raymond E, MIT Press, 1992 3rd ed):

"hacker [originally one who makes furniture with an axe] n.1. A person who enjoys exploring the details of programmable systems and how to stretch their capabilities, as opposed to most users, who prefer to learn only the minimum necessary.... 7. One who enjoys the intellectual challenge of creatively overcoming or circumventing limitations. 8. [depreciated] A malicious meddler who tries to discover sensitive information by poking around. Hence password hacker, network hacker. See cracker...."

"cracker n. One who breaks security on a system. Coined ca. 1985 by hackers in defence against journalistic misuse of hacker...."

An interesting application of the relevant term appears in the title of Michael Scott's *article Hacking the Material World* (Wired, July/August 1993, p. 60-61), referring to "true hacker's spirit" he states "Tunnellers are hacking the subterranean passages and hidden crawl spaces of colleges and universities across America....". Scott describes a style of architectural adventuring engaged in by groups of students at campuses across the USA, in which the objective is to penetrate and discover hidden accesses, service corridors and shafts of large buildings, presumably for the thrill and adventure of it, and answering the challenge of discovering the unknown.

In the foreword to Eric Raymond's dictionary is an account by Guy Steele Jr. of a hacker community pre-dating the present where the preoccupation was the invention and development of a technology and the establishing lof early computer networking systems rather than the sinister activities ascribed generally to hackers and cyberpunks today.

CYBERPUNK AND THE DEMO SCENE

Within the demo scene the audio visual cultural artifact produced has become a currency. It is a means of transaction not only for the expression of a set of aesthetic ideals but also for the claiming of status and respect within a transnational community. These productions seem to be a means for declaring mastery over an aspect of an increasingly

technologically mediated world. This ability to manipulate technology as evident in the demos and intros produced and the rapidity with which software copy protection schemes are cracked sits comfortably alongside a cyberpunk creed which declares oneness with technology. This assertion of continued presence by Kaauld appeared in issue 16 of the demo group LSD's, Grapevine underground diskzine circulated in December 1993:

C Y B E R P U N K ? D E A D ? N O F U C K I N ' W A Y D U D E !

By Kaauld

So, was cyberpunk a mid/late '80's idea that never made it off the street? Or is it still around, festering like the cancerous growth it was always meant to be? Well, I'm a cyberpunk and I don't care. If it runs on any form of electricity I want it! I'll fix it! I'll fuck it! I'll live it! So, are you a cyberpunk? Here's some of the essential things for a 'punk to have:

SONY MINIDISC - Complete with latest hardcore industrial disc.

LASER POINTER - For hassling people in dark alleys.

PORTABLE HANDSCAN - (like the scanman 32 for Mac) for literary appropriations for own manifesto. Don't want paper anyway.

SONY MULTIMEDIA CD-ROM PLAYER - Preferably with a pirate copy of Vitual light inside. If not then Tetsuo or Bladerunner will do.

CELLULAR PHONE - (with scrambler) for low budget coding/decoding.

APPLE POWERBOOK 180 - It's gotta be done. Get a modem for it as well.

STUN GUN - Self defence (plenty offensive).

SONY PYXIS - Find out were the hell you are with this longitude/latitude finder via sats. MICRO CAMERA - Hardcopy data.

MONOCULAR 10x25mm - shoulder surfing.

Latest copies of Wired and Mondo 2000. If ya don't know these then ya ain't a 'punk. So are ya a 'punk? Well, if you are getting there, here's the latest jargon for ya to learn and cruise with.

WEBJAM - A multitasking rave or tribal gathering where self selected performance artists do their thing simultaneously.

PICKING - Archiving a working model of a computer to read data stored in that computers format.

NET SPIDER - Someone who spends a lot of time going from one

terminal to another. A real net personality.

LIFE SUPPORT - Used to describe the condition of a business or product that is struggling.

LICK YA LIPS - basically, get ready - here we go.

FULL ON HONKY HANDSHAKE - (Not to be used racially) Used to describe a standard handshake protocol that allows peripherals to connect with out complicated configuring.

FRIDAY NIGHT MAKER - Slang for that guy who leaves at two in the morning and pukes over the pavement.

BITRAKING - The computer equivalent of muckraking - of journalism as it is sometimes known.

So? How about it? Cyberpunk dead? Nope sorry no way not ever. Cyberpunk was NOT a mid '80's idea. It's been around for years. It just got popular in the mid '80's.

I'm 22 now and I've been a 'punk since 83 and I like it. If anyone wants to communicate with me on this subject or any other then type ya letter and send it in ASCII to me on either Amiga/PC or MAC disk at this address:

Kaauld The House On The Hill

15 St. Pauls Road

Foleshill Coventry

CV6 5DE

England.

end.

(LSD [Leeds Spreading Division], Grapevine, December 1993)

A further contribution in the same issue is worth examining in this context of a style of existence. Where Kauuld list attributes and accessories, the anonymous author, Cygnus, here elaborates a philosophical position, perhaps idealised but certainly expressing an elitist stance at odds with and distinct from the mainstream of society. A strategy for survival?

"C Y B E R P U N K E X P L A I N E D

A Cygnus production

O R G A N I Z A T I O N A L

1. Communication is the foundation of Empire.

2. Don't just sit there - Do it!

3. KIS/KIE - Keep It Simple/Keep It Elegant

4. Experiment, Experiment, Experiment.

5. Quality never goes begging.

6. Decentralize and make it worthwhile.

7. Nobody ever went broke by making a profit.

8. Listen and satisfy.

9. Crossbreeding produces mutation.

10. Be different. If you can't be different, be strange.

11. Style is a weapon.

12. The individual is smarter than the mob.

13. Reality is what you make it.

14. The Idea is an immortal virus.

15. Superior technology is superior choice.

16. Action's on the Edge.

Enjoy it - all else follows.

## INDIVIDUALISM

Cyberpunk is the triumph of the individual through the power of technology. Modern and post-modern technology has given the individual the power to express and realize the creative diversity of his own ideas, a power unprecedented in history.

## PERSONAL TECHNOLOGY

Cyberpunk is closely linked with personal technology, which can be defined as technology which is "close to the skin." Examples are the personal computer, the Walkman, the colour-changing contact lens, and so on. This is the kind of technology which gives power to the individual.

## THE EDGE

Cyberpunk is existence on the Edge. The Edge refers to the frontiers, be they social, technological, or mental. It is an attitude which embraces the

new, is willing to try the untried, is willing to experiment. It is a fascination with the fringes, and the boundary conditions, and in general, with the Edge of current reality.

## S T Y L E

Cyberpunk is Style. Style is used to make a point, to entertain, and to make an individual stand out in a crowd. In Cyberpunk, Style applies to everything from fashion, to software, to hardware, to behaviour, to everything under the Sun. Whatever it is, it should look good, feel slick, and be done with elegance. In Cyberpunk, Style is the ultimate weapon, and it is used to wage war on the mundane.

## I N N O V A T I O N

Cyberpunk is innovation at all levels. It is the attitude that there is always a better way of doing something and that there is glory in discovering it.

## D I A G O N A L T H I N K I N G

Cyberpunk is diagonal thinking, which can be defined as creative rule breaking, nonconformal cerebration and, in general, using virgin neural pathways on a regular basis. It is very closely linked with innovation, since innovation is frequently theresult of diagonal thinking.

## U N D E R G R O U N D H U M O U R

There is a strong element of underground humour in Cyberpunk, and this is a part of Style. The essential absurdity of modern life is well realized in the concept of Cyberpunk and is expressed all over the place. It's an irreverent attitude towards the world that characterizes Cyberpunk.

## C O M M U N I C A T I O N

Cyberpunk is, above all, communication. The transfer and manipulation of information (which is what communication is, in this context) is, more than anything else, what Cyberpunk is all about. Cyberpunk rides the seas of information along the links, whether they are video, or telephone, or computer networks, or printed media, and it is the interaction of myriads of individuals along those links which makes cyberpunk possible. Cyberpunk is about the mastery of information flow and about the skill in shaping, processing, and manipulating data."

(LSD [Leeds Spreading Division], Grapevine, December 1993)

Cyberpunk is primarily an intellectual attitude about personal survival, empowerment and control within, and in defence against an all embracing governmental and corporate technological infrastructure which seeks to dominate society for commercial and political ends. Cyberpunk is not about a perceived threat in demeanour in the same

sense in which Hebdige discusses youth in his book *Hiding In The Light*. The light cyberpunk hides in is not in the visual domain on display to the public. It is impersonal, electronic, digital, international. The kind of outward visible manifestations in person, drawn attention to by Hebdige in the opening chapter of his book, the punk or skinhead style might be an attribute or accessory adopted by an individual, but it is not the central issue in cyberpunk. An element of attitude as identified by Hebdige as "The power, that is to pose - to pose a threat." (Hebdige D, *Hiding in the Light*, Comedia, 1988, p. 18), finds expression on the worlds telecommunication networks and computer installations. The riot and destruction, if it happens, is not galvanised through the dynamics of the mob. It occurs by stealth, meted out by odd and not necessarily aggrieved individuals as a virus without a specific target.

Hebdige's analysis of young lives is particularly useful here and the parallels between his observations of youth style and aspects of the demo scene are significant. There is however a clear difference in the context within which the external evidence of the subculture occurs. There is a paradigm shift in the medium of the externalised expression of the culture. Hebdige refers to visual evidence in the world accessible to conventional perception. The demo scene operates in cyberspace. It's externalised evidence is available only through a computer display. Hebdige's references to dress style among youth identifying with one group or another has it's parallel within the demo scene in the style of corporate audio visual facade the demo groups present in their names visual symbols and logotype devices. These present a notion of legitimacy as is the practice in conventional business but unlike business the graphic style changes with every new demo release only the group name remains constant, *Budbrain, Kefrens, Razor 1911, Italian Bad Boys, Scoopex* or *Possessed*. This visual corporate facade is like the dress style of the costers which Hebdige describes or the wearing of worthless objects as jewellery. The demo group's constant change of visual symbol versions could be construed to be a comment in opposition to the permanent nature of such devices in the conventional world.

THE RELEVANCE OF CYBERPUNK TO *THE SCENE*

Interestingly while cyberpunk has emerged as a journalistically convenient term into which adherents of the demo scene might be seen most easily to fit, it is significant that self reference either in underground publications of the demo scene or within their productions almost never includes the term. The two manifesto style items cited above, therefore should be viewed as individual contributions to a scene discourse, rather than being necessarily representative of or defining the scene in any specific way. Aspects of cyberpunk, particularly as expressed in the Kaauld item, represent a strong leaning or tendency towards commodity fetishism as consumer and user which concurs with Hebdige's discussion of life in the consumption economy (*Hiding In The Light*, p.192), the merger of subjects and objects, which is in effect a reliance for self

definition through technological possessions, rather than the definition of self through the creation of evidence of an ability to produce, as is the case in the demo scene. While both exist within the technologically mediated *postmodern sensorium*, it is clear that the *sign equipment* (Goffman E, *The Presentation of Self in Everyday Life* (1959), Pelican 1969, p.39) employed by cyberpunk to define social identity is appropriated in the form of technological hardware, whereas in the demo scene it is self created in the form of audio visual cultural artefact.

THE DEMO AS CULTURAL ARTIFACT

Demos are not made without a cost. The amount of time, patience, knowledge and skill development required are far from trivial. To make a competent production in this genre, graphic, musical and programming ability must be integrated and the work can occupy from a few hours for an intro by a veteran group, to several weeks or months for a major demo release, as is often recollected in included texts. An interview reported in *RAW Diskmag #2* published by PURE METAL CODERS in early 1992 between PGCS of ALCATRAZ and Lord Helmet reports that ALCATRAZ's then new demo ODYSSEY, had taken the group over 10 months to produce.

Invariably the production credits indicate teamwork as members contribute different abilities towards a common end, often expressing pride in each others work. The projects sometimes involve international cooperation as scattered individuals or chapters collaborate on larger productions. To the subculturally uninitiated, these productions are inconsequential, coloured shapes flying around on screen to a musical score somewhat limited in it's dynamic range and style. A comment that the text is meaningless and that there are better things on the television may well be appropriate, but for the aspiring demo maker, established group member or an amateur computer enthusiast, a demo or intro even without text presents within the sequences of patterns and dancing shapes, encoded information of at least equivalent significance to the aesthetic gratification this variety of eye candy might stimulate.

To the enlightened a secondary reading of the presentation will reveal information about competence, skill and ingenuity in manipulating the hidden capabilities of the hardware. This presupposes sophisticated programming competence or at least the ability to access and modify the work of others, preferably in assembler code. The animated images are of mathematically described objects, geometric shapes and numerical control of the system graphics processor often requiring hundreds of lines of such code. Logotypes frequently executed with enviable craftsmanship, generally have a monumental appearance of rock, metal or gothic horror dripping blood typography as found on cinema posters or video cassette covers. Pictorial imagery where used frequently conforms to a visual realism based on forms of popular science fiction and fantasy illustration seen in the better comics, the work of Boris Valejo, Roger Dean and similar. Musically, while early examples rely on simple

computer audio synthesis and a style similar to that heard in games arcades, the sound which accompanies today's demos and intros is usually considerably more sophisticated, employing digitised audio samples, sequenced into the rhythms and treatments of popular music such as hip hop, acid, funk, rap, techno and other variants, but with frequently elaborate melody lines and variations, probably due to the technical limitations of including vocal lyrics.

In addition to the customary musical accompaniment, demos and intros also have been found to incorporate a number of standard components or parts: a group logo, symbol or both (illustrations as examples of artistic prowess; text messages or announcements delivered onto the screen by various routines such as scrolling, zooming, pixel sprinkling, etc.; graphic and animation routines; lists of greetings to other scene members; and the credits. These elements might appear in any order or be integrated together in any combination, and while intros generally only contain one or two routines, a demo or mega demo may present 20 routines or more. Scene diskzine publications such as Eurochart, differentiate in their voting between single part demos which load the complete program into RAM prior to playback, and multi-load demos which continue to load segments during the demo presentation which can last for more than half an hour of continually changing program content. Status within the subculture accrues to individuals or groups on the basis of overall design or demo structure, innovation in the implementation of graphics routines or improvement upon existing ones as indicated above, and then as a result of evidence of expertise in specific skill areas such as illustration or musicianship.

DEMOS AND STATUS

Demonstration of superiority by these means within an international peer group appears then to be a primary function of demos in the context of the conclusions stated at the end of chapter 2. Competition and one-upmanship appear to be more important motivators than announcement of presence in the scene once groups have moved beyond a basic level of competence. New groups make a point, perhaps apologetically, within their screen texts in drawing attention to the fact of their first productions, while it is evident that those already established, particularly when presenting new routines for the first time, tend to be more assertive. The group Scoopex in their 1989 demo *MENTAL HANGOVER* (Plate 72) in which they introduced a stencil vector routine among others, opened the presentation with the text "THIS ISN'T A FUCKING MEGADEMO. IT'S A SCOOPEX DEMO" and closed with "ALWAYS REMEMBER - SCOOPEX - GENERATIONS AHEAD", (Plate 73). Much of this type of claim is puffery it seems in response to similar claims by other groups (Plate 4, 1987 TechTech demo). Lord Helmet in his *Summary of the Year* 1991 (RAW DISKMAG #2), while acknowledging "The best demo of 1990 [produced 1989] was Mental Hangover", also points out:

"Look at the best demos of 1991. 3000% better. Just amazing how fast

the progress has gone. I think Scoopex slogan "Light years Ahead" should be changed to two months ahead. Because today Mental Hangover is nothing. But Mental Hangover will be remembered as the first "trackmo" ever made! The credits in plane vector is copied thousands time by other" (Plate 14, Anarchy Digital Innovation).

THE SCENE

The social grouping identified for the purpose of this study then, is that which can be identified by means of *sign equipment* known by the terms: *demo, intro* or their immediate variants. Further, it can be asserted therefore that these productions are a useful criterion for defining a distinct subculture. The 765 examples of the genre obtained as the study sample, revealed 398 named groups existing at various times between 1987 and 1993, proclaiming authorship of distinct examples of relevant genre, ranging from the group *Anarchy* having 22 productions attributed to it, down to the majority of groups, 266, each having only 1 production attributed.

As observed through scene publications and self references in their productions, the demo scene consists of three tiers. The individual, the group or team and the scene. There is also strong evidence of the importance of status of groups within the scene ranging from *elite* to *lame*. A description of scene stratification appeared in the diskzine *Freedom Crack* (issue 9, 1992) by scene member, Style of *Vega*:

Levels of the scene

I decided to write in article just to show you like the scene is in my head, in fact in the brain of everybody. Just to show the different levels of the scene. I classified the scene in two different things: the demo scene, and the criminal scene. So here's the different category WITHOUT any group name!

The demo scene:

[1]

Here we have the top elite of the scene. Cool groups with nice demos and nice design, nice music, nice graphics, and fucking cool code. These groups are at the tops of the charts, and they produce a lot of quality stuff. They have also some BBS [Bulletin Board Systems], sometimes.

[2]

The groups who're in this section are also in the charts, sometimes for diskmag, sometimes for cool demo, and they have very good reputation. They own some BBS, and some swappers and this is why they are famous. They produce also some cool demos, quality intros with nice design.

[3]

These groups are known, but they're not in any charts, coz they produce a lot of intros, but not any cool demo/dentros. They prefer quantity than quality, and this is why they're known. Some of them makes some quality intros, but not more.

[4]

These groups are known only because they write articles for diskmag, and only bcoz they swap with a lot of people. They're only `swapping group', but they didn't produce anything. Some of them own some BBS, and they are known in the modem scene.

[5]

They make 1 or 2 intro per year, just for fun, and they don't care about the others groups of the scene. They just produce for themselves.

[6]

They're not known, but they think that they're pure elite bla bla. They don't know anything of the scene, what means diskmag, they're just cli [command line interface - standard operating system] demo makers, they also produce demos and intros with demo makers [automated demo making utility software - not individually coded].

[7]

They don't know what means the word `Amiga scene', and they have just an Amiga for games.

The criminal scene

[1]

They came from the real pure top elite, these groups have the best crackers, the fastest original suppliers and the fastest boards. They have also some elite mail trader and some elite modem trader.

[2]

They have some fast boards [BBS], some modem traders, and they make some trainers [modified game software to give infinite lives etc.]. They are the fastest trainers makers and have also a lot of credits in a lot of cool BBS.

[3]

They have not any BBS. just some modem traders, and they make some trainers. But they are not the fastest.

[4]

They make some trainer, sometimes a crack, but they havn't any modem trader or any BBS, they just do it and spread the trainer or the crack by mail.

[5]

They don't know what means BBS, modem traders, these groups think that they can cracks games without problem, but they're just lame game players who dream to crack and to make trainers.

Hope you like this little article about the different level of the scene. You can perhaps find your own level. Remember that this article is NOT for 1 group or person. It shows you the whole scene. Anyway, if you didn't like this article, then do something better for the next Freedom Crack!

Style's analysis recognises and differentiates two areas of endeavour within the scene, each with their own scale of credibility and levels of achievement for novices to aspire to.

STRUCTURE OF GROUPS WITHIN THE SUBCULTURE

The groups such as those identified, conform to Goffman's conceptual model of group (Goffman E, *Encounters* (1961), Penguin University Books 1972, p. 9), in that their "properties include regulation for entering and leaving; capacity for collective action; division of labor, including leadership roles; socialisation function, whether primary or adult; a means of satisfying personal ends; and latent and manifest social function in the environing society." Of individuals within groups, Goffman states "....they perceive themselves as members who belong, identifying with the organisation and receiving moral support for doing so; they sustain a sense of hostility to outgroups. A symbolisation of the reality of the group and one's relation to it is also involved."

Most of these features are clearly evident in the demo scene although the associations which exist are not formalised in any conventionally official sense. There is no governing body nor are there any written rules. There are no geographical boundaries, even at group level membership is frequently transnational and intercontinental. The factors which bind and define the scene are interest in the productive potential of a common technology and a mutual respect for skill in manipulating the technology beyond what is supposed to be possible; an irreverent stepping beyond the edge in the production of audio visual artefacts which are the *symbolisation of the reality* (Goffman 1961) of the group. Collective action and the division of labour are prominently documented in the majority of productions with credits going to such functionaries as *coders* (programmers), *graphicians* or *artists, musicians, swappers, spreaders* (distributors), *mail traders, modem traders* (software swappers using computer telecommunications) and *crackers* (commercial software

protection code breakers). Leaders are seldom mentioned though it is to be expected that since individuals are variably motivated then decision making can be achieved in any of a number of ways, and the function of organiser does occur. A typical group membership is listed in *RAW DISKMAG #2* (1991):

INFINITE PERFECTION

I.P. is a new group made up of mostly modemdudes and crackers. they have got members from Skid Row, Crystal, etc. [BBSs in capitals]

*Belgium:*

Joey Beltram Organizer, Modem

Badamon Originals Supplier

Mike 'WASTE GATE'

Gordh Trainer

Mithrandhir Coder Graphician

*England:*

Hybrid 'ULTIMATE DREAM'

Executioner 'TREASURE ISLAND'

Akira Originals Supplier

Zygor Modem/Mail Trader

Manx Modem/Mail Trader

Starr Coder, Cracker

Xag Coder, Trainer

HI. T. Moonweed 'FLYING TEAPOT'

*France:*

Shocker Original Supplier

Flyspy Coder, Cracker

JBG Original Supplier

Alex Original Supplier

Loulou Original Supplier

*Germany:*

Shut Berlin WHQ, 'W.T.C.'

Marc Cracker

Nephilim 'HEAVENS HELL'

Adictor Modem, Trainer

Disk Jockey Cracker

Blackcat Cracker, Trainer

Bob Duncan 'HILTON PALACE'

*Italy:*

Rave 'LETHAL ZONE'

Norway:

Jaffa Mega Swapper

*Sweden:*

The Master 'SLIME CITY'

Mercy Modem Trader

*USA:*

Rolling Stone 'DEVILS TRIANGLE'

H.O.S. of Sorrow 'CREEPING DEATH'

Winter Mute 'MARTIRIUM'

Gazoo 'WILD WAREZ'

Leviathon Modem Trader

While the majority of members functions within INFINITE PERFECTION appear to be concerned with supplying, cracking and illegally redistributing commercial software rather than demo production the international profile is not unusual, neither it is seen, is membership limited to a single group. The number of BBS systems operators and modem traders listed also explains the rapid international distribution of warez and demos once available. Group size does vary considerably and is dependant upon factors such as length of establishment and priority of activity. Groups primarily concerned with software acquisition and

redistribution clearly benefit from large size and wide distribution whereas an emphasis on demo creation may be more efficient with a small number and close proximity. A typical smaller group for example is *CYBERNETIX*:

C Y B E R N E T I X - WHO THE FUCK ARE WE?

By HOBBiT of CYBERNETiX

I have been asked this question several times recently. So here, free with this issue of Grapevine, is your very own print-out-and-keep guide to who's who in CNX. We are a fairly new group, therefore we haven't yet got as many members as we would like. At the time of writing (17/8/92) CNX consists of the following people;

STORM - Spends many of his waking hours staring at Xcopy. You guessed it, Storm is a mail swapper, because that's what he does best.

BOOTLEGGER - Bootlegger codes games and stuff. And that's it really.

ROMBUST - CNX's resident boffin, Rombust likes nothing better than fiddling around with Devpac [assembler programming software] for hours on end. He's coded no end of games, which have gained high praise from paper mag reviewers. He's also a cracker, which is a shame, because we've got fuck all originals for him at the moment!

MEGADETH - The Glasgow street artist draws kewl logos 'n' stuff.

HOBBiT - The "leader" of the group. Also runs the CNX WHQ (contact address and official swapping address). Spends most of his waking hours Xcopying, since he swaps with an horrendous amount of contacts. But he still finds time to fulfil hisother group role - that of total weirdo and sick pervert. This makes him the ideal Grapevine writer!

DAN - Dan not only codes, but draws as well. What a guy!

MAD PHANTOM - Mad Phantom composes mad music in his saner moments (i.e. not very often!)

ST. MICHAEL - In between chillin' out around Fleet, Hants (well, someone's got to live there!), St.M often finds time to casually chuck a few jiffies in the postbox. So that's why his postman's not got any kids.... (Bit obscure that one, think about it!) For joining our friendly, productive group (NOT a bunch of losers with no coders! ehehe) then write to me, Hobbit, at:

(no name), 195 Old Road, Chesterfield, Derbyshire, S40 3QH, England

If you're a coder/gfx/artist then please send samples of your work. If you're a trader, make sure that ya are swappin' 0-4 day old stuff only! end. (Grapevine #12 1992)

The way these associations develop or emerge is illustrated in a further article from Grapevine #12, which is usefull to include here due to the insight it provides to what may be a typical sequence of events:

A N E X - L A M E R S S T O R Y - By CARDIAXX of WDL

I was one of those who started with computers by playing games at the old 'n' rusty [Commodore] 64. I was just starting to learn basic and had done some lame productions and of ours some crappy demos at the Pro Demo Creator [software for making demos without programming] (I'll bet that it ain't one who can't remember the old PDC). Then a friend of mine bought the ultimate machine: The Amiga 500 1.2. I must admit: I got pretty angry.

There he was with his powerful tool of an machine. Graphics which were unthinkable. The computer freaks-dream. An Ultimate tool of the Gods. Well, I still managed with my 64, but it wasn't the same. Then another friend of mine got this power-tool in his possession. I was getting green of envy. But as the strong dude I am, I still managed with my 64. Then the 3rd of my friends bought an Amiga. I then decided, I want a taste of heaven. I looked in the local paper and what did I see....

FOR SALE

Amiga 500 1.2 with sampler,

genlock and 100 disks.

5000 NOK call *** ****

I was in the seventh heaven. An AMIGA, so cheap. With so much so I called the number, like in a dream. "Yes, **** here", it answered. "Are you the fellow who's selling an AMIGA." , I said. "Yes, but I am sorry to say that its already sold. Sorry."

My world was in pieces. I could cry. Well, I thought a little. I said to myself.... "How, where and by which way.... I WANT AN AMIGA NOW!" The next day I grabbed 7000 NOK from my bank account, ran to the local computer shop, threw the dosh on the counter and said "An Amiga 500 1.3, please". I got a joystick (arcade) and a 512 kb extra memory. I carried it home. And then plundered my friends for games.

I sat 3 days and 3 nights playing. Then I fell asleep next to my AMIGA. I soon realised that you could to other things with the Amiga than play old, crappy games. So I started playing new, stunning games. I was in heaven. I got myself some contacts. and every day I got new [pirated]games: Shadow of the Beast, Pirates, Crazy Cars II, Test Drive 2 and F18 Interceptor was just some of the games I got.

Me and a fellow decided to start a group. We called us the extremely original name: A-TEAM (I'm sure there is 50 groups with that name). We found out the secret of making a startup-sequence together [initialisation software which runs from a program disk] . And we made a tool[utility program] disc on 2 disks. We used 2 months.

We was now a good (we thought) group. Some couple of guys from Yakutza came over and looked at our tool disk. "Wow!" they said and asked if we wanted to join them. We didn't, because we were pro's. After a long period of time, we found out that it was on time to change name. We got the name: Conspiracy. And as I had got my hands on Rsi Demomaker [software for making demos without programming frowned upon as a lame method by bona fide demo coders], we made a "stunning" megademo. And we arranged our first copy party. We were the huge amount of 11 people on that party.

We were all a bunch of x-copy [fast disk duplication software bypassing some copy protection schemes] turtles. We made more lame tool disks and a couple of "megademos". Then I got tired of Conspiracy and joined a self made group called TRIXEL with Dr. D which then was a member of the false PIRATES. He showed me the secrets of ProTracker 1.1b [audio sequencing software for creating music]. I was now a musician....

My first module [a music sequence file format] was horrible. I did manage the rhythm and bass from the beginning. It was the melody I had trouble with. Well, Trixel joined "Pirates" (I thought this was the real PIRATES) and we gave out some total HORRIBLE Music disks. (Well, not that horrible. I made two AWESOME mixes. (I was starting to get the hang of it).

I quit PIRATES and joined ROBO-TEAM. I was now a novice musician. I managed (to a certain point) the melodies. And made two musax disks. I made some cool musax like Dream Child and so on.... I got tired of RBT and joined EXTENSION and made a musax disk. But a guy there made me pissed of. So I again made a group with Dr. D called POWERMINDS.

We arranged a party with 24 people at the most. It was a success. We made Jukebox 1 and 2 at that party. These musax disks was average. We didn't have a coder, so we made everything in CLI. I got fed up with Dr. D after making Jukebox III. He was from BERGEN. I got an offer from RBT (again) about joining them. I accepted one 1 condition. If the changed their name. We agreed on WEDLOCK. But a few days later I heard from a pal that The Hitcher said that I wasn't a member anyway, because the other members didn't agree to change the name. (bet he didn't ask them).

Me and Fairbrain then made our own group and called it WEDLOCK. We made a couple of musax disk (Beatbox 1,2,3) We do now have a coder so Beatbox 4 will be an improvement compared to my other productions. We have arranged a party which was a success (40 people). We got

sponsor deals and got a lot of money (400Kr each at 4 people) but we could have got more if The Hicther/RBT hadn't screwed up. He didn't charge ticket price from 15 people (1125 kr).

Well, Some may say that I am still a beginner. Yes, I agree to that if they compare me to for example: Fleshbrain, Jesper Kyd etc. But I at least try to learn something instead of complaining and talking. (Hear, Hear Vortex). Now two of my friends got A2000 with hard disk and one got CDTV. I want an A2000. Our group still needs a coder so write to....

CARDIAXX, BOX 105, 5460 HUSNES, NORWAY.

(Grapevine #12 1992)

AGE AND GENDER

The study of the collected materials indicates the demo scene as evidently consisting almost entirely of adolescent male youth. While direct observation of the genre materials themselves does not provide much corroborative textual evidence of this since the participants and producers almost in every case use pseudonyms, some speculative conclusions are nevertheless possible. The members of the most prolific group encountered in the study, Anarchy at some time in 1992 were for example Rush, Icronite, Milkshake, Sunjohn, Slash, Madfreak, Maestro and Trix in Denmark; Performer, Ronan, Audiomonster, NHP, BKK, DCA, Zoom, Rasputin, Rookie, Surferand Conquest in France; Dan, Nuke, Krest, Critical Mass, Mystic, Kris, Del, Mole, Mr Big and Judge Drock in England; Facet in Holland, Pinny in Germany and Trillion in the USA (Judge Drokk, *Anarchy: Members and Management*, RAW DISKMAG #2, PMC, 1992). Since these are pseudonyms or handles in the vernacular, there can only be general assumption as to their gender when seen in credit lists or greetings scrolltexts. Further reading in this instance shows Judge Drokk in describing his role as organiser of Anarchy, alluding to the group members gender in the sentence "I believe you must never put pressure onto one of your members, you have to respect your members as individuals, each with lots of things in *his* life except [in addition to] *his* group".

Interviews, reports, advertisements and in some instance photographs in the various scene diskzines serve to further confirm the assumption of the male gender orientation of the subculture. Numerous examples of individual's contact details have been found to include both pseudonym and real name. For instance in issue 1 of *HEXAGONE / PARASITE*, a French scene diskzine published on September 25, 1992 by the French Group INTENSE, provides contact details of the individual group members with their real names as well as alias handles. No female group member names were encountered in the *HEXAGONE/PARASITE* publication. Similarly, it has been found that articles in such publications infer the male gender almost exclusively when referring to individuals in the scene. Some typical extracts here taken from *RAW DISKMAG #2*

published by PURE METAL CODERS in early 1992 illustrates:

Hawkeye left Static Bytes and joined [Kefrens] along with *his* board [BBS]

`Dreamland'. He also changed *his* handle to Stormbringer.

Gadget of Cytax joined due to internal problems in Cytax Sweden. *He* also changed

his handle, after many tries he decided to stick with Logic.

Bold Eagle has shut down *his* board `The Abyzz' due to personal problems.

The happiest musician in 1991 must be TIP. In 1990 *he* was dust, in 1991 *he's* gold.

Also here we have *a guy* who has taken the whole table. I am talking about Uno of Scoopex.

Yes you read right! Even boring Amiga Freaks can get HIV... The person I am talking about is Rizzo/ The Silents. *He* is a sysop on Cyberdyne.

Uncharacteristically the same issue of RAW carries an interview article by Lord Helmet of Pure Metal Coders, *CHAT WITH SEXY AMIGA GIRL*, 16 year old Wiquie of Linkoping, Sweden, a female member of the group Cytax. Unlike the interview articles generally dwelling upon supposedly male scene members' interests such as scene business, demo making, group administration, competition organisation and demo evaluation, the interview with Wiquie consists of essentially sexist chit chat on the subject of her preferences in the opposite gender. Only one question addresses a remotely technical issue:

"Lord Helmet: Why do you think that so few girls are attracted to the computer? Wiqui: Girls are smart, boys are stupid!"

Perhaps significantly, Wiquie of CYTAX was not reported as having a handle or pseudonym as is customary for male group members. In that context, the article by way of introduction infers that Wiqui might be more a decorative appendage to the group rather than active functionary, and simply states:

"The group is CYTAX. Her handle is being cute."

The issue of gender orientation with regard to the development of interest in computer technology is usefully discussed by Dr. Leslie Haddon in her essay *Interactive Games* (Hayward P [edited by], Culture, Technology & Creativity in the Late Twentieth Century, John Libbey, London 1992, p. 123-147). Haddon concludes that while girls enjoyment of computer games, including those of a fast action arcade nature, was no less enthusiastic that of boys, discourse on the topic of computers, the

exchange of games and game playing tips outside of the game playing environment was found not to be regarded with the same degree of priority or importance by girls. Haddon indicates that for boys, conversation about technical issues such as computer games and computers can serves an important socialising function. Haddon also observes that the opportunity for socialising available in electronic games arcades, socially acceptable and popular as gathering places for male youth interested in computer games and their technologies has been generally denied girls due to a somewhat unsavoury perception of such places by parents. The kind of sustained ongoing preoccupation with technology which might consequently develop in a substantial proportion of the male gender is not according to Haddon therefore shared by their female counterparts who otherwise engage with the same computer game texts as the males with equal enthusiasm.

Recent research conducted by Dr. Valerie Clarke and Joy Teague, both of Deakin University in Australia, would appear to confirm Haddons conclusions concerning social influences. On the basis of research data collected over three years, Clarke and Teague report, though in the context of gender balance in computer education rather than leisure computing, that "low numbers of girls and women in computer science classes appears to be related to societal factors rather than to gender" (Clarke VA, Teague GJ, *Encouraging Girls to Study Computer Science - Should We Even Try?*, Australian Educational Computing, Vol. 9 No.1, May 1994, p 17-22, 32).

Dr. Sadie Plant in her article *Beyond The Screens: Film, Cyberpunk and Feminism* (Variant, issue 14, Glasgow 1994, p. 12-18), asserts a far deeper culturally ingrained position characterising the attitudes to technology of men and women. Her article describes the marginalisation of womens' speech by the "dominant [male] system of communication" which has been technology oriented. Further, Plant states that "The connection between women and technology has been sedimented in patriarchal myth: machines were female because they were mere things on which men worked". Against this background Plant sees a future in which non linear, Hypertext like, computer mediated communication, parallelling the "immediacy of women's communion with each other", as posing a challenging alternative and "disrupting every conception of the straightforward [male] narrative." Cyberfeminity, a virtual reality, she concludes, is a process through which preferable alternatives might be asserted to the control oriented and destructive history of man's achievements.

While Haddon, Clark and Teague present a view describing the female gender as being at least equally effective to the male when operating within a computing environment, though without the preoccupation characterising male involvement with the technology as a factor of peer group socialisation, Plant presents a scenario of the linguistically framed and culturally maintained disadvantage of women as an opportunity to

impact upon the status quo due to a common communication paradigm, that of networking, now occurring within electronic communication infrastructures. Both the reason of socially constrained opportunity as stated by Haddon and that of linguistic determination as asserted by Plant lends credence to the assumption that the demo scene is predominantly a male subculture. Both may be viewed as corollary to recent findings in the USA indicating that 80% of homes with boys between the ages of 8 to 16 have a games computer (Battelle J, Johnstone B, *The Next Level: Sega's Plans for World Domination*, Wired, USA vol.1.6, Dec. 1993. p. 73-77, 128-131).

GATHERINGS

A further feature of the scene are the gatherings of members. These could be simply copy parties for the purpose of fellowship software copying with as few as 3 or 4 attendees in some one's home, however some are large events usually planned some months in advance and involve the hire of a venue and provision for a range of technical and logistic conference type requirements. These are usually hosted by well established groups with a significant reputation in the scene and can attract upwards of 500 attendees. In terms of their agenda these larger events are very similar in their social function to the cultural festivals which feature in mainstream society such as the Eisteddfod in Wales, film festivals etc. These gatherings or parties provide an opportunity for members from various groups and locations to meet, exchange ideas and warez and compete. Categories for competition are usually best demo, best intro, best music, best graphics and sometimes there might be a coding competition to produce an intro or short demo during the time of the party usually two days. Voting is by the attendees and prizes are awarded either in the form of cash from the sale of tickets for the event, or sometimes hardware, software and/or cash from sponsorship. Following the competition, compilations of the winners and runners up are produced and distributed. These events are frequently the opportunity for groups to launch new demos at the same time providing an infrastructure, informal and spontaneous as it is, for establishing and updating qualitative benchmarks for the scene's cultural productions. These productions thus become the principal form of *sign equipment* for groups with which to denote status and standing within the subculture.

TOWARDS AN UNDERSTANDING OF MOTIVATION

As earlier discussed, the production of demos frequently represents an enormous investment in time and commitment for the individuals concerned. The issue of motivation therefore arises. The reward from winning competitions offering computer hardware or peripherals or a cash amount of between $200 - $500 while to a high school student, a typical group member, might seem substantial, once split up among individuals in a group as in the case of cash, financially is unlikely to cover international or even local travelling expenses to attend such an event. Also it is thought to be a fair assumption that only a minority of the

total number of demos produced are done so with the intention of demo competition entry. The reasons being that competition standard is generally known to be high, being set by elite groups with a track record. This factor of standard and difficulty in it's attainment is not insignificant when taken in the context of the scene as a whole. As already indicated, analysis of the research sample data shows that of the 398 scene groups identified only 132 or roughly one third have made more than one production of any kind. A further consideration against competition entry being a prime motivator is that as a rule, in order to enter members of the production group must be present. A travel expense probably too high for many.

SELF PROMOTION

What is overtly evident is that there are several examples where the content invites response from entities other than members of the underground scene. Within the music tracks for instance, in place of instrument names of the sound files used there is to be found information how a software house or other interested parties might contact the composer in order to commission music. Graphicians or electronic illustrators and designers generally sign their work and certainly the coders or programmers are aware that software companies may talent spot. Indeed some groups have in due course developed commercial software, for example the group *Silents* who have written the top selling games *Pinball Dreams* followed by *Pinball Fantasies*, both released for the IBM PC as well as the Amiga. Demos in these instances become the vehicle for skill exposition and perform the same function that a showreel might for a film production company. Some examples offer demo production as a financial proposition to potential clients including other scene groups who may not possess within their ranks the skills to produce their own demo. Occasionally a sub-theme within a demo might be derision or a challenge with regard to another group. In the main however, the messages carried in scrolling text form, against a background of visual effects deal with self acclamation with regard to the producers and the expression of friendship and acknowledgment towards the scene of which the producers see themselves as a part of. This acknowledgment of others is a feature in the majority of demos and is referred to as the *greetings list*. Here, several dozen names of other groups or pseudonyms of individuals might scroll by during the course of a demo.

The demo as a means of posturing for status within a social structure in terms of stratification within the subculture is also worthy of noting as a factor in the motivation of individual and group effort. An established perception with regard to degrees of achievement in terms of accomplishments which are valued and admired within the subculture community as a whole create distinctions of status. These distinctions or pursuit of the values they represent are reasons for example why members may migrate between groups or why groups dissolve, disperse

and re-emerge under different names.

THE DEMO MAKERS PERSPECTIVE

Recorded interviews with demo makers are rare in conventional paper publications and only two have been located in the course of the study. Shatz in his *Walkthroughs and Flybys* CD publication does no more than report sentiments though not direct quotations in his discussion of the Finnish PC demo group Future Crew and their founder Sami Tammilehto. Shatz reports:

"In the next year, they plan to start writing games for a US based company to break into the multimedia industry. Regardless, they intend to keep creating demos and distributing them for free because they have so much fun doing so. What they enjoy most of all is the competition and sharing of Ideas with other groups in the demo community".

A verbatim interview published in *The Australian Commodore & Amiga Review* (James O*, The C64 Column*, April 1992, p 56) between Owen James and Slash (Damien Britt) of the Digital Underground elaborates further:

OJ: Why spend so much time coding a demo that will probably be forgotten in a couple of weeks?

DB: We try and make the demos so that they are remembered and not just forgotten. Um, it could be ego related as well, because a lot of the disk magazines produce charts from people voting, and getting Number One is probably what most people aim for. Mainly it is just for fun and experience I suppose.

OJ: What are your average ages?

DB: It would probably be about 16 or 17, but can range from anywhere from 13 to 60. Most of us are still going to school and are still enjoying our youth. OJ: Do you find it interferes with your social lives?

DB: Not really. You code in your spare time, when you want as there aren't exactly deadlines, though sometimes there is! We just go and enjoy our normal lives and code in spare time. It actually enhances your social life in a way, because when you swap it is just like having lots of pen pals, and there are usually parties and things where you can meet these other people on the `scene', as we call it. Also if you are travelling, you know a lot of people and you can go and meet them etc.

OJ: How did you get onto the demo scene?

DB: Firstup, I was asked by somebody at school, and we formed a small local "lamer" group. However we slowly improved and got more recognition. Have you seen addresses in demos? Well, you write to them

and ask to swap and slowly build up from there.

OJ: Any last thoughts or deep and meaningful philosophies on life or anything else?

DB:.... If people think they are interested, then they should give it a go as it is challenging, fun and fulfilling. It gives you experience in programming and a lot of the scene guys go on to become game coders and doing other things for software houses.

An interview with Mr Hyde, demo coder of the Swedish group Anromeda in RAW diskmag (Issue 2, 1991, item 45) provides a little further insight:

Q: Is it hard to find new ideas to code?

A: It's not hard to find ideas, but it's hard to find good ideas. Most often ideas pop up at school when we are having a boring lesson.

Q: What is your motivation to use so much time to code demos?

A: Sugarcubes (Not the pop group, real ones!), and the great force called "code-gleden.

Philipetto of Vega poses a more philosophical stance on the issue and offers some salutary advice to aspirants and colleagues alike:

Now, all democoders have to face that it happened at least one time that someone asked them: "but why do you spend so much time on such a useless thing?"You can't deny it: demos are useless. They can be as nice as you want but they are made just to be shown.

Before going on, I want to determine a thing: I'm not against demos at all, because I have composed about 40 tunes for demos and I have coded about 20 demos. I have already shown the bad part of democoding: at the end of the work you have a thing which after being watched one time will be forgotten (I know that the great demos are always remembered, but it's a bit strange that a guy spends his whole day watching the same demo 100 times)

The good thing of democoding is that the coder makes experiences and starts to know the machine. This is a very positive fact and it's very useful for the future.Now, demos should be the favourite hobby of a democoder. And this is OK, too. But the democoding must not overlap the other facts of life of a guy, because otherwise the guy after some years will find himself with 3-4 wasted years, and I mean wasted in doing nothing for his life, because you can be as famous as you want in the scene, but REAL life is completely different.

..... Life flows around the money. This is a fact. Have you ever asked yourself why actually all the best coders and musicians (and graphicians)

work for software houses?

..... So, if you are really good, don't work only for the scene. Software houses are always looking for talented people. Get the chance to earn some money."

(Filipetto of Vega, Why Coding Demos?, Freedom Crack 9, 1992)

MASLOW'S HUMANIST PHILOSOPHY

In many respects a scene member's devotion of hundreds of hours in the production of a demo for little reward other than "fun and fulfillment", as Damien Britt alias Slash who is quoted above stated; can be asserted, is no different than for example, a model engineering hobbyist spending a year or two painstakingly manufacturing a 1/20th full working scale model of a steam locomotive. A further parallel might be drawn between what might be interpreted as the obsessive dedication to the task undertaken by demo makers and the "fanatical enthusiasm" exhibited by *otaku*, Japanese "teens or tweens mostly boys" for collecting artefacts or knowledge connected with some commodity or media type as a "maniac field of interest" (Grassmuck V, *Otaku - Japanese kids colonise the realm of information and media*, Mediamatic, Vol 5, No 4, 1990), (Greenfeld K T, *The Incredibly Strange Mutant Creatures Who Rule The Universe of Alienated Japanese Zombie Computer Nerds (Otaku to You),* Wired, Vol 1, No 1, 1992, p 66-68) . Only the context changes. It is the urge and conviction to persist which, it is concluded, is the more significant similarity between the products of the demo scene and those of the artists and film makers referred to in chapter 1, and not the formal features of the artefacts themselves for which no evidence has been found for intentional commonality in the visual references of the more recent to the former.

Fun and a sense of fulfilment are human responses to the satisfaction of a felt need or urge. A. H. Maslow's writings on the subject of self-actualisation and creativity provide within the parameters of this study the most satisfactory answer to the issue of the motivation involved. In his book (Maslow A H, *The Farther Reaches of Human Nature* (1971), Penguin, 1978) Maslow debates the question of intrinsic values in human nature. He postulates that creativeness is an intrinsic characteristic of humanity. His main thesis concerns the holistic nature of the person and the ill effects on well being or *metapathologies* which occur as a result of the denial of opportunity for the actualisation of such intrinsic traits. In discussing this postulate, Maslow differentiates between the motivation involved in the satisfaction of basic human needs, into which category he includes "belongingness, affection, respect and self esteem" (*A theory of metamotivation: The Biological Rooting of the Value Life*, The Farther Reaches of Human Nature, chapter 23), and the dynamics which then motivate the self-actualising persons further, in terms of dedication, self sacrifice, devotion to a cause, aspiration, anger etc. Maslow calls this higher level drive , "metamotivation". He points out that mere gratification

of the basic needs can in it's self be compatible with "existential neurosis" that is meaninglessness, valuelessness and the like. Self actualising individuals on the other hand, he points out are dedicated people devoted to some task or vocation "outside themselves". They have a passion and profound feeling for their work. In this situation "internal requiredness coincides with external requiredness". Employment, voluntary service in some capacity or requested tasks are perceived by self actualising individuals as self indulgence, a pleasure, rather than duty or imposed necessity. The task is felt to provide a release for one or other intrinsic human trait such as creativity and therefore facilitates fulfilment. As a result, opportunity for self actualisation translates into manifestations of fine craftsmanship for example, selfless devotion in helping others or the pursuit and delight in excellence of achievement. Such individuals, Maslow has also found by research, "quite easily and decisively "know right from wrong" for themselves", and the assertion is made that the denial of self actualisation can manifest as value confusion and an "active hatred of the good (or trying to become good) person, or superiority, excellence, beauty, talent, etc."; [hence possibly the delight in sabotage and chaos as discussed earlier in connection with the writings of Taylor and Walton (Images of Deviance), and the observations of Hebdige concerning youth culture].

The intrinsic human values which *metamotivate* self actualising individuals, Maslow asserts are "instinctoid in nature, i.e., they are needed (a) to avoid illness and (b) to achieve fullest humanness of growth. The "illnesses" resulting from deprivation of intrinsic values (metaneeds) we may call metapathologies". These *metapathologies* which result from the denial of opportunity for self actualisation include: Alienation, Loss of Zest in Life, Meaninglessness, Boredom, Philosophical crisis, Apathy, resignation and fatalism, Desacralization of life, Joylessness, Cynicism, and "Aimless" destructiveness, resentment and vandalism.

The kinds of "Pathogenic Deprivation" which leads to the above "Metapathologies" are for example:

Dishonesty - [denying] Truth - [leading to] Disbelief, mistrust, cynicism, scepticism and suspicion; Ugliness - [denying] Beauty - [leading to] Vulgarity, Specific unhappiness, restlessness, loss of taste, tension, fatigue, Philistinism and Bleakness; Deadness, Mechanizing of life - [denying] Aliveness Process - [leading to] Deadness, Robotising, Feeling oneself to be totally determined, Loss of emotion, Boredom, and Experiential emptiness; Injustice - [denying] Justice - [leading to] Insecurity, Anger, cynicism, lawlessness, jungle world view and total selfishness.

(extract: Maslow, Table 3, B-Values and specific Metapathologies)

Maslow concludes, "The metaneeds [truth, goodness, perfection, justice, etc.] seem to me to be instinctoid, that is, to have an appreciable

hereditary, species-wide determination. But they are potentialities rather than actualities. Culture is definitely and absolutely needed for their actualisation; but also culture can fail to actualise them....".

CONCLUSION

It is a conclusion of the present study that a human pre-disposition to self actualisation in the terms which Maslow postulates, substantially provides a plausible hypothesis regarding the underlying motivation for the frequently long and sustained co-operative effort required for demo production. It seems that the technological capability of the computer and the camaraderie of peers, provides the opportunity for self actualisation to occur. It is an opportunity to strive to excel and achieve in the face of what might appear to be an unsatisfactory and hypocritical cultural and social external environment. It is noted however that this predisposition for self actualisation is equal for any domain of endeavour that might be determined through the enculturation of the individual.

Analysis of the collected study materials has revealed a scale of production unanticipated at the investigations commencement. The 743 individual examples of the genre identified, and catalogued together with evidence in the form of 34 hours of video recorded excerpts it is asserted, constitutes a significantly substantial basis for the recognition of a cultural phenomenon. Further, the identified and collected internal scene publications give weight to the identification of a distinct and significant trans-national male gender based, youth subculture. It is a subculture which effectively exists on anarchistic principles, inasmuch as it survives on the basis of liberty and co-operation in the absence of coercive or cohesive structural influence. The productions, demos and intros, created within this environment function both as the sign equipment of the subculture and as a means of self expression and self actualisation for the individuals involved. These productions have also been found to present certain characteristics which in combination distinguish the genre sufficiently from other existing kinetic audio visual media genre types to warrant the genre's recognition as a specific and distinct type of cultural artefact. These are the routines and the essentially non-narrative format of their presentation. Series of technical exercises as demonstrations of prowess and mastery of their medium of expression, though with their musical presentation context also involving creativity in their choreography therefore resulting in a type of vernacular audio visual art form. The author concludes that these findings supported by the diversity of the materials identified, and the now available information resources through the Internet communication resource, are sufficient to constitute a significant cyber subculture.

REFERENCES

Hafner K, Markoff J, Cyberpunk, Corgi 1994

Battelle J, Johnstone B, Seizing The Next Level, Wired, December 1993

Editors, Demos Corner, Amiga Format, March 1990

Bradley S, PD Demo Zone, Amiga Format, January 1994

Borzyskowski G, Proceedings of the 1992 International Interactive Multimedia Symposium, Interactive Multimedia A Graphic Designers View, Curtin 1992

Shatz P, Wakthroughs And Flybys CD, Waite Group Press, 1993

Ten Golden Demos, diskzine Fourth Dimension #5 1/12/1990

Editors, Amiga Guide PD Special, CU AMIGA, November 1991

Beswick K, Hoist the Jolly Roger, Amiga Games, October 1991

Gibsons W, Neuromancer, Victor Gollancz, 1984

Trench M, documentary film Cyberpunk, 1990

Stevens K, Software Piracy and the Amiga, Amiga User International, May 1988

Sterling B, Wired, Compost of Empire, April 1994

Taylor L, Walton P, Idustrial Sabotage: Motives and meanings, Ed. Cohen S, Images of Deviance, Pelican 1971

Keyhoe B P, Zen and the Art of the Internet, The Internet Worm, DEET, 1992

Raymond E, The New Hacker's Dictionary, MIT Press, 1992 3rd ed

Scott M, Hacking the Material World Wired, July/August 1993

Sterling B, The Hacker Crackdown, Penguin, 1992

Dibbell J, Phiber Optic Goes to Prison, Wired, April 1994

Rheingold H, The Virtual Community, Secker & Warburg Ltd, 1994

Markoff J,Cellular Phreaks and Code Dudes, Wired, premier issue 1993

Rheingolds H, The Virtual Community, Secker & Warburg, London 1994

Hafner K, Markoff J, Cyberpunk, Fourth estate 1991 / Corgi 1994

PURE METAL CODERS, RAW Diskmag #2, 1992

Kaauld, Cyberpunk Dead? No Fuckin Way Dude, LSD Grapevine December 1993

Hebdige D, Hiding In The Light, Comedia, 1988

Goffman E, The Presentation of Self in Everyday Life (1959), Pelican 1969

Goffman E, Encounters (1961), Penguin University Books 1972

Infinite Perfection, RAW DISKMAG #2 1991

Hobbit of Cybernetix, Who The Fuck Are WE?, Grapevine #12 1992

Cardiaxx of WDL, An ex lamers story, Grapevine #12 1992

Style of Vega, Levels of the scene, Freedom Crack, issue 9, 1992

James O, The C64 Column, The Australian Commodore & Amiga Review, April 1992

Mr Hyde Anromeda, RAW diskmag Issue 2, 1991, item 45

Filipetto of Vega, Why Coding Demos?, Freedom Crack 9, 1992

Grassmuck V, Otaku - Japanese kids colonise the realm of information and media, Mediamatic, Vol 5, No 4, 1990

Greenfeld K T, The Incredibly Strange Mutant Creatures Who Rule The Universe of Alienated Japanese Zombie Computer Nerds (Otaku to You), Wired, Vol 1, No 1, 1992

Maslow A H, The Farther Reaches of Human Nature (1971), Penguin, 1978

Weiss A, An Amiga User's View of the Internet, Internet World, Mecklermedia Corporation, USA, May 1994

Speton J G, aminet/text/hyper/adl1129.lha, Aminet Amiga CD ROM, Walnut Creek, USA, Feb. 1994 Grapevine #12

Judge Drokk, Anarchy: Members and Management, RAW DISKMAG #2, PMC, 1992

INTENSE, HEXAGONE / PARASITE, ISSUE 1, September 25, 1992

Haddon L, Interactive Games (Hayward P [edited by], Culture, Technology & Creativity in the Late Twentieth Century, John Libbey, London 1992

Plant S, Beyond The Screens: Film, Cyberpunk and Feminism, Variant, issue 14, Glasgow 1994

Battelle J, Johnstone B, The Next Level: Sega's Plans for World

Domination, Wired, USA vol.1.6, Dec. 1993

Christian Marz database email s-marz@ira.uka.de, dated 1993, February 1994

Aminet Amiga CD ROM (Walnut Creek, USA 1994)

Lord Helmet, Summary of the Year 1991 RAW DISKMAG #2Rebels, History Lesson, Demo, 1990

Shatz P, Walkthroughs and Flybys, Waite Group Press, 1993

Rucker R, Sirius R U, Queen Mu, Appropriation, Mondo 200 - A Users Guide To The New Edge, Thames and Hudson, London 1992