

THARUNKA THARUNKA





Hello ... this is BUSH VIDEO transmitting some printed messages. We are people who are putting our heads into the common information space of video communication. We define video as a tool for the reception, codification, and transmission of audio/visual information; and as the technological extension of the human brain's memory/image processing, storage, and retrieval system. After consciously and unconsciously, seeing and dreaming, video and metavideo 24 hours a day for the last four months we are now giving a brief report of "these instrumented revisits to paradise" (Bucky) and the discovered educational, social integrational, global culture participational, and simply world turning-on potentines of video communication which make the present pre-programmed, one-way broadcast TV as obsolete relevant as the town crier.

Realisation of the total ecological interdependence of all living forms on the planet requires our responsibility to globally coordinate our energy modulating strategies which requires a planetary communication medium and a universal language for world literacy. Joseph El Khourey's article "Alchemy of Communication" outlines the tradition of this hermetic quest evolving to video as the contemporary alchemic tool.

It seems to us that video is the first of a family of a new generation of universe communication tools - probably as revolutionary as Gutenberg's printing press - which will expand the field of man's knowledge in unprecedented forms.

Mick Glasheen's "Towards a General Theory of Communication" states a definition of communication as a sharing of conscious experience of energy and his "Topological Videospace" indicates a conceptual framework of inside-outing one surface Klein bottles for video information considered in terms of four communication processes - reception, codification, transmission, and transaction of messages.

Similarly to Naom Chomsky's every child reinvents language when learning it-theory, video languages have yet to be invented, let alone vidiated. Thus, at the moment, video is a vast educational program to be processed (or process to be programmed) and most of our work is heuristic probing into video communication potentials.

The primary areas for video exploration are proposed to be:

- (1) Video as Personal articulation.
- (2) Video as Social interaction.
- (3) Video as cosmic integration.

VIDEO AS PERSONAL ARTICULATION

Video as prosaic or harmonic articulation for the spontaneous investment of the imagination-gestating intellectual increments of experience.

Video as self-actualizing, meditational tool for reality projections e.g. self-made videospaces as empty memory theatre for staging consciousness transformations (see Joseph's "Memory Theatre") and for insertion of specific vidiations to be played with by self or others invited into the theatre.

- Synthetic video/music translations (video art).
- Video therapy (cybernetic acupuncture?).
- Video diaries of personal evolutions.

VIDEO AS SOCIAL INTERACTION

Video as social monitors (Social Early Warning systems similar to DEW - Distant Early Warning system for missile detection) for detection of evolutionary changes in societies.

Video as tool for initiation of social evolutionary strategies.

E.g. "Challenge for Change" type projects (cf. Warwick Robins and Tom Zubrycki's articles).

VIDEO CONTACT DIRECTORY - SYDNEY - AUGUST 1973

The names and addresses of those people in the directory have been edited down to those WORKING WITH video, and is intended to induce interaction and exchange of information and tape. If you feel you have been left out, write to us, "Bush-Video", 31 Bay Street, Glebe, telling us what you're into. On an international level it would be good to plug into the Video Exchange Directory, C/- Image Bank, 4454 West 2nd Street, Vancouver 8, B.C., Canada, who publish regularly a world directory. Let it flow.

Aggy Read, C/- Film Dept., Flinders Uni, Bedford Park, Adelaide.
 Bush-Video, 31 Bay Street, Glebe, Sydney. Phone 660-2684.
 Best Dealing and Sasha Trikous, "Eurutta" Sages Road, Baxter Vic.
 "Challenge for Change", Warrick Robbins and Marlene Matteson, 21 Palm Street, St. Ives, Sydney. Phone 440-8622.
 Elizabeth Cook, Chisholm College, La Trobe Uni, Bundoora Vic. 3083.
 Frank Wingham, Box 284 P.O., Grafton.
 Gail Haglund 132 Auburn Road, Auburn, Hawthorn, Melbourne Vic.

George Klein, Tasmanian College of Advanced Education, Box 1415P GPO Hobart 7001 Tas.

Ian James, 28 Norfolk Street, Fremantle 6160 W.A.
 Ian Batty, 81 Liddiard Street, Hawthorn Vic.
 John Hughes, "Winterborn", Mountain Road, Cockatoo Vic.
 John Hanson, Box 85 P.O. Belgrave Vic.
 Phil Noyce, 20 Alfred Street, Annandale.
 Peter Fredericks, 60 Foley Street, Kew Vic.
 Peter Lewis, Bristol Channel, 2-3 Broad Plain, Bristol UK.
 Rodger Foley, 112 Riley Street, East Sydney.
 Richard Dunn, 19 Victoria Road, Swindon, Wilts UK.
 Warren Hannigan, 3 Help Street, Chatswood.
 Tom Zubrycki, 35 Stephen Street, Balmain, phone 827-1546. Or C/- Sociology Dept., UNSW.
 Carey Court, 318 Station Street, North Carlton. 51-6811 (work).
 Jon Sunderland, C/- 13 Lynette Avenue, Beau Maris Vic. 3123. 99-3881.

Video as tool for social intercommunication and information feedback - consciousness as communal bond matrices.

Video as anthropologic tool for world cultural integration. e.g. Videospace/time realization of Australian aboriginal dreamtime.

BUSH VIDEO PROGRAM PROCESS

We are primarily concerned with self educational/experimental video software and hardware research, production and display.

(a) SOFTWARE

Research

(1) Metavideo: Design of generalized video languages for universal human communication and programming of a universe image information integration tool.

(2) Design of generalised video languages for operational situations.

Suggested curriculum for video Design Science - Synergetics of TV, the mathematics and physics of TV, Videospace Topology and Projective Geometry, Cybernetics and Video Epistemology Communication (Video Information Theory), Life and Light, Structuralist Mythology Programming, World Community of Interests and the Theory of Games (Von Neumann), Media Ecology.

(3) Design of specific video languages for immediate educational, industrial and social use. Suggested educational video research subjects:- Synergetics, General Systems Theory, Physics, Chemistry, Geology, Biology, Ecology, Meteorology, Sources of Energy, Political Geography, Ergonomics, Production Engineering.

Productions

Video productions are considered not as static products but as process reviews which can still evolve from viewing feedback.

(1) Personal articulations of video-reality projections.

(2) Social interactions and consciousness mixing. Documentation of emerging culture/life style as well as being an integral part of it (specifically concerned with the post-Nimbin community), Inventory of living Australian aboriginal culture (life/style, language, myth/song) as an eco-model of world game playing community, Alternative news service, World culture mix matrix.

(3) Cosmic integration (?) - production of a comprehensive series of "Universe Scenarios" for assisting world literacy regarding world resources and man's function on the planet (educational programs as previously listed).

(b) HARDWARE

Research

(1) Design of a universe image information integration tool for recording, processing, storing and retrieving audio/visual information from a computerized image bank of accumulated images of man's cultural evolution.

(2) Research (if possible), into developments in pertinent technologies e.g. photography (especially infra and ultra naked sense reception spectrum), electron microscopy, fiber optic cable information transmission, 3D holographic display, laser video projection, radio interferometry, graphic computer systems.

(3) Progressive survey of videotools as they become available. Test, experiment and feedback performance information on 1/2" videotape systems.

(4) Design modifications to presently available equipment for preferred functions.

(5) Research Slushware i.e. Organic hardware and Media Ecology.

Production

It is proposed to establish an experimental video workshop as a teaching-learning situation.

Design and production of originally invented/modified videotools e.g. Chrominance synthesizer, 4-gun Read/write tube, 1/2" vidicon tube, cox box (for topological transformation of videospace), comprehensive mixing facility (at least mixing 2 VTR's, at most mixing 6), Electronic video experimentation, feedback loop exploration, subjective color exploration, (a) Black/white revolving discs, (b) Land color theory, Mono- to color converter via filter-wheel, EEG Alpha-wave video modulations.

BUSH VIDEO FACILITY

It is proposed to expand the existing facility to include color mixing and editing functions with additional experimental hardware. The facility will be portable and will serve as a partially mobile basis for taking the experiment out into the community. The facility will operate within a cultural context ranging from confronting community video projects, community arts projects, individual artists and colleges teaching television courses. It will do this by supplying a creative experimentation and learning situation and display venue for the software produced in a centralized location and a travelling facility touring communities, arts festivals, colleges and universities.

There is still an equipment shortage - indicated by the number of people who have used and want to use our equipment. There is a large amount of equipment, which has had nowhere near the kind of use that Bush video's equipment has had, in the Universities and educational institutions - we suspect that it needs liberating - possibly a nationally co-ordinated liberation front - Can AUS use its influence here? There have been a lot of ideas floating around about a campus electric newspaper and a Travelling Show to tour the campuses. We are interested in both these ideas, but we haven't the resources to do them alone. A liberation of campus equipment would make them more feasible.

Access the video tool on your campus. It is in the faculty cupboards for restricted educational use. If you can get to use it we would like to tour the campus circuit and meet and work with you. Bringing our mobile studio (the workshop centre) and tapes from other places (the distribution). We can plug into an existing situation on campus for one week and use video to produce a groups eye view by

1. Make programmes.
2. Playing back programmes in video theatre.
3. Play back tapes from other campuses

and a universal language. Video may be the tool to create that language.

You can use/access this tool in your situation.

On campus, many faculties have portapaks for restricted education use. Derestrict this. If you get access under a research pretext we would like to work with you and see your tapes.

We would like to tour campuses to:-

- Energise existing context.
- Work and share experience in video.
- Disseminate our skills.
- Show tapes from other cities.
- Take tapes to the next stop for showing.

BUSH VIDEO PEOPLE: Joseph El Khourey, Mick Glasheen, John Kirk, Jonny Lewis, Ann Kelly, Melinda, Tom Barber Anna Soares Martin Fabinyi, Sri Richard, Mad Jack Meyer, Fat Jack Jacobson, Karl Wheelbarrow, Brian Williams, John Sisson, Jim McDonald, Damian. - Wednesday, August 8, 1973.



INSIDE A MEMORY THEATRE

In Campanella's "City of the Sun," a Utopia of astral magic is described in which the round central Sun temple, painted with the images of the stars, was surrounded by the concentric circles of the walls of the city on which the whole world of the creation and of man and his activities was represented in images dependent on the central causal images. The "City of the Sun" could be used as an occult memory system through which everything could be quickly learned, using the world 'as a book' and as 'local memory.' The children of the Sun City were instructed by the Solarian priests who took them round the City to look at the pictures, whereby they learned the alphabets of all languages and everything else through the images on the walls. The pedagogic method of the highly occult Solarians, and the whole plan of their City and its images, was a form of local memory, with its places and images.

General principles of the Classical art of memory.

The first step was the imprint on the memory of a series of Loci or places, the commonest though not the only type of mnemonic place system used was the Architectural type. In order to form a series of places in memory a building is to be remembered, the forecourt, the living room, bedrooms, parlours, not admitting statues and other ornaments which have been memorized in the building. This is done as soon as the memory of the facts is required, all these places are visited and their various deposits are retrieved.

The art developed in classical antiquity as an assistant to the art of oration.

The memory theatre of the Divine Camillo.

"They say that this man has constructed an amphitheatre into which whoever is admitted as a spectator will be able to discourse on any subject... I spoke to him about his work. He calls his theatre by many names, saying now that it is built or constructed mind and soul, and now that it is a windowed one. He pretends that all things that the human mind can conceive and which we cannot see with the corporeal eye, after being collected together by diligent meditation may be expressed by certain corporeal signs in such a way that the beholder may at once perceive with his eyes everything that is otherwise hidden in the depths of the human mind. And it is because of this corporeal looking that he calls it a theatre.

Camillo's theatre rests basically upon seven pillars, the Seven Pillars of Solomon's House of Wisdom.

By these columns signifying most stable eternity, we are to understand the seven sephiroth of the super-celestial world, which are the seven measures of the celestial and inferior worlds, in which are contained the ideas of all things both in the celestial and in the inferior worlds.

In his memory building the Universe will be remembered through organic association of all its parts with their underlying eternal order.

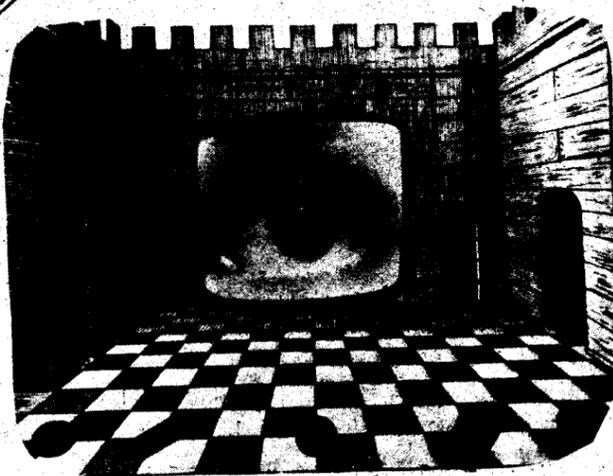
The basic images are those of planetary gods and under the images there were drawers of writings related to the subjects recalled by the images.

Today it would look like a huge ornamental filing cabinet. But we should not lose sight of the grandeur of the idea - the Idea of a memory organically geared to the Universe.

Giordano Bruno's Art of Memory.

A most solid foundation for the truths and secrets of nature. For you must know that it is by one and the same ladder that nature descends to the production of things and the intellect ascends to the knowledge of them; and that the one and the other proceeds from unity and returns to unity, passing through the multitude of things in the middle. (Giordano Bruno)

The aim of the memory system is to establish within, in the psyche, the return of the intellect to unity through the organization of significant images.



The images of the stars are intermediaries between the ideas in the super-celestial world and the sub-celestial elemental world. By arranging or manipulating or using the star-images one is manipulating forms which are a stage nearer to reality than the objects in the inferior world, all of which depend on the stellar influences.

One can act on the inferior world, change the stellar influences on it, if one knows how to arrange and manipulate the star-images. In fact the star-images are the 'shadows of ideas,' shadows of reality which are nearer to reality than the physical shadows in the lower world.



Let us contemplate the spectacle of the statues of gods and goddesses, assimilated to the stars, revolving, both as magic images of reality and as memory images comprehending all possible notions, on the wheel in Bruno's "Statues." Or think of the inextricable maze of memory rooms in "Images," full of images of all things in the elemental world, controlled by the significant images of the Olympian gods.

It is not enough to say vaguely that the memory wheels worked by magic. It was a highly systematized magic. Thus the images of decans of the zodiac, the images of the planets, the images of the moon-stations would form and reform in ever changing combinations, in connection with the images of the houses. Did he intend that there would be formed in the memory using these ever-changing combinations of astral images some kind of alchemy of the imagination, a philosopher's stone in the psyche through which every possible arrangement and combination of objects in the lower world - plants, animals, stones - would be perceived and remembered? And that, in the forming and reforming of the inventor's images in accordance with the forming and reforming of the astral images on the central wheel, the whole history of man would be remembered from above, as it were, all his discoveries, thoughts, philosophies, productions?

Such a memory would be the memory of a divine man, of a Magus with divine powers through his imagination harnessed to the workings of the cosmic powers. And such an attempt would rest on the Hermetic assumption that man's *mens* is divine, related in its origin to the star-governors of the world, able both to reflect and to control the universe.

Magic assumes laws and forces running through the universe which the operator can use, once he knows the way to capture them. The Renaissance conception of an animistic universe, operated by magic, prepared the way for the conception of a mechanical universe, operated by mathematics. In this sense, Bruno's vision of an animistic universe of innumerable worlds through which run the same magico-mechanical laws, is a prefiguration, in magical terms, of the seventeenth-century vision. But Bruno's main interest was not in the outer world but in the inner world. And in his memory systems we see the effort to operate the magico-mechanical laws, not externally, but within, by reproducing in the psyche the magical mechanisms. The translation of this magical conception into mathematical terms has only been achieved in our own day. Bruno's assumption that the astral forces which govern the outer world also operate within, and can be reproduced or captured here to operate a magical-mechanical memory, seems to bring one curiously close to the mind machine which is able to do so much of the work of the human brain by mechanical means.

The Art of Memory in the 14th century is followed by Robert Fludd, who is in the Renaissance tradition, and also by thinkers who are taking it in new directions, Bacon, Descartes, Leibniz. In the 17th century the art of memory underwent yet another of its transformations turning from a method of memorising the Encyclopedia of Knowledge, and reflecting the world in memory to an aid for investigating the Encyclopedia and the world with the object of discovering new Knowledge.

"The Monads of Leibniz."

Mnemonic, says Leibniz, provides the matter of an argument; *Methodologia* gives it form; and *Logica* is the application of the matter to the form. He then defines *Mnemonic* as the joining of the image of some sensible thing to the thing to be remembered, and this image he calls a *nota*. He then mentions that things seen are better remembered than things heard.

In this new mathematical-Lullist art, says Leibniz, *notae* will be used as an alphabet. These *notae* are to be as 'natural' as possible, a universal writing. They may be like geometrical figures, or like the 'pictures' used by the Egyptians and the Chinese, though Leibnizian *notae* will be better for 'memory' than these.

As is well known, Leibniz formed a project known as the *characteristica*. Lists were to be drawn up of all the essential notions of thought, and to these notions were to be assigned symbols or 'characters.' The 'characters' were to be used in logical combinations to form a universal art or calculus for the solution of all problems.

Allied to the *characteristica* or calculus in Leibniz's mind was the project for an encyclopedia which was to bring together all the arts and sciences known to man. When all knowledge was systematised in the encyclopedia, 'characters' could be assigned to all notions, and the universal calculus would eventually be established for the solution of all problems. Leibniz envisaged the application of the calculus to all departments of thought and activity. Even religious difficulties would be removed by it.

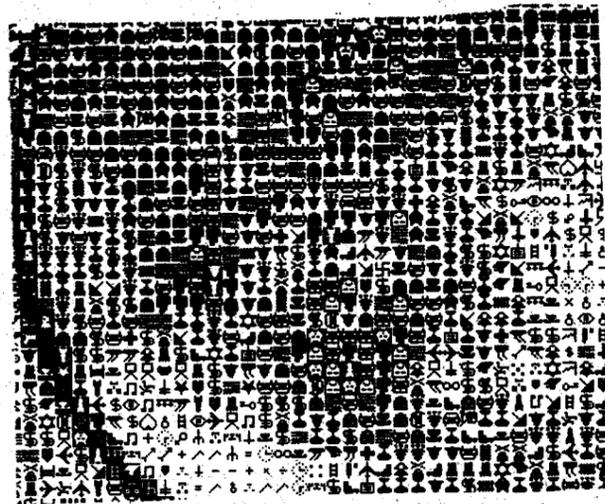
It was through his invention of new 'characters' that he was able to operate the infinitesimal calculus, which was but a fragment, or a specimen, of the never completed 'universal characteristic.'

The word Monad was borrowed by Leibniz from Bruno. Though Leibniz as a philosopher of the 17th century has moved into another atmosphere and a new world he bears obvious marks from the Hermetic tradition. The Leibnizian monads when they are human souls having memory, have as their chief function the representation or reflection of the universe of which they are living mirrors.

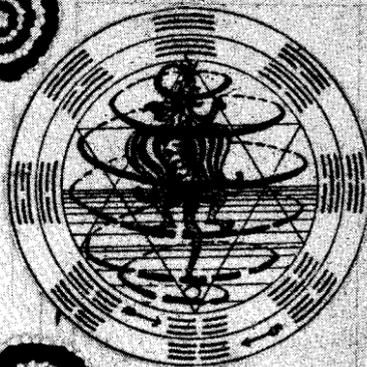
If I were to choose a patron saint for cybernetics out of the history of science, I should have to choose Leibniz. The Philosophy of Leibniz centres about two closely related concepts - that of a universal symbolism and that of a calculus of reasoning. From these are descended the mathematical notation and the symbolic logic of the present day.

Norbert Wiener - "Cybernetics"

History of The Art of Memory adapted from Francis Yates' "The Art of Memory."



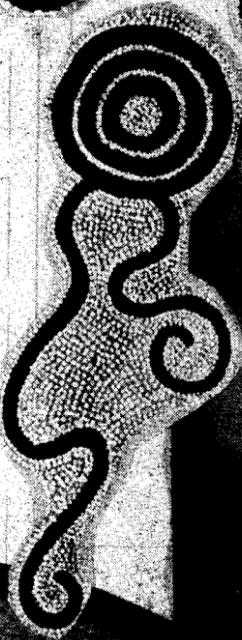
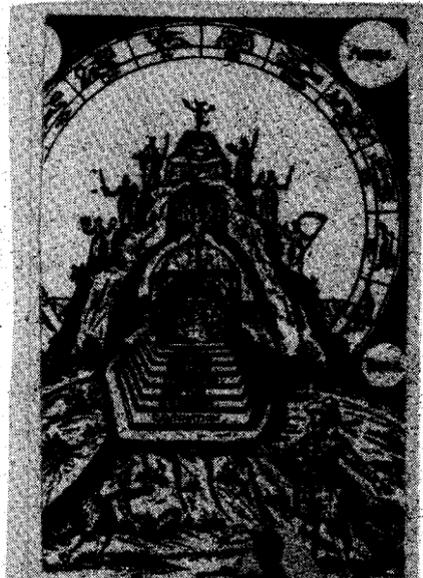
NOTES TOWARDS AN ALCHEMY OF COMMUNICATION



libraries, museums, computers, film-studios. The monitors are moving in fluctuating geometric formation now they suggest a Hindu Yantra now a Klein worm, a Hopi sand painting, the helical structure of the DNA the icosahedron structure of a virus or a dome by Buckminster Fuller. I call this show:—
THE DREAMING OF THE ELECTRONS INFORMATION STORAGE

Man has secreted vast amounts of Art and Knowledge in communicatable forms, all this can be stored in a global memory and made available to all men.

"Survival now would seem to depend upon the extension of consciousness itself as an environment this extension of consciousness has already begun with the computer and has been anticipated in our obsession with ESP and occult phenomena." — Marshal McLuhan.



Man's powers of observation in time and space are very great. He is conscious of his awareness and expresses his consciousness in the symbols, rituals, architecture, and Institutions that he creates. These creations in turn act upon their maker, in an ascending spiral of ever widening loops that trace the limits of the world in which he lives. In man, the observer's role brings the participants role to levels of possibilities that know no limits but those that he himself accepts as the ultimate stages of his own development.

If you look on the horizon of the present continuous eternity you will notice that a sun is rising called, "total communications" — that's our sphere — we, are the new alchemists brought together by our perception of the Lapis in the cauldron of the Videosphere, for the last three months we have been exploring this memory studio from centre to circumference with telepathic and orbiting satellite dialogues with neighbouring celestial bodies.

"Man can do nothing without the make believe of a beginning."

Where do we start AUSTRALIA 1973 TELEVISION ABC Channel 1234567891011 NEANDERTHAL TV — this network is more to be pitied than abhorred, it stands at the foot of an evolutionary ladder which it does not have the strength to climb. However,

Universe constant with its omni-directional history is mutating several television strains, as cross-fertilizing agents bearing the genetic message of total communication systems.

BUSH VIDEO — sometimes known as the outback of communications research or Channel Infinity.

Right from the start we were operating on many levels — idea, materialisation, myth, fulfillment, seed, information the message is the media are undergoing revolution upon revolution on the technical front and are consequently generating ideas in the minds of artists educationalists and speculators. The history of our century has been the result of the design science of buying and selling under the profit motive. In an age when science has the means to satisfy all material needs for all men the problem is one of free information flow. Capitalist Design science has served its evolutionary purpose it is now obsolete.

INSIDE THE MEMORY THEATRE

It is 1 am. I am locked in the memory theatre watching the monads of Leibniz passing through the one-eyed chambers of Infinity through infolding feedback and the corridors of topology, spiralling amidst the Architecture of history,

Information — omnidirectional, retrievable, open access, many faceted cable nerve satellite links, evermore precise — integrated circuits, microfilm, lasers. Many forms — telex, video, xerox — all knowledge available at any human terminal of global nervous system. Go anywhere portable recording devices in the hands of all. Invisible cords of energy information and 3-dimensional holographic projections form the Architecture of a new space.

"The Effect of Satellites is the conversion of the planet into a global theatre that demands spectacular programming beyond anything conceived of by the old Hollywood. The global theater demands the world population not only as audience but as a cast of participants." — Marshal McLuhan.

MUSICAL HIEROGLYPHS

As well as storage of this immense body of knowledge a new language synthesis seems to be required.

(1) To overcome the problem of possible overload and make retrieval practical — [the libraries of today are archaic forms in an age of electric information — the process is slow, bulky and inefficient — the word system is straining its bindings both literally and conceptually. The new Memory theatres would probably use multi-modal computer indexing with a light pen retriever system.]

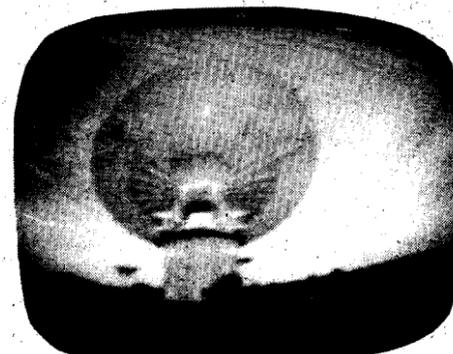
(2) It is difficult and inadequate to properly express concepts born of audio-visual dialogue in the present word language.

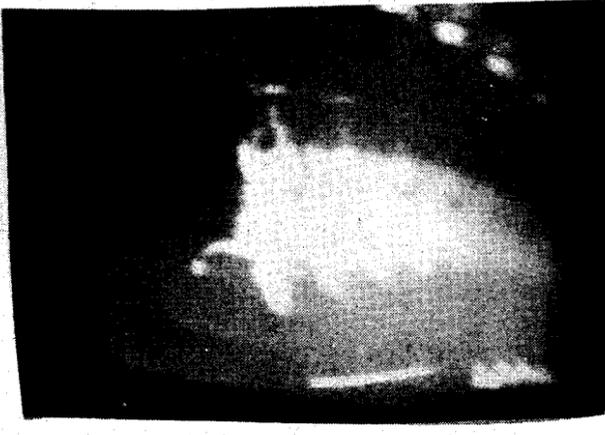
(3) The immensity of Information will eventually require vast second level indexing to facilitate reaching the first level of Information.

Therefore an integrated synthesis of the stored information will be required especially for the Initiation or education of the young. This will probably mean the formation of a synchronous audio-visual language which will be used by men to extend consciousness and knowledge in similar ways to the previous language synthesis — first as sound then as writing.

Elements of the new universal language could come from many sources not only the literate cultures of the West. Some symbol systems which would probably be helpful — The multi-conceptual Churingas of the Australian Aborigines, the Mandalas and seed-mantras of Tantric Art, the symbols and systems of the Hermetic tradition. The Geometric extensions of consciousness cited by Anne Tyng, extending from Jung's idea of the Archetype —

"As ordering operators and image formers in the world of symbolic images, the archetypes thus function as the sought for bridge between the sense perceptions and ideas." — to the genetic code —

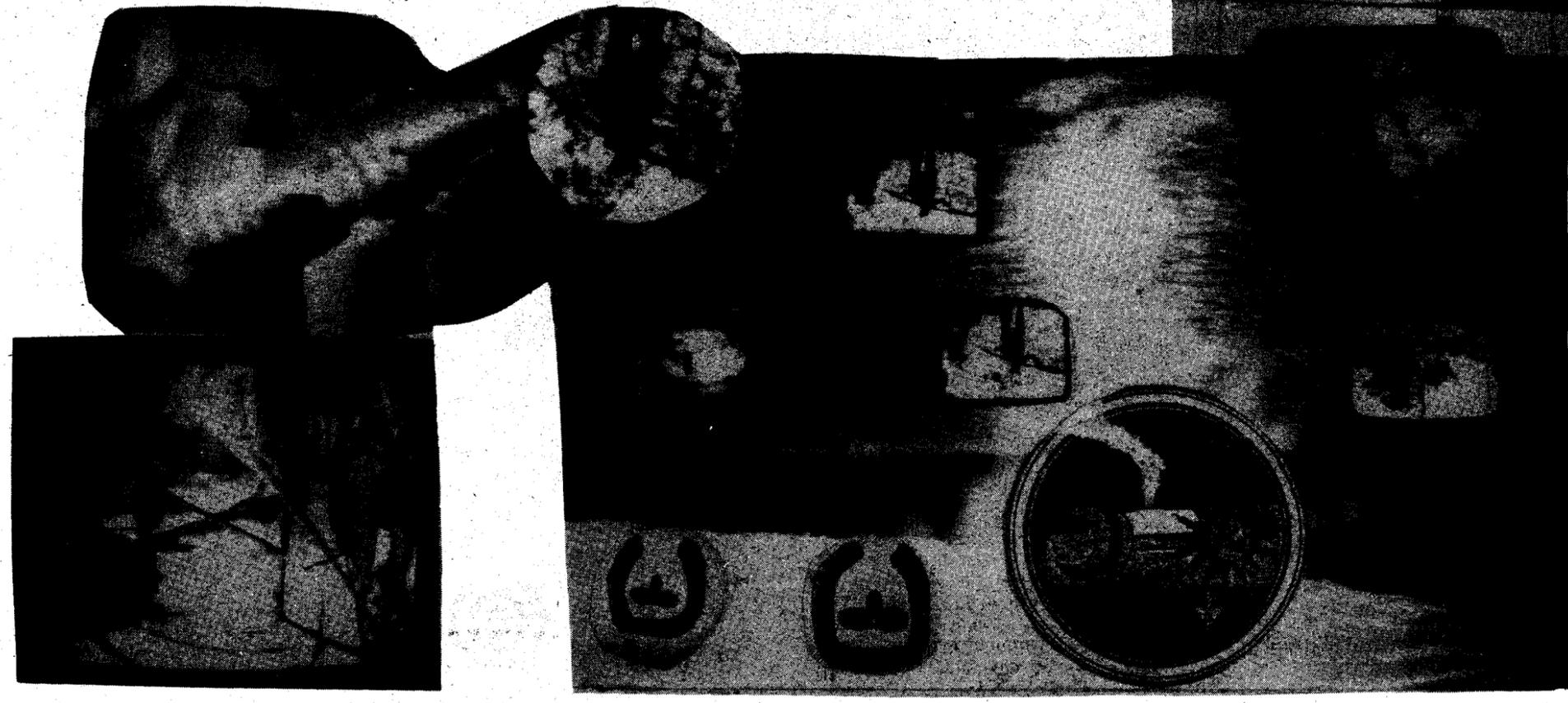




Joseph El Khourey
In the Second Industrial, or
Information Revolution the product is
the process and all minds partake in
external dreamtime process, and creation.

"The Alchemists: the empiric
philosophers of their time projected the
world into the detail of the equally
unknown processes which they were
striving to bring to fulfillment in the
outward world of their experiments.
These outward processes came on their
own part to act reflexively upon the
alchemist until he could feel them literally
reproducing themselves as though upon
sensitized film in the recesses of his own
psychic being." John Trinck The
fire-tried stone.

SUBLIMATIO



Ever-increasing man-made sensory
environments necessitate comprehensive
integrated design. Norbert Weiner, has
pointed out the dangers inherent in man
made Information systems, using the
parables of the monkey's paw and the
sorcerer's apprentice. — Many people
today are alienated by technology
because it is manipulative, elitist, too
specialized, a pollutant — Increase in
negative feedback suggests that we must
have harmonic integration of all universe
forms and minds or we will Self destruct.
Negative feedback is the result of first
industrial revolution in which people were
alienated by the process but enticed by
the product.

NEGATIVE FEEDBACK OR
NIGREDO

"At present thanks to the pioneering
work of Cyberneticians, information
theorists, general systems theorists,
systems analysts, structural
anthropologists, structural linguists and
their fellow workers in related fields, we
come to the insight that the properties of
material and individual identity of their
components. The same regulatory system,
expressed in an information flow chart,
may be realized as an artificial system,
composed of transistors and capacitors, as
a hydro-dynamic mechanical system and
as a system of nervous pathways and
synapses. The exploratory hypotheses of
this work suggest that underlying the
complex phenomena of the human mind
and of human interrelationships formed
by communicating human beings, there is
a basic regulatory structure which is
shared by the biological body and by
artificial servo-mechanisms." (Ervin
Lasilo)

"The spatial organization of these
helical circuits into spiraling coils can
provide form patterns which give access
and an infinite choice of pathways to
fantastic amounts of stored memories,
which become the basis of decisions and
thought processes."
As well as these sources, there are vast
areas of modern thought which seem to
be approaching powerful insights which
could provide a structure for this new
language.



Transverse view of a leaf of the New Zealand Christmas Tree. Numerous stomata can be seen as part of the epidermis, which is at the base of the thick layer of hairs. In this position the stomata are remote from the air outside the leaf and the hairs interfere with the carbon dioxide moving into the leaf during photosynthesis. The upper surface of the same leaf is almost free of hairs but CO₂ cannot enter the leaf through that surface because there are few stomata present and there is a very thick cuticle.

COMMUNICATION AS SHARING OF CONSCIOUS EXPERIENCE OF ENERGY

This article was written by Mick Glasheen for the World Design Science Decade Think-In, London, July 1967, and has since been printed by the World Game and the International Times.

Universe: The Sum of Man's Experience

Universe is the aggregate of all humanity's all time, consciously apprehended and communicated experience.

Universe is *finite* because it is the sum total of finitely furnished experiences. — Universe though finite is a *nonsimultaneous* structure-ergo, unitarily unpatternable-ergo, conceptually unthinkable-ergo, undefinable. This is to say *undefinable* does not mean *infinite* or *un-finite*. It means that definability — *de-finite* is a sub-set of *finite*-ergo, pattern *de-finition* is a subdivision of *finite-yet-unitarily-undefinable universe*. *The definable conception is therefore the first thinkable sub-set functioning of universe.*

The physicist's *Law of Conservation of Energy* which states that energy may be neither created nor destroyed-ergo is finite-embraces only the physical aspects of experience.

My definition embraces both the physical and metaphysical, the latter being all the weightless experiences of thought.

The metaphysical includes a mind extracted, refiningly concentrated and consciously formulated anti-entropic generalizations, in a hierarchy of progressively contracting degree, which most economically describe the workings of the metaphysical sub-division of universe. Buckminster Fuller.

— man has no nature but his own history — his total history, electronically, this total history is now potentially present in a kind of simultaneous transparency that carries us into a world of "heliotropic nought time". Marshall McLuhan

Humanity: Universal Anti-Entropic Function

Is the human an accidental "Theatre goer" who happened in on the "Play of Life" — to like it or not:— or does humanity perform an essential function in universe? We find the latter to be true.

By *entropy*, we refer to the experimentally demonstrated physical behaviours covered by the second law of thermodynamics and the latter's disclosure of the omni-accelerating-acceleration of the diffusion of physical energy patternings of universe-spoken of by the mathematical physicist as the "Law of Increase of the Random Element", which may also be called the "Law of Expanding Universe".

By *anti-entropy*, we refer to the omni-accelerating-acceleration of the clarifyingly differentiated and inter-communicated, experience derived, pattern cognitions of the human mind which progressively disclose the orderly complex of omni-interactive, pure, weightless and apparently eternal principles governing the intellectual design and operation of the seemingly and "suggestively" only-infinitely self-regenerative universe.

We may call this metaphysical phenomenon — which continually *simplifies* and contracts the generalized description of principles apparently operative in all the special case experiences — "the Law of Decreasing Confusion", or the "Law of Intellectual Conservation", or the "Law of the Contracting Universe", or the "Law of Diminishing Chaos", or the "Law of Progressive Order", or the "Law of Contractively Orderly Generalizations".

While gravity's effects are physically measurable, the *concept* of gravity is in itself unweighable.

Metaphysics and *physics* are thus seen to co-function, to progressively conserve the self-regeneration of non-simultaneously and overlappingly evolving universe.

Man's function in universe is that of the metaphysical, anti-entropic function. He is essential to the conservation of universe which is in itself an intellectual conception. Buckminster Fuller.

"E=MC². This said that the total of local system energy is the product of all concentric local systems of energy's self-interfered, shunt-holding patterns (M for

mass) as multiplied by the entirely non interfered local omnidirectional velocity of surface growth of an omnidirectional, outward-bound spherical wave of radiant energy in terms of second power of radial wave module frequency growth rate."

M equals all the locally complex, concentric, self-associative, unique holding patterns of all energy, and

C² equals all the eccentrically disassociative individual patternings of all energy (C being the radial or linear speed of radiant energy, which is approximately 186,000 mps). Buckminster Fuller

Energy

Universe is an all energy accounting system. E=MC². This said —

In the inherently subjective language of physical transformation of an omni-interaltering and accelerating universe there are only two fundamental kinds of observable transformational changes, i.e. *angular*, or sub-unity *alterations* and *linear* or plural unity (frequency modulated) *accelerations*. These subjectively viewed transformations of universe are also designed angle and frequency modulations.

Angular patterns are the locally complex, concentric self-associative, unique holding patterns of all energy and frequency patterns are the eccentrically disassociative individual patterns of all energy.

Matter: angularly cohesive gravitational inwardly shunted chordal patternings.

Energy: the linear acceleration of an omnidirectional radiant wave.

Life: an energy capturing anti-entropic omnidirectional radiant wave growth system.

"Life is a partial continuous, progressive, multiform and conditionally interactive, self realization of the potentialities of atomic electron states."

J. D. Berna

The dual and regenerative human functioning as successive, high frequency, subjective and objective, (subconscious and conscious) which altogether provide *angular range finding* and the *teleologic irreversibility* of human articulations are implemented exclusively by two principles with which humanity modifies his forward experiences in Universe in preferred ways. The two physical principles by which alone man may alter his ever evolving environment are those of *angular* and *frequency* modulations. Angular modulation (c.f. ruddering) is erroneously spoken of by man as spatial modification. Frequency of event modulation is erroneously spoken of by humanity as time modification. These capabilities of man's senses, brain and mind, provide the basis for his strategically selective differentiations of experiences. The human's subjective experiences are teleologically and spontaneously transformed into objective alterations of the evolutionary environment – to most effectively support man's unique brain and mind functioning in universe in the anti-entropic role.

It is our intent to so design or control the angles and frequencies of the evolving environment events that the spontaneous reflexing of society will result in all men enjoying all of Earth – and the progressive reaches of the universe about it – without mutual interference with one another's degrees of subjective and objective freedoms.

World

Because of the incessant *wheeling about* of humans first in the womb, then in the baby carriage, then on foot, in the auto and ship and plane roundabout a spinning earth in a spinning solar system within an involutivæ – evolving, spiralling spinning galaxy, totally inventoried experiences are inherently omnidirectional when considered as the sum of observational orientations. Buckminster Fuller

But the world, mind, is was and will be writing its own runes for ever, man, on all matters that fall under the ban of our infrarational senses. James Joyce
Finnegans Wake

The whool of the whaal in the wheel of the wold of the Boubou from Bourneum has thus come to taon! James Joyce
Finnegans Wake

Apollo to the Moon

We have been rapt in the "artifice of eternity" by the placing of our own nervous system around the entire globe. –

The first satellite ended "Nature" in the old sense. "Nature" became the content of a manmade environment. From that moment, all terrestrial phenomena were to become increasingly programmed artifacts and every facet of human life now comes within the scope of the artisticogion." Marshall McLuhan

Humanity is taking off – from its flouder, snail, and crablike existence, only around the two dimensional bottom of the sky ocean world – into its self-interference free four dimensional occupancy of universe. Buckminster Fuller

Towards a General Theory of Communication

Within the general system's network of all energy-experience universe, "communication" has been defined as "the sharing of conscious experience of energy". The communication process is the moving of this energy-experience information from a sender to a receiver. We have proposed that this process consists of four sets of events:-

- 1) RECEPTION of energy message from the universe.
- 2) CODIFICATION of these received messages into patterns.
- 3) TRANSMISSION of these codified pattern messages by information-symbol-tools transmitted by media.
- 4) TRANSACTION of these information-symbols by a society-culture acting on the energy environment.

Of course, this is a linear statement of what is in fact a continually regenerative feedback cycling of the reception, transmission, re-en-de-codification, action re-action-transmission of energy experience information messages. Consideration of the angle and frequency variables for each event elucidates this continual energy-message frequency modulation by angular constraints.

Now, to further describe the events in the communication process by discovered relevant quotations, and brief consideration of the angle and frequency variables in each event:

The Communication Process

1. Reception

"Everything in nature has motion – not just casual motion but motion that is rhythmic and unending,

following a precise pattern or cycle. If we set a pendulum in motion it is not difficult to count the number of strokes, or cycles, in a given period of time. Similarly it is quite easy to observe and time such natural cycles of natural phenomena become greatly faster or slower, or as the phenomena being studied become impossible to observe with man's unaided senses, then we must find other means of observing or calculating these cycles.

Much of all basic scientific knowledge can be encompassed within what man has learned of these cycles of motion... John J. Grebe.

"... everything that exists and happens in the world, every object and every, every plant and animal organism, almost continually emits its characteristic identifying signals." Lawrence K. Frank

"... the conscious 'world' is in fact energy radiantly manifest at relative rates of retarded speed..." Buckminster Fuller

The all-energy universe continually emits radiant wave frequencies – some of whose signals man consciously receives, and decodes into a generalized pattern or "cycles" of "motion", which he has encoded into the electromagnetic spectrum – a linear chart indicating the frequencies in cycles per second of all radiant energies and the narrow spectrum bands of light and sound within which man can "sensorially monitor" with his naked sense receptor's angular channel constraints. . .

"A sound – travelling first in air, then by way of middle-ear bones and oval window into the fluids of the spinal cochlae – generates a wave in the basilar membrane. The basilar membrane bellies in and out, carrying along the complex of tissues above it. The hair cells of the organ of Corti move with the basilar membrane. But the hairs have their tops embedded in the tectorial membrane and their roots fixed in the hair cells, so they cannot side. Instead, the motion of the basilar membrane bends and twists and pulls and pushes the hairs. Under these physical stresses the hairs generate electricity, and the electrical signals stimulate the auditory nerve. Eventually and deviously – the electrical signals running through the auditory nerve stimulate the hearing centres of the brain. . ."

Sound and Hearing, Life Science Library.

"The visual pattern recognition capacity of the eye lens and correlated brain function has been progressively extended and amplified through the simple magnifying lens to the microscope and telescope, through the camera lucida and obscura to the photographic and television camera, and towards sophisticated system which record, amplify and relate complex visual and aural patterns of great magnitude.

This development also encompasses the ways in which man has widened his 'sensorial' monitoring to the electro-magnetic spectrum through instrumentation. He can now 'see' into the infra-red, ultra-violet and x-ray frequencies, 'hear' in the radio frequencies, and, may more delicately 'feel' through electronic metering than with his most sensitive skin areas. Buckminster Fuller

"... The world can be thought of as a myriad of To Whom It May Concern messages." Norbert Wiener

These radiant frequency waves emitted from the environment impinge upon man's sense receptors, whose angularly co-ordinated channel constraints determine which wave lengths are directly apprehendable, e.g. as described above, the sound-generated frequency wave in the biocular membrane is recorded by the bending and twisting, pulling and pushing – angular constraining of the hair cells. This channel constraint limitation is relatively overcome by man's sense extension instruments which angularly modulate the previously non-sensorial frequency bands into sensorially tunable perceptivity limits e.g. microscope's angularly focusing lens modulates impinging light waves.

2. Codification

"... sensory relays recode sensory messages, extracting signals of high relative entropy from the highly redundant sensory input – so that redundancy is reduced but comparatively little information lost... the sensory relays try to ensure that what they pass on really is NEWS..."

Sensory Communication

"Man's brain is a multi-frequency (four sensory ranges) scanning (T.V.) integration, continually operating in co-ordination with a multitude of memory (kinescope taped) T.V. scanners. The whole array of new and memory T.V.'s is frequency monitored by an angular and frequency modulated *pattern commonality scoring and score-predicting* conceptual co-ordination capability. The T.V. co-ordinating conceptual capacity includes a score-guessing and score guess testing faculty, as well as a strategic-tests-contriving-pattern consideration, all of which conceptual patterning proclivities are self-started and regenerated by synergetical *intellection*. *Generalized systematic conceptuality's omni-directional relationships are only angularly configured* and are independent of size or dimension." Buckminster Fuller

"In this manner, said I: although these variagated bodies in the heavens are deemed the most beautiful and the most accurate of the kind, yet (as they are only part of the visible world) are far inferior to the real beings which are carried in those orbits in which real velocity, and real slowness, in true number, and in all true forms, work with respect to one another, and carry all things that are within them: which latter things truly are to be comprehended by reason and the intellectual power, but not by sight: or do you think they can? By no means, replied he."

The Republic of Plato, Book VII

The sensed radiant energy frequency wave message are decoded into conscious experience by intellect. Thinking is F.M. – frequency modulation. It is the tuning-out of the myriad of relevant energy-message *frequency variable* perceived by the sense receptors to leave a residue of tuned-in or accepted feedback messages which are encoded into generalized abstract angular patterns. Intellection is cumulative pattern apprehension. Thought is perceptions of patterns in universe, the codifying of energy experience messages into generalized abstract angular patterns.

3. Transmission

"In the beginning was the word" – might be changed to "In the beginning of industrialization was the word"

the first atmospheric wave propagating, ear diaphragm receiving, physical formulation of an abstract teleologic device invented entirely by intellect's anticipatory concepting of its usefulness and by man's subsequent conscious (fading off into sub-conscious) disciplining of muscles and nerves." Buckminster Fuller

"the spoken word was the first technology by which man was able to let go of his environment in order to grasp it in a new way. Words are a kind of information retrieval that can range over the total environment and experience at high speed... By means of *translation of immediate sense experience into vocal symbols* the entire world can be evoked at any instant. . .

... Just as writing is an extension and separation of our most neutral and objective sense, the sense of sight, number is an extension and separation of our most intimate and interrelating activity, our sense of touch. . . If the human ear can be compared to a radio receiver that is able to decode electromagnetic waves and recode them as sound, the human voice may be compared to a radio transmitter in being able to translate sound into electromagnetic waves. . ."

Marshall McLuhan

Thought's *abstract angular patterns* are encoded by *symbol patterns* which extend, translate and evoke a *sensed energy frequency* experience. These symbols ("physical formulations of an abstract teleologic device") are transmitted by *energy frequency waves* ("atmospheric wave propagating") modulated by *angularly co-ordinated channel constraints* ("disciplining of muscles and nerves") into *preferred patterns* of symbol articulation. Man extends the frequency modulation capacity of these transmitting channels by his communication-tool instruments-media.

4. Transaction

"Society can only be understood through a study of the messages and the communication facilities which belong to it..." Norbert Weiner

"Culture may be defined as a distinctive pattern of living, whose shared components are attitudes, values, goals, institutions, and modes of communication. These would also include the 'style' of living as influenced by those man-made environmental control elements and products in common usage." John McHale

"The forum of public interaction may be thought of as a cultural marketplace where senders and receivers seek each other out. There must be an element of the unexpected in the messages delivered there, a bit of a surprise, for most of the receivers or their time is wasted... The potential for surprise in messages, as measured by various adaptations of Shannon's technique, may serve intuitively as an index of cultural value..."

Richard Meir

"the true wealth of world man is mathematically inventoriable as his physically organized ability to protect and satisfy his forward, inexorable, metabolic and intellectual regeneration needs, – which is stable in per capita forward days, safely and adequately anticipated." Buckminster Fuller

"Information is a name for the content of what is exchanged with the outer world as we adjust to it, and make our own adjustment felt upon it... to live effectively is to live with adequate information."

Norbert Weiner

The myriad of energy experience information symbols are encoded into communication network patterns of social transactions, by culture. Culture is frequency modulation. It is the tuning out of irrelevant message symbols to a residue of tuned-in messages which are encoded into "the distinctive patterns of living". These patterns are translated and transmitted by "attitudes, values, goals, institutions, modes of communication, and environmental controls" which, with tools, angularly modulate the energy environment in preferred patterns for metabolic and intellectual survival frequency desires and needs.

MESSAGE-MEDIA MATCH

We now come to a more specific soft sell. In the last section it was indicated how man's naked sense receptors receive radiant energy wave frequencies only within a limited band of wavelengths, how the brain decodes nerve signals by tuning its frequency oscillations to leave residual pathways in the neural network mosaic, how energy information messages are produced by modulation of the channel constraints of the communication tools, and how a society-culture survives by adapting its pattern of living and information conservation to the total energy environment. In all cases the most efficient reception, codification, transmission, and transaction of energy experience is when the channel constraints are best adapted to the energy frequency messages.

Could the harmonious tuning of the angular channel constraints be so perfectly matched to the energy frequency messages, that this energy-experience information could be received, codified, transmitted, and transacted indirect angle and frequency terms? We would move closer to a generalized energy language and Galileo's dream of the language of the universe.

This already happens. We receive and codify pure energy messages. We transmit and transact arbitrary energy — meaningless symbols. Just as we naturally (and unconsciously) tune the constraints of our sense receptors and neural network to match the message input, so should we tune our communication tools and live our lives.

Perhaps this idea is a corollary of Buckminster Fuller's conception of energy and 'synergy', — as energy represents the behaviour of the separate parts of the universe, synergy can be defined as:

"the behaviour of whole systems unpredicted by the separate behaviour in isolation, of their component parts."

In the same way as synergy produces unexpected energy advantages of strength and stability — harmonious tuning of channel constraints to message frequency produced unexpected resonance, amplification, and harmony.

Man naturally tunes the constraints of his sense receptors to energy frequency messages. For example, the ear differentiates between high and low frequency sounds by matching the "wave-like" ripple frequency induced in the basilar membrane to its torsional constraints:

"At some point in the hearing process, the ear must differentiate between high-frequency and low frequency sound, so that the proper information may be passed along to the brain. This discrimination occurs when sound pressure activates the basilar membrane, one of the two walls of the spiral cochlear duct. The membrane is light and taut at the end near the stirrup and thick and loose at the other. Hydraulic pressure waves in the cochlea induce a wave-like ripple in the basilar membrane which travels from the taut towards the loose end. High tones create their greatest crests where the membrane is tight, low tones where the wall is slack. The position of the highest crest is important because it determined which nerve fibres will send the final sound signals to the brain.

Sound and Hearing, Life Science Library

Man adopts the same strategy for his sense extension instruments. For example, a radio telescope tuning in on low frequency signals from a quasar:

"A neat system compares the noise from the stars with a source of electrical noise deliberately produced. An ordinary electric valve serves as the source; the stream of electrons, which calls on the positively charged plate of the valve, gives rise to minute variations in the current, as random as the waves from the sky. The current through the valve is adjusted so that its noise exactly matches the radio noise collected by the aerial. So the current is a measure of the level of the incoming signal."

Nigel Calder

On x-ray diffraction photography as tuning in to the electron frequencies of crystals:

"When a handful of pebbles falls on a drum-skin there is a general coarse noise, but at the same time the natural tones or frequencies of the drum come out quite strongly. When elections strike a target, they produce a 'noise' of x-rays, but there is also a quality in the x-rays that is characteristic of the material of which the target is made."

Nigel Calder

And the new cameraless photographic process called holography which uses the highly coherent light from a laser to diffract the wavefronts of light coming from a scene and records on light-sensitive film the light waves themselves to produce a three dimensional picture, seems a perfect example of the channel constraints of a receiving medium tuning to the energy message frequency:

"Light has a wavelike character, like an alternating electric current. To describe the light emanating from a source or reflected from an object it is necessary to state both the amplitude of the waves and their phase. All optical detectors, such as the eye, photocells and photographic film, respond only to intensity, which is a long time average of the square of the amplitude. When squared, a negative amplitude yields the same intensity as a positive amplitude of the same magnitude. Thus the information captured by the eye or a piece of photographic film is incomplete.

To recapture the lost information on the phases of the wavefronts it is necessary to add a second uniform optical field of coherent light sufficiently powerful to make the amplitudes of the original and added fields everywhere positive. . . .

To make a hologram, coherent light, such as that emitted by a laser, is split into two beams. The signal beam is diffracted by the object of which a hologram is to be made so that an apparently haphazard pattern of wavefronts flows from the object to the film plate in which the hologram will be recorded. The reference beam is directed straight at the hologram plate where it interferes with the signal beam, the wavefronts of the two beams either augmenting each other to leave a bright spot on the film or cancelling out to leave a dark spot. The resulting fine speckled pattern contains information describing the wavefronts themselves, whereas ordinary photography can record only light intensity. . . ."

B. J. Thompson and G. B. Parrent, Jr.

Holography, Science Journal, January 1967.

In holography, information is received in direct frequency and angle terms. Omnidirectionally expanding waves of light frequency messages are frozen on the film plate by the angular interference patterns they make with the reference beam. A hologram transmits direct waves at angles:

"The fine structure of the hologram acts as a highly complicated diffraction grating and generates wavefronts which depart from the hologram at different angles. . . . These light energy wave messages are tuned by frequency modulation: (or, more accurately phase modulation).

"Just as an electric wave can be modulated to serve as a carrier of information (about sound, say), so can the interferometrically produced wave pattern be modulated to serve as a carrier of information about the light waves that produced it."

Holography, has many extraordinary message matching medium properties — because every point on the hologram sends light to every point on the hologram, if the film is broken into pieces each piece can reconstitute the entire original image — it's like DNA reproduction; which is also like in its non-negative printing — if the hologram is treated as a negative and used to make a positive print on a second piece of glass film the positive will again reconstruct the original scene, not a black/white reversal, because the original film record is the result of interfering two sets of coherent waves to produce a modulated interference pattern just as two radio emissions can interfere to produce a modulated carrier wave whose information is not effected by changing the polarity; because it is an image of the omnidirectionally expanding wave fronts of light no focusing is required to record events that occur anywhere within a given volume — could it be used to visually image "the omnidirectional universal maelstrom of non-simultaneous . . . wave frequency patternings of Universe" (Fuller)?

We've said so much about holography because it is a perfect example of the harmonious matching of a media's channel constraints to the energy message frequencies, incurring tremendous synergetical advantages. It is not a very well known phenomenon, having been developed only in the last few years although originally proposed by Dennis Gabor twenty years ago, yet it seems it will be an important medium in man's future direct confrontation with energy. Imagine storing all received light energy experience in multi-image holograms recording growth, change, wave cycles . . . and transmitting them via global individually computer controlled 3DTV . . . a TV hologram of the happenings inside your head. "Come and take a great step outside your mind . . . (The Monkees). As well as an instrument to probe new energy environments, we have a tool with which to create them — a tool for the energy environment modulating artists to perfectly visualise the future.

"With the introduction of laser holography which recreates a visual experience in full dimension, we may begin to return to a much more ancient way of experiencing our movement through space and our duration in time. Process and flow may replace bits and pieces. The ray of the laser beam may melt our fragmented world back into a cohesive experience again; and the artist will have to find some new dimension to explore."

Telemobility

Codification

The tuning of the sense receptors is a function of the brain nerve cells — motor neurons which spark the contraction of muscles, sensory nerves which receive and transmit light, heat, pressure and other sense impulses, and interneurons, the most numerous, which interconnect the more specialized types and make up of the brain . . . as the sense receptors naturally modulate their channels to accommodate incoming energy frequency messages, the brain must similarly operate by a process of "serial matching". From the last section, where the brain was considered as a kind of internal map of the environment where external sensations produced mosaic patterns of discharging nerve cells, etc, we can infer that the brain does function by some sort of nerve signal tuning messages to the neural medium:

"The situations that we call painful or unpleasant are those in which we cannot fit the input of nerve-impulses to our set of rules. In the terminology of these lectures they are the situations of doubting or uncertainty. Since there is no fit we seek to make one by every sort of expedient we can devise, if only by ascribing the disorder to some agent that we call the "pain" within us . . . in so far as we can visualize the process of fitting input to the rules it seems to involve some kind of serial matching, in which as much as possible is fitted and what is left over is then fed back through the machine again"

J. Z. Young

Recent probes into the brain's energy environment by molecular biologists have uncovered more specific evidence of such several matching:

" . . . such wired in instinctive networks as the optic, motion and emotional centres of the brain are direct products of the genetically coded DNA-RNA- protein factory of the cell and its differentiated development. It now seems equally obvious to many of the new biologists that, in more devious and elusive way specific molecules shaped by the DNA-RND messages also act as the medium for carrying on all the brain's functions of memory, learning and even thought. Lawrence Lessing

The DNA-RNA communication process is the ultimate medium harmoniously tuned to message!

Giant linear molecules of deoxyribonucleic acid (DNA) codify the total genetic information governing the form and function of every living cell and organism in double standard helical ladders of four chemicals, adenine thymine, guanine and cytosine which are repeated in 64 different sequences along the molecule (now all identified — the genetic code has been cracked!). This information is transferred in short sequences, as needed, to strips of ribonucleic acid (RNA), which act as templates for moulding the thousands of specific proteins making up a particular cell or organism.

The codification of genetic information along the strands of the DNA molecule is the ultimate language! — but at present nature's cipher which man is translating with the aid of Information Theory:

"Proteins have properties which make them especially attractive from the standpoint of information theory. They are constructed as a message, since they consist of some definite arrangement of about 20 different amino acid residues. Thus, the protein molecule could be looked upon as the message and the amino acid residues as the alphabet. For example, we do not know if the letters of this alphabet (the amino acids) are arranged in words within the message or not, that is, we know nothing of the redundancy characteristics of the protein molecule."

Herman R. Branson

As we shall see in the next part, information theory considers the amount of information contained in a message as a function of the frequency probability of occurrence of symbols — the more probable the less information. Here with proteins as linear messages and amino acids as symbols, the relative frequencies of amino acids and their inter-symbol influence will determine the information content of protein messages.

Such considerations of DNA information codification of relative frequencies of amino acids seem similar to Buckminster Fuller's theory of thought codifications:

"Thinking is FM — frequency modulation — for it results in tuning out irrelevances as a result of definitive resolution of the exclusively tuned-in or accepted feedback messages pattern differentiability."

and,

"Intellections are cumulative pattern apprehensions and are synergetically integrative as wisdom." seems to further indicate the inherent relationship between thought patterns and DNA patterns which he proposes to be:

"omnitetrahedral + structuring as a triple bonded linear tetrahedral array and the four unique quanta corners may explain DNA's dichotomy transferred T, A, G, C patterning control of all biological species reproductions."

DNA's role as pattern maker for both living cells and abstract conceptions empirically closes the gap between life and thought. Evolution as the rise of consciousness can be understood as the progress of efficiency of information codification of amino acid sequences. Universe as the accumulated sum of man's consciously apprehended experiences can be understood as the interactions of specially coded RNA molecules in the nerve cells of the neural network.

DNA reproduction thought-processing is the ultimate message — harmoniously-tuned-to channel. — A perfect synthesis of medium and message resulting in unforeseen synergetical advantages of anti-entropy information about energy order which is used to devise new evolutionary adaptations to more efficiently modulate the energy environment.

"Looking at the long course of evolution it seems that by the process of variation and selection populations have been produced that are able to support life under continually more and more difficult conditions. There is a certain parallel between this finding of new environments by evolution and by the formation of new associations in the brain. In the brain, by association and learning, things that were not previously significant for life are made to become so."

J. Z. Young

The synergetic anticipatory capabilities of intellect (in respect to conceptual formulations of evolutionary transforming potentials of universe and the anticipatory strategems evolved by intellect to test such hypotheses) imply the possibility of a velocity transcendence of omniscient functioning over omnipotence functioning which could mean an intellectually regenerated evolutionary extension of universe in generalized synergetical integrity. Intellect's comprehensive anticipatory objectivities indicate a speed of functioning transcendental to physical events. Intellect may be "creating" finitely extending and re-finishing universe as it asks each next good question." Buckminster Fuller.

"Thought might artificially perfect the thinking instrument itself; life might rebound forward under the collective effect of its reflection." Teilhard de Chardin

TRANSMISSION

Are these examples of transmitting channel constraints tuned to frequency messages?

"Resonance is that special case of forced vibration where the natural frequency of the system corresponds to the frequency of activation — the larynx provides a sound compounded of many frequencies of vibration. The head cavities resonate to some of these frequencies and not to others. By changing the shape and size of these cavities we change the resonant frequencies, and the sounds that leave our mouths have different proportions of the various harmonies. The quality of the vowels depends upon what harmonies are reinforced."

G. A. Miller

"An Arab is anyone whose mother tongue is Arabic," says Gamal Abdel Nasser. It is not only the chief bond, but a chief source of trouble. Its whole stress is on rhetoric and resonance, not meaning and content. How poetically an Arab speaks is far more important than what he says. "In Arabic", assents one specialist, "the medium squared is the message."

Arabia Decepta: A People Self-Deluded
Time Essay, July 14, 1967

"The listener selects a station by tuning his receiver to the appropriate frequency. An electric circuit consisting of a coil of wire and a condenser has a natural frequency of its own, that is to say it will carry an alternating current at one particular frequency much more readily than any other. A condenser is simply an arrangement of metal plates. The tuning knob controls the plates in such a circuit, and by moving it the 'resonant' frequency is changed." Nigel Calder

Some of us naturally and harmoniously frequency modulate our messages by the transmitting channel constraints. All of us can electrically. In the last section we saw how the new electronic communication tools are providing us with the medium for a new language of energy experience. Our hypothesis of communication as the sharing of conscious experience of energy is tentatively validated by electricity's integration of energy and information:

"the very idea of communication as interplay is inherent in the electrical, which combines energy and information in its intensive manifold — today it is the instant speed of electricity that, for the first time permits easy recognition of the patterns and the formal contours of change and development." Marshall McLuhan

Thus, says McLuhan, electric light is pure information, the medium is the message.

OK. We like transmitted media messages of pure energy information. But what is the language of message-media inherent in the new electronic communication tool technology?

"— If TV were shut off that could end the war in Vietnam — and at the same time set back the Civil Rights movements?"

McLuhan: Oh, yes. But there is an alternative: Put hundreds of extra lines of the TV image, step up its visual intensity to a new hot level. This might serve to reverse the whole effect of TV. It might make the TV image photographic, slick, like moves: hot and detached. Bell Telephone are now operating with 8,000 line TV images, not 800, quite beyond the fidelity of any known photographic process."

Conversation with McLuhan,
Encounter June 1967

OK. Different amounts of information elicit different responses. How many "bits of information" to various reactions? How is this related to the channel capacity of the human eye as it becomes another screen? The number of lines in a (horizontally scanned) picture determines the vertical resolution only; horizontal definition is a function of how many transistors from black to white can be accommodated in a single line, which is a function of how rapidly we are able to switch the picture tube electron beam on/off which is a function of bandwidth of the entire system which is a function of the carrier modulating frequency.

By saying "the medium is the message" is a good comprehensive aphorism and implies the harmonious relationship between the transmitted signals and the channel capacity, but it isn't a specific communication tool for the showing of energy experience.

Although McLuhan criticizes information theory as being too concerned with content and not form, it does elucidate content and also indicates ways of harmoniously relating them — tuning the messages to the channel constraints — the medium becoming the message maybe.

Information theory is concerned with the efficient encoding of messages, whether they are sequences of amino acids or dots and dashes of electric current. It seems to be sufficiently generalized to be able to include all energy frequency messages.

It considers messages to emanate from an "ergodic" source which is analogous to the non-simultaneous universe event patternings:

"... an ergodic source is a hypothetical machine which produces an infinite number of or ensemble of infinite sequences of characters."

It adopts Fourier analysis to define change in terms of energy wave transformations:

"... any variation of a quantity with time can be accurately represented as the sum of a number of sinusoidal variations of different amplitudes, phases, and frequencies. The quantity concerned might be the displacement of a vibrating string, the height of a surface of a rough ocean, the temperature of an electric iron, of the current and voltage in a telephone or telegraph wire ..."

Then it precisely defines the amount of information in any message, from random events to an energy wave, as the logarithm of the number of possible messages or amplitudes, which is the number of YES/NO choices, which is the amount of information measured in "bits"

How, then, is "information" defined? In the mathematical theory a unique conception is formulated, somewhat distinct from that previously defined for our purposes. Quantity of information is related not to what is being said but to what could be said. That is, information is a measure of the freedom of choice or source exercises in the selection of a message. More specifically, information is measured by the logarithm (to the base 2) of the number of available choice. A unit of information is called a "bit" (condensation of "primary digit"). A two choice situation is characterized by one "bit of information." In like manner, if one has available say 8 alternative messages among which he is equally free to choose, then since $8 = 2^3$ so that $\log_2 8 = 3$, one notes that this situation is characterized by 3 bits of information."

DeFleur and Larsen.

The average number of these bits, per symbol or per second necessary to encode the message produced by the source gives the "entropy", (which we met in the last section as measuring the disorder in matter). Here entropy is a measured choice — the choice the source exercises in selecting the one particular message that is actually transmitted, and measuring the uncertainty of the recipient as to which message will be received, or uncertainty that is resolved on receipt of the message. Entropy and information are identified by the same formula.

NOW if the entropy of a source is less than the channel capacity, messages from the source can be encoded so that they can be transmitted over the channel. This is the basic concept of information theory originated by Claude E. Shannon:

"Shannon calls this the fundamental theorem of the noiseless channel. He states it as follows:

"Let a source have entropy H (bits per second) and a channel have a capacity [to transmit] bits per second. Then it is possible to encode the output of the source in such a way as to transmit at the average rate $(C/H) = E$ symbols per second over the channel, where E is arbitrarily small. It is not possible to transmit at an average rate greater than C/H ."

Let us restate this without mathematical niceties. Any discreet channel that we may specify, whether it transmits binary digits, letters and numbers, or dots, dashes, and spaces of certain distinct length has some particular unique channel capacity C . Any ergodic message has some particular entropy H . If H is less than or equal to C , we can transmit the messages generated by the source over the channel. If H is greater than C , we had better not try to do so, because we just plain can't."

It not this fitting of the entropy to a unique channel capacity the tuning of a frequency message to channel constraints? We have powerful formula for the design of efficient communication transactions.

Although communication engineers warn that their theories are purely intended to assist the encoding of electrical signals, could we tentatively proceed further to apply their formulae to consideration of the whole of the electromagnetic spectrum and man's energy experience?

TRANSACTIONS

"and the instrumented points to paradise show it to be a comprehensively coordinate dynamically equilibrium earnable vantage ever tuneably tunable amidst the reciprocal complexities of evolutionary, wave-frequency patterning growths ..."

Man, harmoniously, tunes himself to the "evolutionary, wave-frequency patterning growths" of the universe energy environment, because he himself is a miniature magnitude universe.

"... each and every individual man appears possibly to be one of the individual sequence integrities of complex patterning consequences of all the alternatively permitted individual freedoms of equally elective patternings of total universe."

Thus man naturally and now consciously modulates harmonious transactions of energy and information with

the environment — within their respective laws of conservation.

Firstly, of energy. As the great anti entropic, man reverses the entropy-increasing tendency of thermodynamics by the progressive precessional conversion of energy into work:

"man is a "life long" visible patterning integrity which both corporeally and extra corporeally redistributes and synergetically transforms in precessional patterns permitted in principle ... which he processes most often with subconsciously co-ordinated reflex routines, but which he now at this unique threshold moment in history consciously participates in to meagerly successful degree whose directional resultants often are precessionally "impulsive" in principle as are the locally dancing water molecules impulsively resultant in the abstract reality for instance of the swift porpoise gliding and some of which resultants in principle are known as the 'realities' of energy which are identified as a variety of unique "energy" effects.

Some of which abstract principle "energy" behaviour man precessionally converts into "work" which he applies to the progressive conscious and subconscious participations of men in accelerating the local even patternings of apparently ever totally self-transforming patterns of evolution." Buckminster Fuller

Precession is defined as "pattern transformation at 90° to the lines of co-ordinated in-put action". For example, surfboard riding. Just as a board riders movement "slant-wise across the waves" abstractly "rolling" fronts at such an angle that the rate of coasting inwardly towards earth's centre is synchronizingly designed and co-ordinatingly governed by the "surf-boarders" angular learning to match the rates of "outward" local motions of each of the individual water molecules in respect to earth" — so does man's matching of his evolutionary adaptive environmental (angular) constraints to the wave frequencies of the energy environment enable him to ride the waves of evolution!

Secondly, of information. As the great accumulation of experience, man is on the threshold of accumulating all individual mens' experience in a total collective consciousness by the progressive realization of himself to be evolution conscious of itself.

"Consciousness rises through living beings: that was about all we were able to say. But from the moment the threshold of thought is crossed its progress becomes easier to unravel; for life has not only reached the rung on which we ourselves stand, but begins to overflow freely by its free activity beyond the boundary within which it has been confined by the exigencies of physiology. The message is more clearly written, and we are better able to follow it, because we recognise ourselves in it." Teilhard de Chardin

We have previously seen how such hypotheses of evolution-consciousness are being confirmed by scientific investigation, e.g. molecular biological evidence of neural processing of information as a DNA-RNA transfer. We are beginning "to recognise ourselves" in genetic code messages. Who will we recognise in the "message(s) more clearly written" along the helical strands of the DNA molecules in the nerve cells of our neural network!?

New expansions of consciousness are not pronouncements of mysticism:

"... one day man's brain may be provided with extrasensory equipment, such as a microwave receiver and transmitter devices, to extend his range of communication and put him in direct connection with his more and sophisticated information processing machines." Lawrence Lessing

But since hypotheses of "collectivity of consciousnesses" are statements of the harmonious tuning of individual human brain wave radiation to total universe energy integrity, their pronouncements are inherently poetic:

"We are faced with a harmonized collectivity of consciousness equivalent to a sort of super-consciousness. The idea is that of the earth is not only becoming covered by myriads of grains of thought, but becoming enclosed in a single thinking envelope so as to form functionally, no more than a single vast grain of thought on the sidereal scale, the plurality of individual reflections grouping themselves together and reinforcing one another in the act of a single unanimous reflection." Teilhard de Chardin

Global, two-way transmission individually computed-linked holographic TV will realise this potential — as almost did the Beatles "Our World" global TV transmission:

"Christ, when pressed for a "rule", said only ONE word, a dynamic word, — LOVE. Today this may be scientifically defined as the non-retarded, RADIATION OF PURE ENERGY, harmonically digestible and scientifically utilizable by all (man) through the selective and recompositional functioning of intellect."

Buckminster Fuller,
Nine Chains to the Moon.

MICK GLASHEEN

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THE VIDEOSPHERE: WATCHING BIG BROTHER

Sitting here in NY watching the paranoid workings of politics unfolding thru video energy a fantasy of the future emerges.

The Nixon tapes suggest the possibilities: what if instead of audio tapes, Nixon had made videotapes of everything that happened in the White House. Instead of all the confusing verbal evidence at present fascinating 200 million viewers, we'd be able to see the real thing. But everyone's worried: the tapes could be edited. An alternative emerges...

Let's wire all government buildings for video. Live video. Thousands of cameras in every office. Transmitted by laser or cable to every home. At any time anyone can tune in to any government office and see what's going on. Real open government. We can see what our paid representatives are doing. If they fuck up we hope on the videophone and complain. If they don't pull their weight we fire them. People's government.

It makes a change from the current video use. Cameras checking whether we're shoplifting. Cameras checking whether we're working in our factory or not. Cameras checking how we're driving down the streets. We've accepted these spying devices. Why be so hung up on secrecy? But let's make the process two-way. Let's watch our representatives and stop them becoming our masters.

Video can expand our vision. It can take us places we can't go. It can keep us informed. Rather than being a weapon to oppress us it can be a tool to liberate us.

Make way for television democracy.

Albie Thoms, NY, July 73

3D TV

"'twas evening and warm fires belit the starry cold pains of yonder"; (B.B. Broacheavy, Ch.14b).

Now that we've got the typewriter set up, what'll we write about Karl?

Well, we can talk about hardware, software, or slushware.

What about mediumware?

That's slushware.

I think that before coming to any decisions on this matter I'll try to elaborate on the data from which we decided to choose. The term 'ware' - where does the word 'ware' originate from, Karl?

At a ridiculous guess, I'd say that it came over with the Anglo-Saxons, when the Swedes and the Danes invaded England in the early Mediaeval ages.

Could it have anything to do with 'wrought', as in 'it was wrought in burnished manganese hydroxide'?

It's an old word, a really old word; that's it, I think.

Has it got anything to do with 'software'?

Only insofar as notions can be wrought.

Can we assume then that if a person said to you 'hey man, that videoshow was wrought in black and white,' you would immediately have a very good approximation of a picture of what this (any Given) person was getting at?

Yes and No, by golly, (let's have a look at the dictionary again - getting a bit accurate here) from no point of view, it would imply that the person was still in film because it rolls although I suppose videotape rolls as well. However, the person volunteering such a statement either implies that he understands the aspects that make a video, or that he knows nothing about it whatsoever.

So, before making our irrevocable decision upon which type of ware to comment, do you or does anyone here think that the word 'wright' is worth commenting upon, in any context including that of the elusiveness of the moment of supreme boredom? Yes or No?

Shit yeah!

Thankeeall, and I've just been informed that slushware is bade because it implies a sort of beauty in slush. We really have to decide, brothers, you know, because the fourth dimension is catching up on us in the form of the second dimension which is about to expire at the bottom of this sheet.

Karl; 'The lowest common denominator of videotape is that anybody can muscle (wrought) their way in; whereas the highest common denominator is in the separation of the muscles via an egoless state.' (Sorry for editing that speech of yours, Karl, I'll restate you verbatim.) Ego out onto the tape. Yeah I think that's fair enough.

Wrighteau, beauty; okay, terrific - so that: (what d'you reckon, mate?)

'So that the further interests of video show themselves through being shown.'

Righteau, now we're serious.

Go on.

Mate, why don't we just talk about three dimensional video for a while, hey.

Eh?

'Three dimensional video.'

'Right-ho.' 'Where are we?'

'Three dimensional video.'

'Okay.' 'hang on; what do you reckon.'

'The way of three dimensional video is as follows: one: two cross polarised Kerr Cells mounted in front of the videon tube.

'Yeah, go on.'

'Switching from one to the other alternately, triggered by the synch. pulses thus generating 25 dextro-oriented polarised images interspersed with 25 lavo-oriented images/second.

Two: When played back, onto a monitor with a similar arrangement of Kerr Cells in front of the screen with the observer wearing glasses which are livo- and dextro-oriented polaroid lenses, both the left eye and the right eye receive 25 images (independent) per second.

Modification to number one:

One (a): Instead of one camera we need two cameras switching on and off alternately, the combined information going through ONE videotape and being played back through ONE monitor.

Three: The right eye receives information obtained only by the right hand camera and similarly vice versa but separated by chronastic space of one frame.

Thus providing almost all the requirements for genuine black and white threedimensional vision.

'What are you talking about, Karl?'

'I'm talking about reality of conception without necessarily implying reality of perception.'

'Where does that get us, or alternatively, what conceivable good can be wrought of it?'

'As a purely abstract statement to a really terrible question, I reckon that a lot of good can come of it.'

MAD JACK AND KARL WHEELBARROW



MEDIA - VIDEO POINT!

ACCESS - "newsletter for individuals and organizations interested in or participating in Public Access Television". Write to him for inquiries... names D. Smith, Genus Project, c/o Thurbet, 56 West 75th St., 1A N.Y.C., NY 10023.

APRIL VIDEO CO-OPERATIVE - "produce a publication called The Dumpling Place which is a print out of information relevant to vido-people. To subscribe send information to P.O. Box 138 Bearsville, N.Y. 12409.

CABLE INFORMATION - newsletter for Churchmen, educators, and community leaders. Yearly subscription \$10, 475 Riverside Drive, RM.852, N.Y.C. 10027.

CATS VIDEO TRAINING MANUAL - basic television technology, equipment operation, shooting procedures, editing, fieldwork etc. Send 50p. 15 Prince of Wales Crescent, London, N.W.1. (It's good stuff.)

GUERRILLA TELEVISION - Michael Shamberg and Raindance. High information covering the evolution of alternate video, its hardware, groups and future. For information write Gordon & Breach - Suite 1304, 440 Park Avenue, South N.Y.C. NY. 10016.

HANDBOOK FOR COMMUNITY - basic introduction. 30c. Room 304, 790 Madison Avenue, N.Y.C. 10021.

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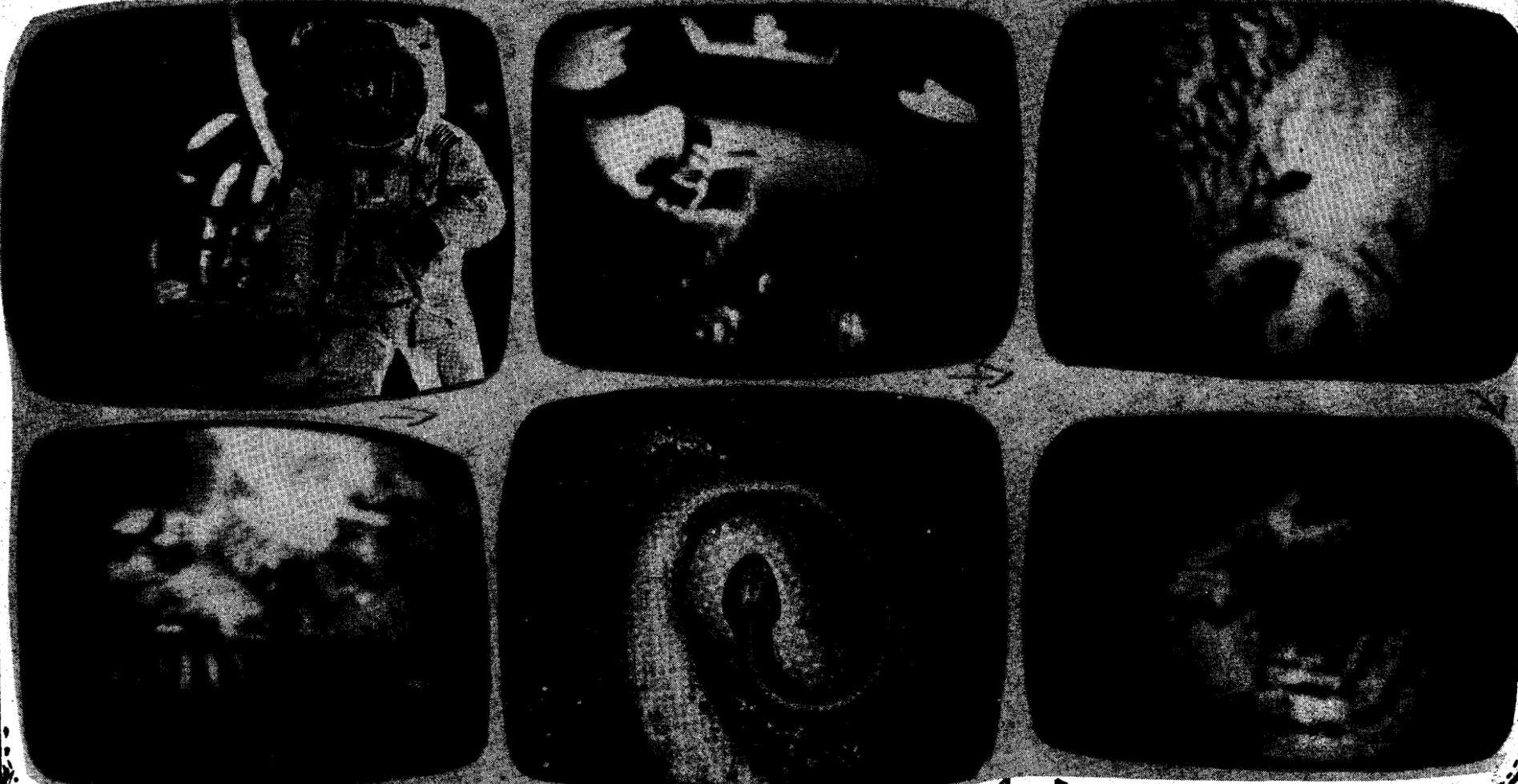
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PORTAPACK PLAYBACK FROM VIDEO RECORDER

MIX OF PORTAPAK AND CINE PLAYBACK



CINE

SHOOT SNAKE ON PORTAPAK

HIRE NASA SPACE MOVIE

PLAYBACK MOVIE AND TAPE

FEED INTO MIXER

RECORD MIX ON VIDEOTAPE

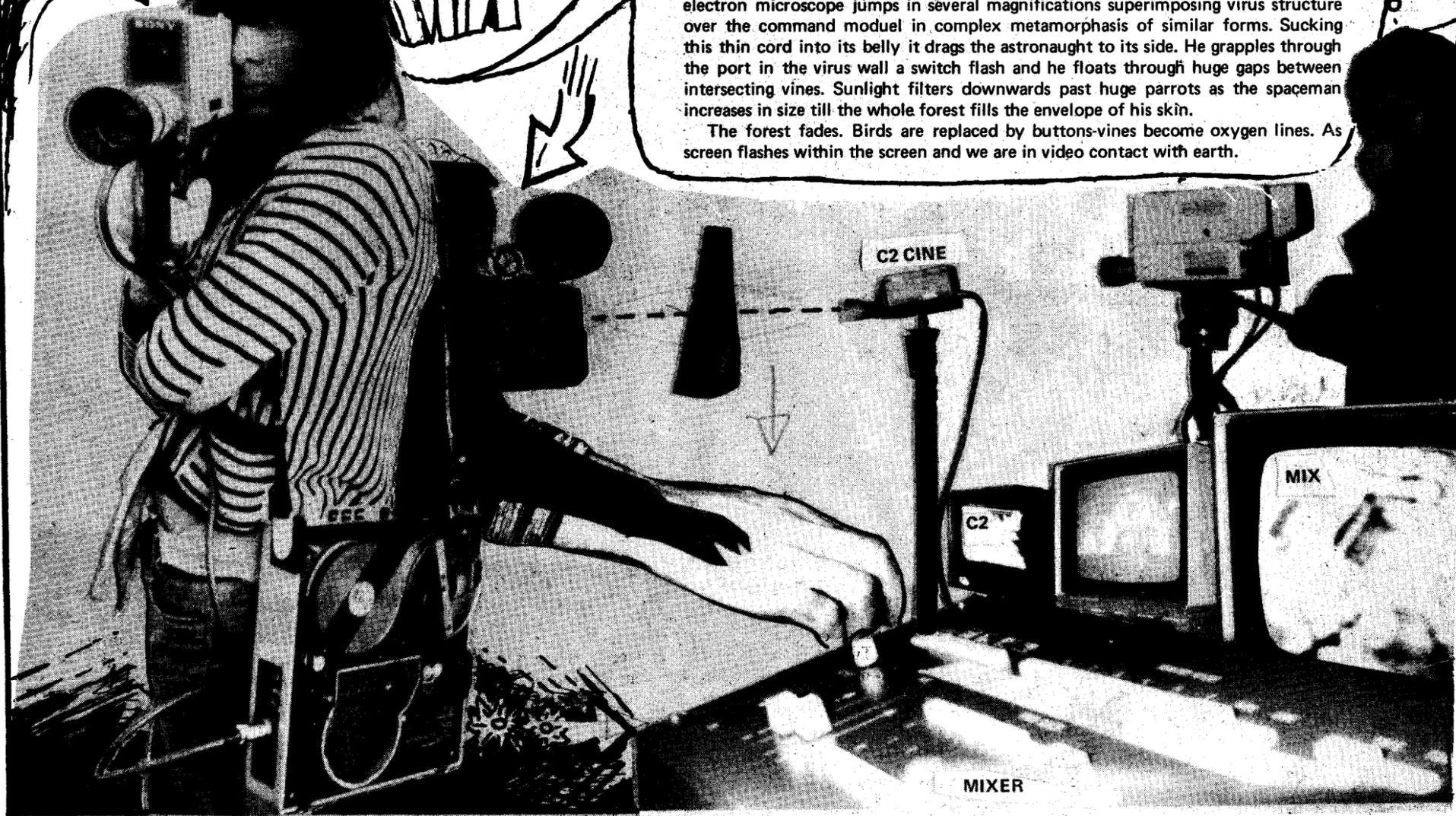
SPACE TIME

JOHN KIRK

We pass from the immediate present world into time machine parameters. First stage is the image access modem where visual records of present, past and past present future lie imprinted and codified electromagnetically. There keys punched will trigger a scan of the total record retrieving clusters of image values and forms according to the binary coding co-ordinates. We have used numerals from the random number generator in the last co-ordinate places. A random spread of image values will result. We take three cassettes and walk to the control room. Slap cassettes into three machines and watch the countdown on three screens climb into position at the mixer and those screens erupt with imagery and now test the slide controls.

The large monitor on the right shows the mixer output and with the punch of a button it cuts from images of jungle exploration to scenes of the last Moon mission. Move the sliders and there is a gentle mix of a huge tapestry reptile coiling its rings around the last rocket stage getting ever smaller as it disappears earth pointwards. Punch in machine three, cut from reptile to viruses drifting toward human cell walls, the dead shell of the rocket disappears into the point and flame erupts through the whole of space enveloping the virus, penetrating cell walls. Its hot. Grab that knob and ease it round - the flames cool to mauve then green. The electron microscope jumps in several magnifications superimposing virus structure over the command moduel in complex metamorphosis of similar forms. Sucking this thin cord into its belly it drags the astronaut to its side. He grapples through the port in the virus wall a switch flash and he floats through huge gaps between intersecting vines. Sunlight filters downwards past huge parrots as the spaceman increases in size till the whole forest fills the envelope of his skin.

The forest fades. Birds are replaced by buttons-vines become oxygen lines. As screen flashes within the screen and we are in video contact with earth.



MIXER

IMAGRO
VIDEO FEED
INTERACT

COMMUNITY
OF LIKE
INTEREST

GEOGRAPHIC

COMMUNITIES

Hi Folks..
Here's the
global videomap
that's eye on the
right - one of the
many videomaps all
over the world
trying to set up an
access center
get together with
your community
to get machines,
money and guarantee
access to machines
and distribution - on
cable broadcast and
satellite.
Here's some legal
balls hit and ways
through the
mage J.K.

INTERNATIONAL LAW

Every Island, no matter how small, has its belt of territorial seas, but extending beyond the three mile limit by "perscription" is yours if you use it, occupation is the most satisfactory claims to the sea-bed. Military and civil use of the sea-bed is the same as freedom of the seas.

BROADCASTING AND TELEVISION ACT

- The Board Controls:
- What you put in, in equipment or system.
 - Who operates the stuff, as regards staff.
 - Where you put it, the location.
 - What input of power.
 - What operating frequency or bands.
 - What hours you broadcast, times.
 - How much Aussie content.

A person why not, on a ship outside Australia, but in water adjacent to Australia:-

Establish, maintain or use any station or appliance for transmitting broadcast programmes by means of wireless telegraphy.
Penalty \$1,000 or a term not exceeding five years.

Proposal for Mini-TV Broadcasting Station for Remote Settlements

Small self-contained TV broadcasting stations are proposed for installation in northern communities to facilities

communication, stimulate cultural development and encourage interval and inter-community involvement. The mini-TV stations have the advantages of low cost and simplicity. Also by virtue of remoteness and lower power these stations would be free of the complexities of channel allotment and interference.

The mini-TV units are made up of a standard broadcasting unit costing \$2,000 with an input from a video player, camera and microphone, or microwave relay. Back up equipment of the Sony 1/2" format would include a camera, video-recorder, and miscellaneous gear costing around \$2,500. The system has effective FM radio broadcast which can be used independently with a bonus of the video picture. Allowing \$500 for installation and training the total package amounts to \$5,000 per unit.

Probably the mini-TV stations would be operated by volunteer legal groups to optimize community involvement. Effective communication would be encouraged ahead of demands for fixed broadcast hours or quality of technical presentation. The mini-TV stations could operate independently or be part of a mini-TV network. The format of the Alberta Native Communications Society is suggested as this group operates independently but has representation from all social and ethnic groups. With a mini-TV network programs can be bicycled and repairs facilitated by the direct exchange of faulty components.

A demonstration Mini-TV unit is now underway under the authority of the

Alaska Education Broadcasting Commission. This demonstration is being carried out by the University of Alaska's Division of Media Services utilizing the small village of Anatuuk Pass as the test site.

It is proposed that a similar demonstration unit be set up in the Canadian North. The facilities of the Mackenzie Institute in Inuvik are available to this demonstration. Since the Mackenzie Institute has a complete Sony 1/2" TV production studio, there is a close association with the Inuvik CBC station, and as most Inuvik residents have TV receivers, the mechanics of operating a demonstration are simple and relatively inexpensive.

The Mackenzie Institute has been operating in Inuvik since 1967 along the lines of a community college and had been active in educational television since 1969.

The minimum cost of a mini-TV demonstration would be \$2,500 to cover the cost of purchasing a 10-watt TV/FM broadcast unit plus \$500 for travel, supplies, videotapes and the production of a report. If additional funds are available it is suggested that a local student or group of students be hired through the coming summer to staff the mini-TV demonstration. A further \$1,000-\$2,000 would be required for this aspect.

Richard M. Hill
For information on how the programme is progressing write to: Brian Thompson, Indian Brotherhood of the Northwest Territories, P.O. Box 2338, Yellowknife, N.W.T.

**MICRO
BACK WORLD
NET**

TOWN
STUDIO

BUSH
VIDEO

MINORITIES

CABLE
STATION

NATIONAL
CABLE
BOOK-UP

OF

UNITY

Development' (copy enclosed) we submit a possible model for allowing community access to programming for cable systems, for your perusal.

LEGAL MODEL FOR GUARANTEED COMMUNITY ACCESS

CENTRE FOR ADVANCED TELEVISION STUDIES

We would like to submit the following suggestions and recommendations for the consideration of the Minister of Posts and Telecommunications relevant to programming origination for transmission over cable systems.

Given the stipulation by the Minister that "programming must be all of a kind specially designed to appeal to the local community of the areas served" and that production equipment now exists and is being used by community groups in North America to originate their own programme material for cable transmission, we suggest that:-

1. Community groups already existing in this country using videotape equipment to originate programming for internal purposes could now provide programming for cable transmission.

2. That in principle these groups should be able to make such programming without external editorial control except for normal legal constraints and that they should have free access to local cable systems.

3. That community groups without access to production facilities should be given access to such as is necessary for the origination of programming for cable transmission.

Further to these, and the list of factors forwarded from the conference on 'Communications and Community

Licensing of Programme Originating Bodies

A license be granted to two programme originating bodies using the same carrier these being the community access umbrella organisation and the cable company each of these being separately responsible to the Minister for their programming.

A Community Access Umbrella Organisation

This organisation should be in the form of an association or a non-profit-making trust or foundation whose objects are solely the production of programming as a service for the community and in part to provide this programming for cable transmission. It will establish a production group and provide production equipment and make sure it is made available, without prejudice, to all members of the community who wish to use it.

Structure

The organisation will be open to membership by any individual or constituted group within the community (and could include the cable operator) to participate in furthering its objectives and would be completely non-exclusive within these terms.

Representatives of each constituted group will constitute the policy-making body of the organisation and will be responsible for assuring representivity, for finance, and legal liability for programme content.

It will also appoint staff to service production and administrative groups who will be under its control.

Servicing Officers

A number of paid officers of the organisation will be appointed to administer programming services under the following categories:-

1. General administration and secretarial
2. Accounting
3. Research
4. Community Communications facilitation
5. Production assistance
6. Technical services assistance and will work with community groups in assisting their production.

Production Facility and Technical Standards

Community access to a scheme on a broadly representative basis necessitates the use of highly portable and easily operable videotape recording (VTR) equipment, so both 1/2" and 3/4" VTR equipment shall be used for origination. For final editing this material will be transferred to 1" VTR allowing editing and a final transmission signal of adequate quality (this method has been fully explored and found adequate in similar schemes in Canada). Purchase and/or access of both these facilities shall be ensured.

Editorial Control

Member groups which from time to time participate in programme production shall be responsible for editorial control of their production except where such production is considered libellous or obscene.

Access

Access to production facilities and transmission time shall be open to any group, without prejudice, either on a first come first served basis or a time-sharing basis, to be decided by the policy-making body on the basis of availability.

Finance

Participation of these groups within the association in programme production should not be precluded by lack of sufficient funding. The funding could come from a number of sources, e.g.:-

1. Grants from Charitable Trusts
2. Grants from Community Development agencies, including local government and national government agencies
3. A percentile portion of subscriber license fees (as in Canadian example)
4. Grants from educational institutions
5. Charitable donations.

**P.M.G. CONFERENCE VIA COAXIAL CABLE
SYDNEY TO MELBOURNE WITH BUSH VIDEO
AND THE P.M.G. RESEARCH DEPARTMENT**

Hugh Guthrie, P.M.G. We'd like to talk about communications and to use video in a worthwhile manner. This is one of the best uses that you can put video to, it is saving the transportation and is non-pollutant. If we had to fly to Sydney we would have used 3000 gallons of kerosene. These are the sorts of things that we would like to look at in talking about communications.

We'd like to use communications for the benefit of the community. That may sound grand from an organisation like us - but as well as getting a return for our money we want to provide the community with a tool.

Dr. Albert Seyer, P.M.G. We hear all the time what technology can be doing and I think we can be sure that technology can do what ever we want. What we want to do is find out what the community wants then change the technology to fit that and this is where we are not getting enough feedback. So one of the purposes of this exercise is to find out what you people want as representative of the community - over to you.

John Kirk, Bush Video - What you need is a facility that is accessible and flexible. I've read about some people in New York who have an O.B. van and they pull up along side some telephone wires and plug in.

Albert, P.M.G. When you say plug in do you mean in an active or a passive sense.

John Kirk, B.V. I mean going out into a community and reacting with a portapahn and plugging into a cable system for wide distribution of that information.

Albert, P.M.G. - That's off line interaction - I'm not rejecting it - what we are doing now is on line interaction. I think we are too inhibited by what technology can do now so that we don't think of what we would like it to do.

Mick Glasheen, B.V. - On the large scale we'd like to have instant two-way communication between any two people in the world that is the ultimate video communications. Why haven't we got global T.V. now.

Albert, T.V. is still a medium that radiates out from a source.

Mick. We want omnidirectional interaction to see if communication is possible between human beings irrespective of space - a time get together. Monitors of people all around the world talking to each other.

Albert. There are 3000 million individuals in the world. What is the reality of that kind of hook-up?



John Kirk. I think its fairly simple the more people you want to reach the more energy you need to get that information across. On a point by point basis you need a high frequency grid with points on a grid and a system whereby each of those points are accessible. So that the social reality is that people can get in touch with the next group of people.

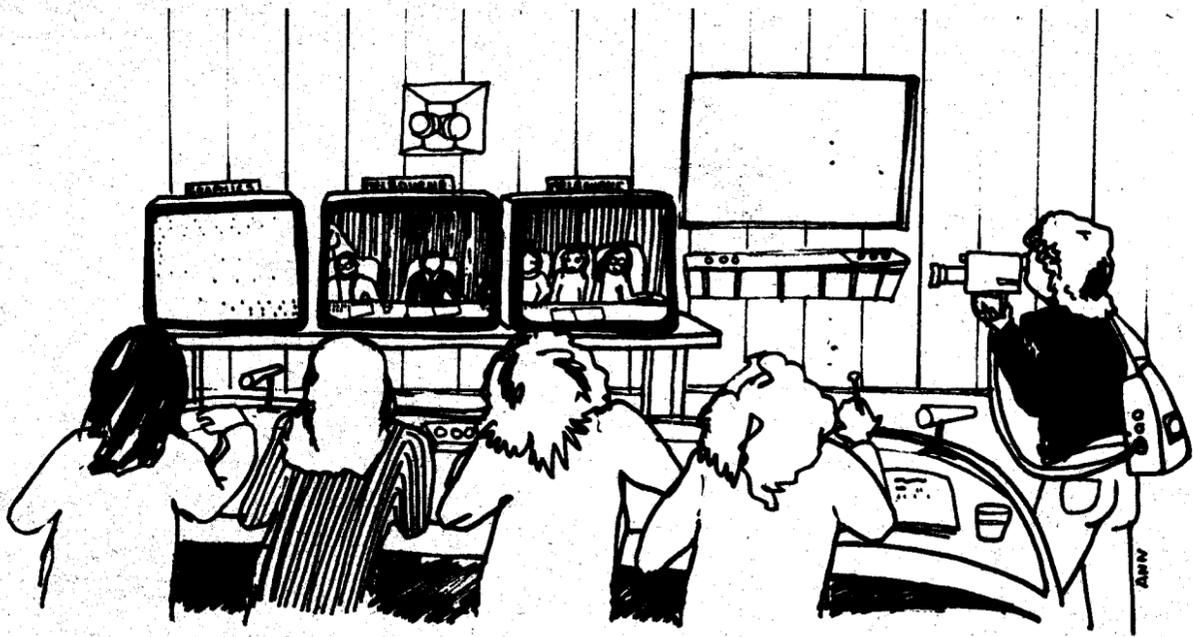
John Craich, P.M.G. Similar to the subscriber telephone network.

Albert. Community interest comes into the whole thing. Historically community of interest was the tribe or village around you and with these you could communicate through your normal sensory functions is it that community interests developed into a mental attitude were the community of interests is really wide not necessarily on a geographic basis but on an intellectual basis.

John Kirk. People in Malaysia or Indonesia are in a very different position to what we are in.

Neil Edwards, P.M.G. The other day we went to Maquarie University to talk to a guy who is an ex-journalist and he was saying that the underdeveloped countries and the Iron Curtain countries are scared stiff of the kind of thing you're talking about. They are scared of being swamped by western cultural, values and technocratic values - the upwards and onwards technocratic values of this kind of medium.

What do we do about them. Do we have to therefore say. Well this part of the world can have this medium because they want it whatever that means and another part of the world doesn't. Well that really could be a hang-up. We speak about global village and things like that but are we going to be screwing up the villages that are really villages.



Michael, B.V. But it is also a fact that when this sort of thing happens a kind of world culture perception that naturally generates an awareness in underdeveloped countries of their own culture. There are examples of how both have worked together. Also the traditional culture has been re-emphasized. There is a balance between the future and the past.

John, P.M.G. Surely in most of these cases the traditional cultures that you're talking about are not being stimulated but are being killed off.

Albert, P.M.G. I was wondering if you are not becoming dependant on what technology has made possible namely instant communication over the world discovering common communities elsewhere and I don't know whether we often look too far afield rather than looking at our own grass roots. There is a danger of us dispersing ourselves. When you talk to older people they are really worried about the fact that if someone gets their throat cut in Timbuktu they know it all over the world five minutes later.

John Kirk. The governing parameters of the information network that boardcasts news all over the world via satellite aren't geared towards the interest of the people. What does it matter if a guy gets his throat cut in Timbuktu to somebody in the street here. - I mean it might matter and it might not. The only way to affect the control of what goes through the media is have the people who are receiving the information to have some sort of selection so that they can scan what's coming in and work out what is relevant to them and what's not. With broadcast T.V. you don't get that choice.

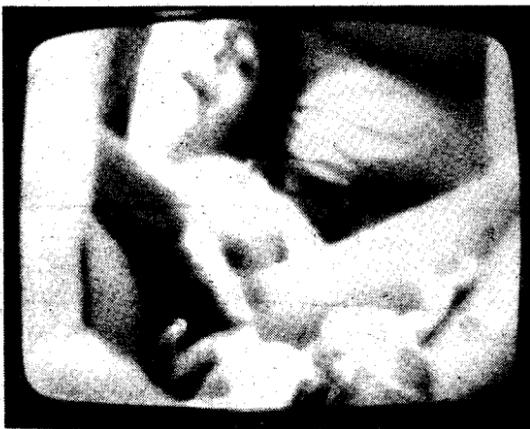
The way to get around this is to get back into your own community and start finding out whats going on there and then build your perceptions outward. - That's the way I feel about it.

Bill Lavery, P.M.G. Do we need video. Why not just Audio? Is it more important to put telephone in South America or video between U.S.A. and Australia.

John Kirk. When you look at the whole information problem its not just one type of information but a lot of different types and there is a use for transmitting facsimiles and there is a use for transmitting just straight visual information that we are seeing now not necessarily in the form of talking heads but maybe people performing real time skills that they want to transmit to another point, so that people can learn. Its a matter of working out what sort of information you want to put across.

Bill, P.M.G. I think also putting priorities on what sort of information you want to convey.

John Kirk: I think the educational T.V. system in Brazil is a pretty interesting one. It is a satellite link. They take central programmes and broadcast them to the whole country. Its not an interactive network but a central point radiating.



Neil Edwards, P.M.G. Are we going into something which may snowball into something we don't expect. - How careful must we be when we make decisions to go into these things.

Hugh, P.M.G. I think you have it all mixed up. The kind of communication system that I see that is a community generator is one that is an extension of my nervous system one that satisfies only one person at a time.

John Kirk: Mich's got an interesting idea in his head - which is - a univereal image bank - think there are probably two sorts of needs - one is person to person



communication and group to group, and the other is access to general information when you need it. And its a matter of having a flexible enough system to cope with that.

Albert: You're approaching here an area which needs to be recognized. The more information is stored the more complete it becomes to retrieve it. The problem arises out of the fact that there are more and more people generating more and more information.

Michael. At the same time there is an explosion of facts there is an implosion of the principles that are holding these facts together that's pretty evident in the evaluation of science. If you could just put that sort of information into the computer that is integrating the data.

Albert. The sheer fact that you are sitting here to me is an extremely interesting factor until a few days ago I didn't know of your existence. And at the same time we are trying to think the same problems out.

John Kirk. I think the way the video groups operate internationally is interesting because in one respect they are tuned in very closely to what's going on working with people in both working video processes and just straight documentation. And a lot of these people travel and when they do they take tape and there is quite a bit of cross-fertilization in the type of software and also in video concepts of how this tool can service a new communications system.

Joseph, B.V. I think we have reached that evolutionary point where we have to make really inspired and expansive communications experiments with wide cross-sections of people who aren't familiar with high technology so that there people be given a chance to contribute to the creation of a high information environment.

So on the practical level I'd like to suggest a series of projects which we could possibly co-operate in. There are a few just off the top of my head.

First a link-up between tribal and culturally Aboriginal people in the centre and the north of Australia with de-authorised Aboriginals in the cities and towns of the East. Secondly, a two way cable system in the village co-operative in Nimbin which is trying to integrate the best of the craft orientated technologies with newer technologies.

A third area would be in a high density city situation possibly in a housing development situation as there are a lot of video groups interested in working with these people.

VIDEO:—AGENT FOR CHANGE

It is becoming increasingly evident that we are in the midst of a tremendous societal transformation. The rapid change in social values has found collective expression in a whole diversity of alternative life styles springing up in the urban setting. More generally, it has brought about a widespread concern over the fact that the institutions servicing the needs of the majority of the population — education, welfare, health, employment etc. are becoming increasingly more complex, centralized, bureaucratized.

Finding themselves in a state of complete powerlessness in the face of what is perceived to be both remote and coercive, people are beginning to insist on the need of being able to participate in the shaping of their own environment. Which means among other things, directing and manipulating the tools of modern communication necessary to gain and exercise that participation. Video, as yet only a recent innovation in communications technology, has come to be recognized as a powerful tool which can give people access to means of generating, receiving and exchanging ideas and information, thus facilitating responsible decision making.



Challenge for Change

The potential of video as a vehicle for change can best be illustrated by reference to the Canadian government-sponsored "Challenge for Change" programme — the first ever application of UTR to community organization.

Back in the late 60's, one of the teams original projects consisted of working with the 'Comite des Citoyens de Saint Jacques,' a dynamic citizens organization operating in one of the poorer areas of Montreal. At the initial foundation meeting of the organization, the citizens voted that the most critical problem facing their community — and one which deserved immediate attention — was its record of bad health.

When it started to become obvious that the lobbying of provincial and civic authorities was proving ineffectual, the organization decided to take the problem into its own hands. An apartment was rented in the area and subsequently renovated. Medical and dental workers who showed interest in the idea of a citizen run community clinic were recruited. Soon the clinic was operating 5 nights a week.

Within the context of what was taking place, the Challenge for Change team saw its main role as that of "sensitizing the inhabitants of the area to their common problems and to communicate the committee's hope that together they can act to change their situation." The group promptly set about to prepare half-hour programmes on the causes of ill-health in the area — bad housing, unemployment, inadequate welfare, sparse recreation facilities, bad education, inferior medical care. These tapes were shown at the beginning of each meeting (which incidentally, were open to anyone to come along).

Challenge for Change published a report describing the effects the programmes had on the local residents.

"When the 30-minute video presentation was over, each group moved its chairs into a circle and plunged into a discussion. Having seen people like themselves on the screen, discussing their problems with utter frankness removed much of the reticence and timidity people have in a group of strangers... They talked at length of problems shared and possible collective solutions.

"Could we have stopped people in the street and questioned them, the same way, if we had not had the camera or a microphone? I don't think so. It's a good pretext for talking to them.

"When people were interviewed, they became interested in the Committee. Then they came to the public meetings and became involved and eventually joined the team.

"People could tell it was another citizen like themselves doing the interview, and they had more confidence in us than they would from the CBC or NBC. Often the press deforms what is said.

"The people we interviewed on the street — I really felt they wanted to get a message across. They wanted other people to hear about their problems, to share them. People feel pretty isolated.

"I think people hoped their message would reach the powers that be. They had never had the chance before."

The above comments were reflective of the type of attitudes people shared at the meetings. Clearly the project was a success in as much as it generated a

collective awareness of issues affecting their everyday lives. It proved that what one person has to say does mean something to someone else besides himself. Furthermore, it helped to demonstrate that community video can exert a type of dynamism which serves to accelerate perception and understanding. And, therefore, accelerate action.

In the Australian urban setting community video exists only in its very formative stages. It is only quite recently that individual operators / challenge for change teams have started to plug into particular issues around which community sentiment has coalesced.

Currently, receiving the most attention is (1) Victoria Street, Darlinghurst — the focus of a three pronged confrontation between the local resident action group, developer and council, and (2) the Redfern aboriginal housing project — the subject of antagonism directed against it by the local white working class community.

As each video project is only in its initial stages, it is as yet too early to assess its impact on the community. It is quite possible however, that at least with Victoria Street, the video people operating in the area acted too late — opposing attitudes have already become firmly entrenched. The obvious lesson to be learnt here is that Challenge for Change groups should monitor needs and preferences of effected groups before redevelopment plans have been drawn up. In this way not only does community video become an indispensable tool for urban planners, but it also provides a means by which people can begin to participate in shaping their own environments.

Cable television — by the people and for the people

A revolution in communication media is gradually looming — soon people will be able to plug into cable video at the switch of a dial and watch events taking place within their own neighbourhoods and communities in the comfort of their own homes.

America has been the first country to make provision for Public Access television — i.e. that set aside for direct use by the public. A small but steadily growing number of urban centres and small towns right across the nation have already been wired up with cable systems.

Cable time is made available to groups or individuals on a first come first served basis. No control is placed over programme content. Subscribers, who pay as little as six dollars a month for a linkup to this service, can watch people at their places of work, in neighbourhood stores, restaurants and parks, at public meetings, sports carnivals etc.

This is what started to happen during the Nimbin cum-together in May — although, on a modified and smaller scale. I remember some of the locals blowing their minds over some of the festival programme material beamed through the cable — they would stand for hours gazing into monitors set in strategic locations along the main street. Nimbin townspeople and festival-goers saw the first experiment in public access cable video in Australia.

A comparison with the way in which community events are perceived and communicated over commercial and federal owned television reveals further the revolutionary nature of their new medium.

Take for example a rent strike in full swing on New York's West side. If one tunes into commercial TV one may see a 60 second edited strip of picketing accompanied by a smooth commentary on the part of the announcer. The film is shot at the point of heated confrontation, defined as the most attention getting and therefore the most newsworthy. A dial twist to Upper Manhattan P.A. Cable TV may present the viewer with a totally different perspective on the event. He may find himself looking at the tape of a group trying to organize the strike — the nature and reasons for their involvement and commitment to change.

Public access cable operates free of the necessities of the commercial format i.e. that the meaning of events and their expression must be altered to meet the requirements of a marketable commodity — in this case, 'news.' Instead it provides any person or group with the opportunity of have input into a collective bank of information. Inevitably, a different yet more accurate and rounded perspective on events is presented.



The possible applications of P.A. cable TV are virtually limitless. On New York's West side, a heterogeneous community of mixed racial and ethnic groupings has been making their own tapes and then sending them over the local cable system. What this has achieved is a greater mutual understanding and tolerance amongst the various groups of their separate cultural

identities and life styles.

With the permission of local council authorities other interaction generating facilities were introduced into the neighbourhood by the people themselves — community fairs were staged in close off streets, adventure playgrounds for children built on open blocks.

The presence of all these additional resources has contributed in a major way towards the rejuvenation and revitalization of an area where formerly interracial conflict and hostility was high. Significantly, crime rates have dropped to their lowest point in a decade.

The introduction of public access TV in Australia obviously depends a lot on government recognition of its potential benefits to user-groups. Initially what makes this transition a difficult one is that people have thoroughly internalized the conception of television as a one-way medium. We have become passive consumers of information.

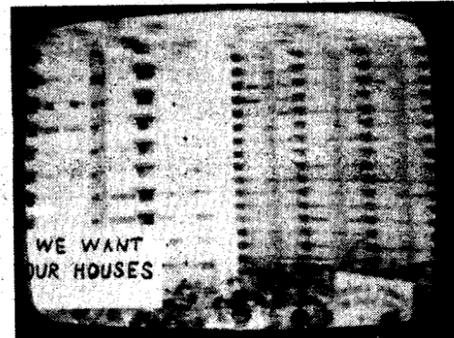
At this stage, a lot depends on individual operators and challenge for change teams. One lesson that has been learnt from the Canadian experience is that once people have been exposed to participatory television, they will quickly acknowledge its benefits — particularly its potential for facilitating collective action, and then begin to demand it.

Education of potential user-groups

The logical place where education in the technique and use of VTR can begin is the school.

John Burke (Melbourne Learning Exchange) describes his involvement with some of the early activities of the Media Access Centre of Portola Institute — one of which focused on an experiment with video equipment at a school open day.

"The open day made the first characteristic very clear. We were invited to take equipment to the school, which was a junior high school. We took two sets of Sony ½". One was used in a classroom for recording and instant play back. The other went on-tours of the school. Both cameras were operated by students after a brief introduction to techniques. No very tangible products came out of the classroom, though students found the medium exciting — mostly, it was a first experience of being 'on-camera' — but the possibilities for student workshops were clear. The camera which toured the grounds produced some interesting student observations on the school. After reporting on the activities of the open day, interviewing teachers and



other students, the camera crew chose to view the school as they saw it. The particular school had an eight foot high wire fence around it and the crew projected their perspective of it as a "prison" and dug further into its characteristics from that point of view. The product was not malevolent, but potentially illuminating for staff and administration. Video can clearly be used to record different perceptions of a school situation."

Besides schools, educational campaigns will in the foreseeable future be conducted in work places and other community centres — explaining to people that cable is not merely an extension or further refinement of TV but an entirely new means of communication.

Video — a catalyst of urban change

Entirely new perceptions of community life are developing in the urban environment. Resident Action Groups, legal and medical referral centres, learning exchanges and adventure playgrounds are springing up in local communities in response to the felt need by people to retain control over their own lives.

Community video is seen as a tool which can considerably accelerate these changes. Urban inhabitants will be able to understand their individual and collective problems and deal with them more effectively. Consequently, reducing the monopoly of power in the hands of a few.

One could almost foresee the situation in the next two decades when communications will be the primary determinant of urban life. However I tend to be optimistic in forecasting the changes that video may bring about.

Judging from recent overseas experience, widespread public access to cable TV will result in more face to face human interaction rather than less. While, at the same time, concomitant political and economic decentralization will bring about the simultaneous phenomena of societal dispersion and integration — dispersion into a multiplicity of diverse communities and lifestyles, and integration into an increasingly global urban culture.

Tom Zubrycki

The Borough of Camden is part of the most central London urban complex and has a large urban redevelopment programme. As a bunch of video freaks squatting in derelict council housing due for demolition under the programme we were politically committed. We were sharing the same risks of fire violation of privacy by officials, and lack of security as long term local residents. Our homes were up for

This page is a collage of information collected when we made a film on "Housing Rights" for the Borough of Camden. It let us explore some of the problems local council tenants were facing. Shooting portable video equipment allowed the formulation of a model for using this tool to generate interaction between tenants, community aid centres and the Borough Council. Tenants benefitted by Council action stimulated by first hand evidence on videotape.

"ARCHITECTURAL DESIGN" on CAMDEN HOUSING REDEVELOPMENT PROGRAMME

The housing cost yardstick is one of the most serious constraints on the designed of housing. Perhaps it is necessary for the Borough Architects or Directors to seriously question why interest rates are so high on housing finance; 3/4 of every tenant's rent goes to pay off an interest charge.

But beside the reality of the housing situation for so many thousands of people in Camden, the £25 to £30 rents for Branch Hill are like rubbing salt in their wounds. Equally irrelevant to them are architectural mysticism and a description of the schemes. All they want is somewhere clean, warm and decent to live.

Seifert speaks endearingly of the men who made millions out of property deals. Those same millions have caused land values to rise so much that the Minister of the Environment, himself one-time developer refused Camden's application to compulsorily purchase the former Euston Square site for housing because being next door to Euston Centre the cost of an acre of land was £376,000. In 1960, houses on the site would have been lucky to fetch £1,000.

Parts of Camden today look like Belfast without the rubber bullets. Streets of derelict houses, smashed windows, corrugated iron flapping backwards and forwards in the wind. Pavements are broken and rutted. Gospel Oak has

virtually disappeared. The streets still there, in odd corners you can still see the names. But the people and buildings have almost gone. Only Camden knows where. So much of the rentable housing stock has gone, that one area often comes down solely to provide homes for decanted people from another site, so that that site, in its turn, can be demolished. Perhaps less than 10%, some AA students put it at under 5%, of the new accommodation on Camden's sites is taken up by the people hopefully waiting on a list they will never reach the top of.

Many many people have made fortunes out of other men's misery in other times in history, now instead of

starving and seated labour in factories it is done by more subtle means through property. As Engels wrote one hundred years ago, so with a slight change those words could be used as a leader in any of today's newspapers.

"Unemployment, the Housing Problem, bad schools, urban blight, mental illness are all part of the pressures brought on the people by the economy. If you are homeless, you are 100% homeless, if you are unemployed you are also 100% unemployed." We can either pay lip service to the problems as architects and kid ourselves and others we are trying hard to solve the problems, or we do not accept them. The choice is ours.

CHALLENGE FOR CHANGE

BY WARWICK ROBBINS

Challenge for Change is an open access community television project which has been operating a series of pilot programmes in Sydney for the past six months. Its work basically involves the application of video-tape equipment and television techniques to the breaking down of barriers within the community - at all levels.

The project seeks to give people the ability - both individually and in groups - to communicate more effectively about the problems which involve them. It also provides a medium capable of assisting the community in more honest and constructive self-assessment of these problems.

Although basically a locally developed project established by two Sydney journalists, Marlene Matteson and Warwick Robbins, Challenge for Change parallels closely in concept a similar structure of the same name run for the past seven years by the National Film Board of Canada. The Canadian situation has its origins in film and graduated to the use of portable video-tape equipment through long-term experimentation in the potentials of both mediums in community situations. Here the principal has been varied slightly in having its base in the awareness of the community's need for improved communication rather than a quest for applications for a medium.

In Sydney at this time it has been possible to assess that - based on overseas experience, particularly that in Canada - application of video-tape facilities and techniques at the simplest level, with high-speed production capabilities and maximum ease of operation has the greatest potential for achievement.

Challenge for Change saw the need as primarily one of access and has set about, initially using equipment borrowed from a number of sources (in particular Bush Video), to make these facilities available to people in a variety of situations.

The material produced so far has been applied in a number of different ways. In one situation, a community group in South Sydney has, and is, being assisted to produce material for uses ranging from submissions to Government ministers to short segments for broadcast on National television. In two other group situations involving people confronting social repression, in particular a Gay Liberation group, the equipment is being used to help in an internal capacity within the groups to help in their understanding of their own problems. It is hoped later that this material will provide a basis for wider communication outside the groups.

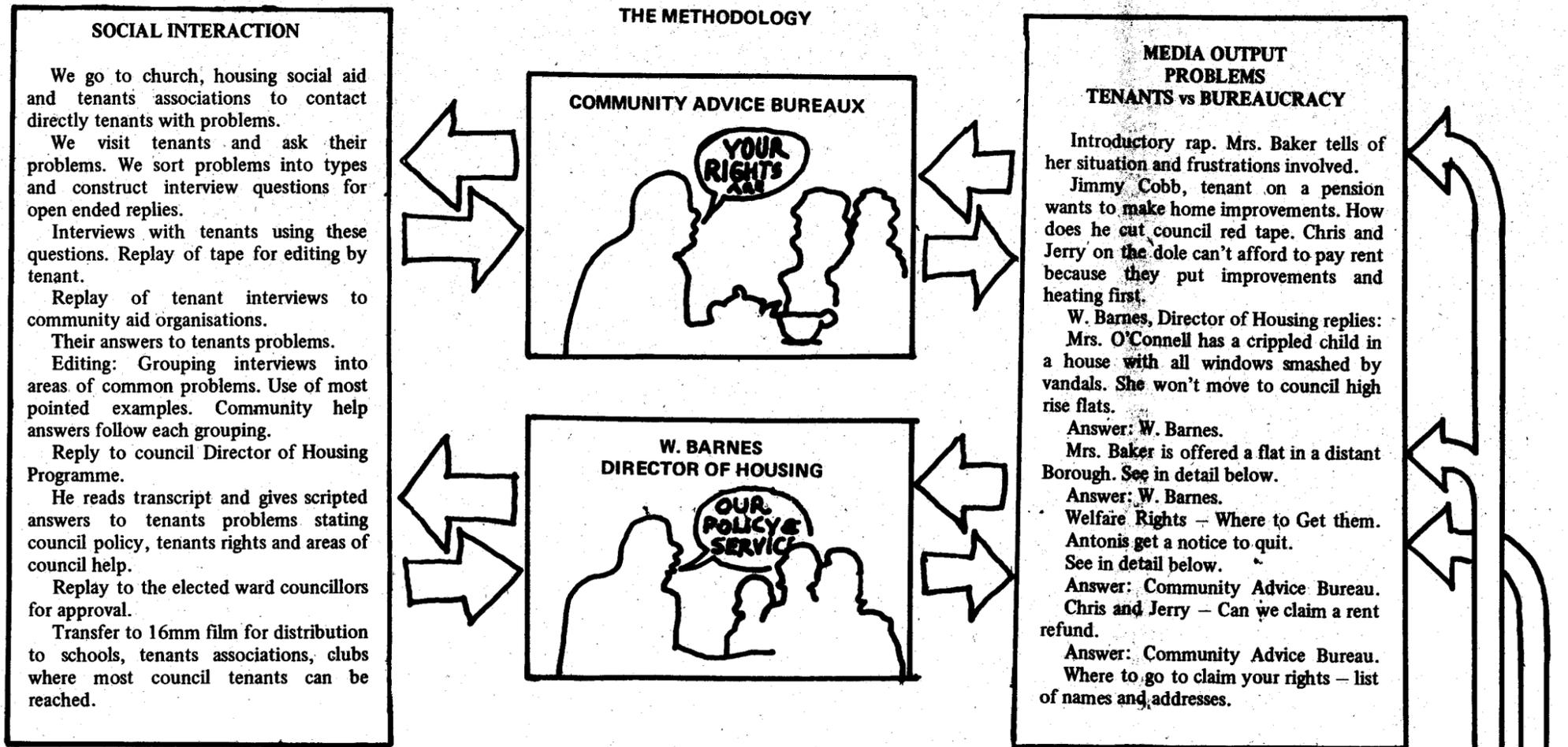
Work is also being done on foreign language programmes in both the resident action and education fields.

All of this work has been aimed at establishing as quickly as possible a wide base of local experience to provide for a vertical expansion in Challenge for Change activities as its evidenced potential and the need for this type of activity draws increased and wider support in the provision of facilities and operating resources.

However, at this point it might be as well to go back and look more closely at the concepts from which Challenge for Change grew, particularly in relation to the existing communication structures which dominate our society.

A starting point in development came with the realisation of the severe limitations which exist within current media, both printed and broadcast, in terms of ability to relate to the problems and aspirations of our sectional society and the individuals which make it up.

housing



THIS IS VIDEOTAPE

Mrs. Baker: My eldest boy was crippled. They operated and they said he will be in hospital till the Christmas. Well he came out two days later. He needed all new clothes which was all my wages went on him that week. I went up to social security and they would not help me. Although we had no food or anything else they refuse to help me because I was working full time. I'd never been in a position where to ask for help so I didn't keep any of the receipts. Every penny I'd earned that week went on that boy. He had to have shoes, everything. Well two years without clothing sort of thing he had to have the lot. They said they couldn't help me. They sent me down to Bidborough House and they gave me a pound. And they made me feel as if I begged myself for that pound. I'd never felt, well I suppose I wouldn't like to have the feeling again. Because I was in tears that day and it was anger. If you know what I mean it was anger. And I was told to, if I packed in work they would help me. Well I was prepared to work if they'd help me pay my rent and other expenses as we had no furniture, well we hadn't got a lot in here. There was no heating for the kids or anything so, they said I couldn't have, I went down to on the housing committee. They said I wasn't in the area, in the district long enough. They sent me medals for my husband. I didn't want medals. All I want is a flat to live in. Now since we moved in here, the children, well they have deteriorated. In their way of life. I mean you like to set a standard to the children to be clean. They don't have to be expensively dressed in all the mod clothing. They don't have to have that if they're clean. But you go out into the kitchen and you run from it. The door doesn't fit properly, there's holes in the wall, the wallpaper is hanging down. It's just like this here behind us. It's exactly the same. So in my mind, to people like me, I think the system's wrong, and I think something should be done about it.

John Kirk: This film tells you some of the benefits you can claim as a tenant and where to claim them. What problems do people have and what do they think about them? In this film some of your neighbours talk about just that. You will also get the replies made by the Council after they heard and saw what these people had to say.

Mrs. Baker: How do I come up to my family? It'll cost me about six shillings bus fare to come up here to ask them for a lend of ten shillings and then really it wouldn't be ten shillings I'd want it'd be a pound. I'd want because I'd have to get back home again.

Interviewer: So if you get rehoused you'd like to be rehoused round here?

Mrs. B.: I have to be rehoused around here because the children, see, there's a family life here for them.

William Barnes: I know, and I also know that having to travel from south of the Thames to work in Camden or to visit friends in Camden costs a lot of fares. There are over 200,000 people in the Borough — say 70,000 families. There are considerably fewer dwellings and many of the dwellings are still sub-standard. We are trying to raise standards — to give people kitchens and bathrooms where they have so far had none. We are also trying in places like Kentish Town to provide some green open space where there has not been any until now. This means moving some people out. I know that this means breaking up communities, cutting people off from friends, schools and hospitals — and no-one wants to do that. But if enough people agree to move together, we can create new communities in new surroundings

**WELFARE RIGHTS AND WHERE TO GET THEM
MRS. BARKER CITIZENS ADVICE BUREAU KENTISH TOWN**

Mrs. Barker: The greatest number of our problems in fact that come to us are on housing and there, really, is where people ought to know their rights.

Antoni: The eight months ago she ask me for £9 a week, so I said to him I can't give you £9 in a week but I will give you £8 in a week, so he says no I can't take £8 I want £9. Well I sez to him if you want £9 I can't give you £9. So he says to me I will go to my solicitor and tell him to send you a letter to leave the house (a notice to quit).

John Kirk: If I came in here with a notice to quit in my hand from my landlord, how could you help me?

Mrs. Barker: The first thing I would tell you would be, do not leave your accommodation immediately. You have rights as and unfurnished tenant which will enable you to probably stay quite a while or indefinitely, not quite so many rights as a furnished tenant. But we tell people not to panic.

video in London
BY JOHN KIRK

The problem can be seen as having its cause in the overall domination of the communications media by business principals rather than the need to disseminate information and opinion — domination by the need to measure achievement in terms of profit rather than social improvement.

Probably the greatest weakness in the media today is the shallow level of its dealings with people and the realities of their day-to-day lives. The mass-media seems so often to live on fantasy and the unreal dramatisation of real situations. The result is that the few essays into the real problems of society which do occur are generally buried under the cynical and opportunistic mass of day-by-day so-called "reportage." The elements of truth are painted with the brush of sensation and end up as the trite and the distorted.

Perhaps this situation is unavoidable. It is most certainly irreversable within current media structures. Where media is required to cater for the needs of a vast number of people it is impossible for it also to cater for sectional and minority requirements. This is particularly so when the main function required of the media is the provision of slightly varying forms of flippant panacea, pitched at a level where thought is a limited requirement.

It is a sad thing that our society accepts that our press and television will only infrequently examine real problems in more than a cursory fashion — and even less often seek possible solutions.

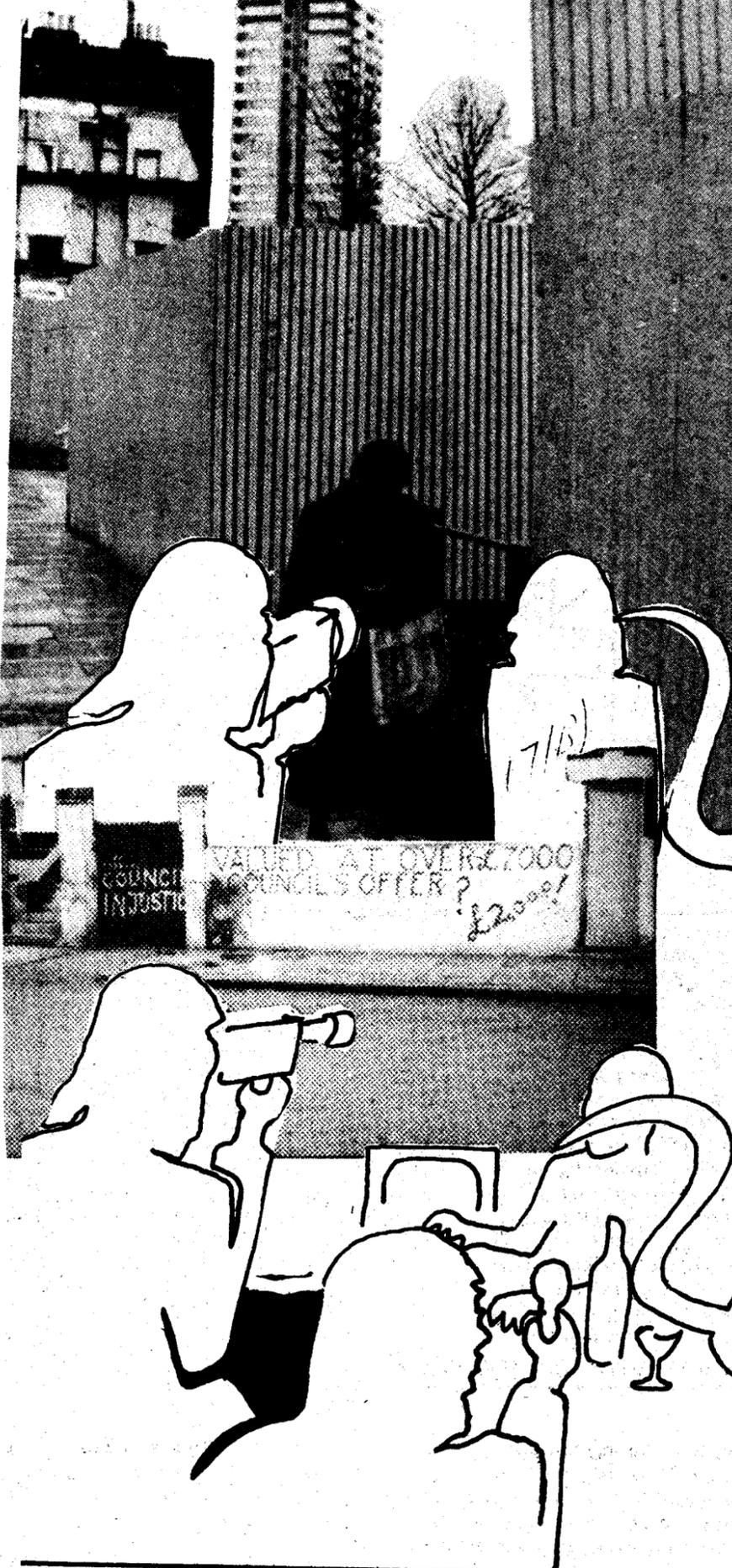
However, this is less than forgivable when modern technology can now provide improved methods of communication which are ideally suited to the requirements of proper community dissemination of information and opinion and to the quest for solutions for problems at a minority group and individual level.

So often the weakness in our intersocial relationships is an inability to convey accurate information and at the same time real emotion across the barriers between community groups and social stratas. These barriers can be the result of varying factors but, no matter what their cause, it will only be through application of sensitive catalysts that they will be broken down.

Challenge for Change is designed to be such a catalyst. It is designed to provide the flexibility of structure necessary to cater for the needs of a multitude of varying situations; to provide a means of information dissemination which can, at the same time, be sensitive to the emotional requirements of the communities in which it functions.

The Canadians, in summing up their project, used the following words. "People may soon understand how the mass-media's power to move information on a national scale, when linked with the potential of voluntary groups for small-group feed-back, could be used creatively in the process for social change.

What was said in Canada applies equally here, and those involved in Challenge for Change and who have come in contact with its work believe that the next few years will see it and other allied activities becoming an integral and essential part of the community. One fact is becoming more and more clearly demonstrated as the work here progresses — once you give an individual a voice he will use it and fight to retain it — once you free a person from oppression it is far harder to return him to that condition than it ever was to keep him there.



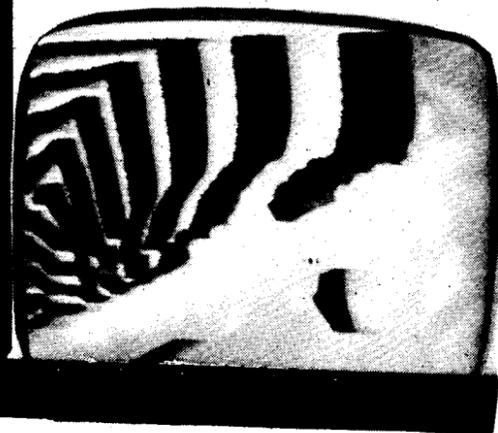
Bush Video Equipment Ltd. 5, Avenue 7, 1973, Page 17B

SUPA 8mm and POLAROID THEIR RELATIONSHIP TO VIDEO

For many years both Supa 8mm and Polaroid have suffered the category of being toys, or to quote big-time movie makers and photographers "un-professional". Both tools however have an incredible amount of potential that at last is being tapped by those into video.

With making of any video-tape (be it broadcast or other) you will experience that it is the only medium that is flexible enough to "feed in" a variety of other mediums. For example, in a simple studio mix situation, movie, stills, and print as well as music and live performing maybe collaged together to produce your tape. A lot of diverse information then can supplement the theme of your tape and generate a lot more information "outside" the videosphere.

Supa 8mm is flexible enough to document the simplest situation, yet its limitlessness can be used very creatively (e.g. see "K-Tape 1" an original 8 m film by Jim Wilson - Sydney Filmmaker's Cinema - Darlinghurst). It is both cheap (raw stock is about \$4.00 tax exempt 50 ft Kodachrome) and accessible (walk down to your nearest chemist and buy a camera for \$) It opens up a whole new unexplored visual area being the most maneuverable of any kind of filmic tool (be it film or video) that can shoot things beyond the reach of the latter. 8m. hardware is already very sophisticated. Beaulieu have a camera that can shoot from 2-70 t.p.s., has interchangeable lenses and can provide a sound back-up, while Super 8mm scans systems provide playback (black and white or colour) with sound, thru a home T.V. set or any number of monitors. Specifically, its an ideal "back-up" tool for a studio-mix but its also interesting to note its influence on the commercial boardcast scene. India is planning to use it for her budding broadcast network while Tokyo T.V. viewers watch a regular Supa 8mm movies. C.B.S. recently aired a Supa 8mm movie made by a team of doctors treating



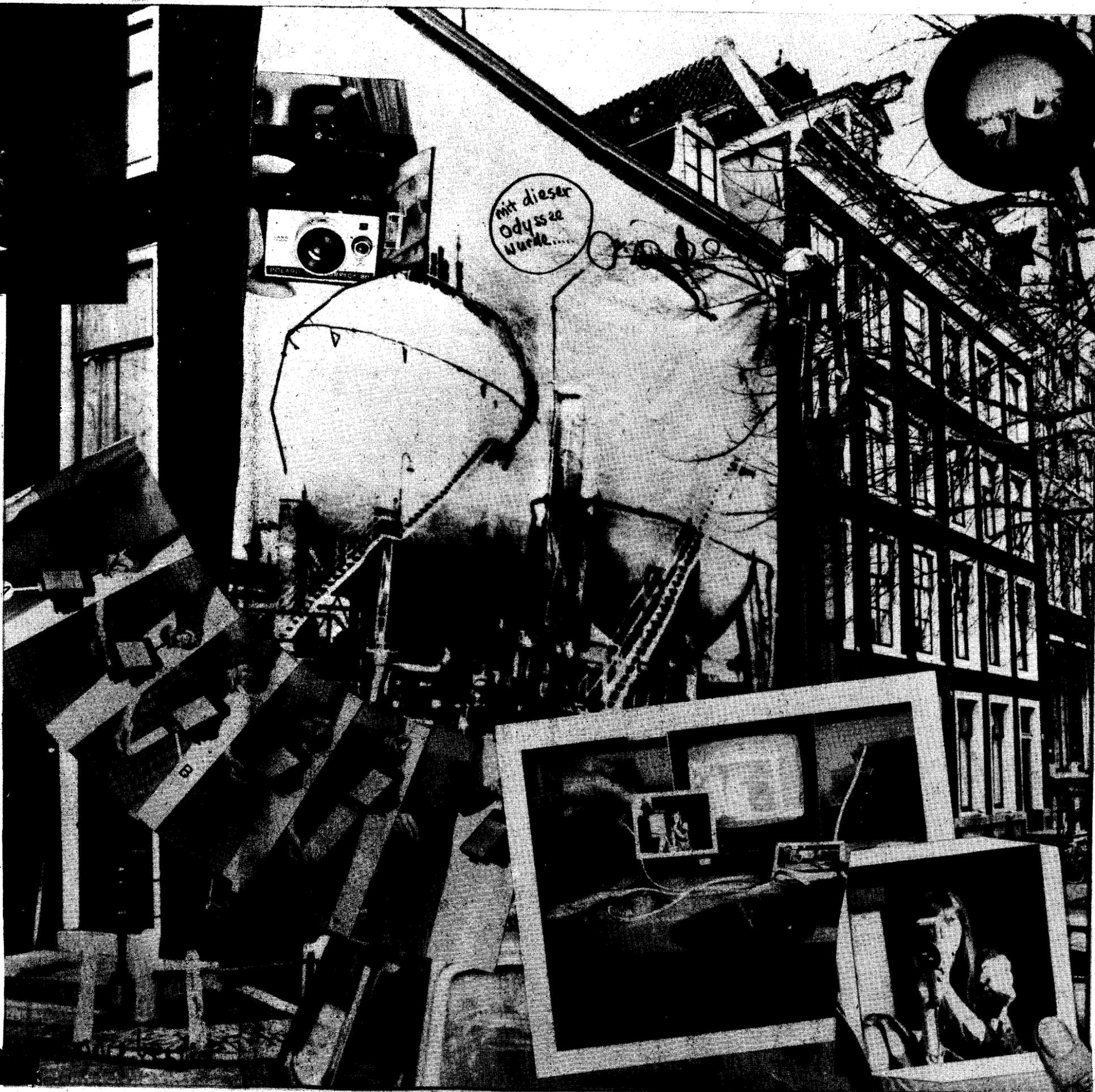
victims in earthquaked Managua, Nicaragua, all of which demythologize the type of T.V. "camera-crews" and "directors" and like a video community access situation allows filmmaking to be done by more people, giving them the opportunity to become the media.

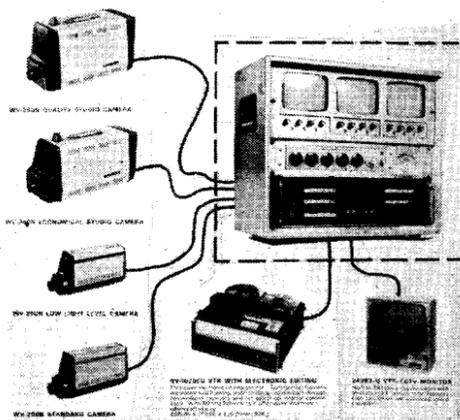
The instant feedback qualities of Polaroid photography provide quick pictorial information without long darkroom time. Most of the photographs in this magazine were taken with Polaroid film providing sharp, detailed software (black and white 3000 A.S.A.). Polaroid postcards, visual catalogue polaroids, there are an infinite number of uses that can be programmed on the spot with Polaroid. Communicating in a short space of time with a photograph is an incredible attribute to any tool.

On a broader scale Polaroid artists such as Une Laysiepen are doing good things. Consider his anti-pollution Polaroid enlargement of a threatening oil refinery on the side of his home in Amsterdam (probably the largest shown in Europe). He is currently working on an enlargement of a Boeing 747 which he plans to exhibit in front of Amsterdam's Royal Palace complete with Jumbo soundtrack. Another artist, Ted Seios (an "old Chicago bell-hop") is into the metaphysics of Polaroid. By concentrating very hard (after a certain amount of beer or cream buns) he can take mind toto of a certain understood image. For example, he concentrates on the Eiffel Tower, snaps a colour Polaroid on his head, and produces the image of the Tower on print. Yeah!

The best of Polaroid's film is yet to come. Still under research in the U.S. is Polaroid's cine film, which will enable the filmer to shoot, process and show his work in a matter of minutes.

These tools are good, it just needs people to be aware of them and use them to seek out a higher understanding of themselves, their friends and the world.





THE NATIONAL NV-3082E/ WV-85E (EIAJ 1std) 1/2" PORTABLE VTR SYSTEM features

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- * Overall weight 9.5 Kg.

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(Cam., vtr., mains adaptor) \$1155 + 15% sales tax.

NV - U46A R.F adaptor \$39.10 + 15% sales tax.

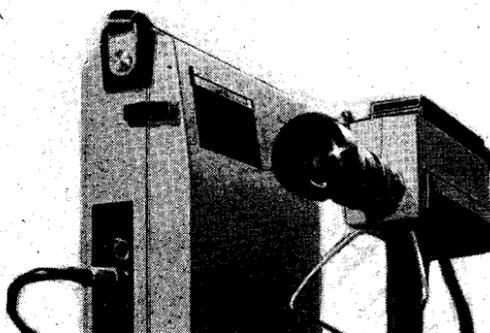
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will connect to any PAL colour VTR and features:-

- + Unidirectional microphone
- + Two vidicon system, one in the handle,

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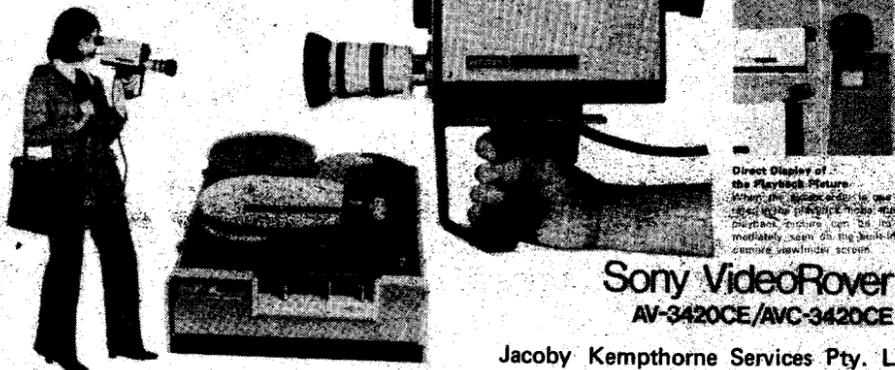
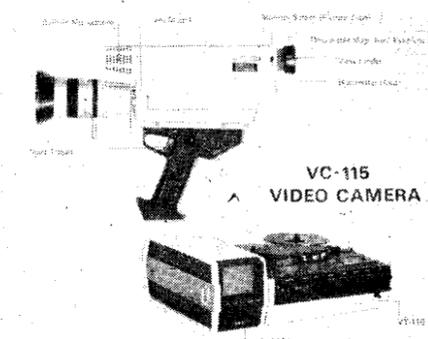
- + 300 lines resolution
 - + Operates from 1500 lux lighting
 - + Automatic or manual aperture control
 - + White Balance switch for correct colour balance
 - + Weight (camera only) 2.62 Kg.
- This camera is part of a pre-release colour portapack possibly cassette loading using EIAJ 1/2" PAL reels.

PRICE:

VTS115 \$1769 + tax.

CCS150 \$1800

Colour portapack (complete) approx \$3500.



Sony VideoRover AV-3420CE/AVC-3420CE

Jacoby Kempthorne Services Pty. Ltd., 469 Kent St., Sydney. 26-2651.

The AV-3420CE/AVC-3420CE is a complete portable, battery-operated VTR system that can be carried and operated by one person. It offers high resolution picture quality created from the techniques and experiences accumulated over many years. It consists of a handheld video camera (with zoom lens and built-in Electret Condenser Microphone) connected to a shoulder-or back-carried videocorder. The videocorder records picture and sound and to play them back on a monitor or, with the optional RE unit on an ordinary TV set.

The videocorder can likewise be used to record TV programmes off the air. The camera has a zoom lens and an electronic viewfinder that shows the operator recording picture exactly as it will appear on the TV screen. This viewfinder, moreover, can be used for playback to check the tape as soon as it has been recorded. An AC power adaptor, which also serves to charge the battery, makes it possible to run the AV-3420CE/AVC-3420CE on AC household current. Other features include still picture and audio dubbing. Improved performance on newly developed High Density Video Tape and high performance heads assures horizontal resolution in excess of 300 lines. Picture are sharp and clear with vivid contrast - a sharply focused virtually grain-free picture. Tapes are interchangeable with those of any Sony AV-CE series VTR.

Price \$1190 + 15% tax.

THE JVC NIVICO PV 450/ GS4500 (EIAJ Std1) 1/2" PORTABLE VIDEO SYSTEM features:-

- * 35 Minutes recording on a 5" spool.
- * 60 Minutes continuous operation on internal batteries.
- * Replay through eyepiece monitor.
- * Operable from car battery.
- * Audio dubbing facility.
- * 250 lines resolution (recorder).
- * Operates from 100 lux minimum lighting.
- * Compatible with all EIAJ standard 1 VTRs especially the Nivico KV 35.
- * Mains power adaptor has overload protection.
- * Weight (camera & recorder) 9.5 Kg.



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DIAL A PROGRAMME is a one channel cable TV system. Using a two pair cable it allows the subscriber access to many programmes through dial selection access. **REDIFFUSION BRISTOL** Supply programming via cable to TV sets in many homes in Bristol, England.

Programmes are originated on 1/2" portable VTR within the city and have a high degree of community participation. The relay of these programmes to the subscriber's home brings him closer to the community he lives in.

THE VIDEO COTTAGE TECHNOLOGY. CUSTOM EQUIPMENT SERVICE

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STUDIO TWIN CLAMP LAMP SPOT OR FLOOD. 2 times 300 watt. PRICE: \$15

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BACKPACK UNIT. Mounts portapack, microphone and batteries, holds camera when not in use. Shockproof and Dustproofed. PRICE: On application

STUDIO DOLLIES. Cranked Elevator. Three large wheels. Collapsible. (Not supplied with head.) PRICE: \$150

In as much as technology has been found to be destructive it can also be seen to be equivalently constructive, for every release of energy, anywhere and at any time contains within it the bi-polar possibility of both creation and destruction, of success and failure succeeded by disintegration. Such is the most fundamental law of existence - for existence implies dualities and all energies are bi-polar.

We are born into this age for a particular reason - to fulfill a particular need of the environment, to perform a specific function that is an integral part of the evolution of the Universe and more specifically of the planet Earth and mankind as a whole. Our every thought and every act has repercussions throughout the cosmos. Nothing can be taken lightly or without sufficient 'care'. Knowledge carries with it the weight of its own responsibility. The acid 'dreamtime' is passing - it was a time for learning to 'see' beyond the conditioned framework created by the intellectual and emotional pressures of family, culture and society; it was a time for coming 'face to face' with one's own 'dharma', of trying to understand 'who one is' and what one is doing on this spinning ball flying through endless space. Nothing in this universe is fixed, no state no situation, whether good or bad, ever remains, but is continually changing, evolving, transforming and for this reason

we cannot remain attached to any situation but must flow with it, learning from each moment to adapt to the shape of the next.

So too the time for dreaming is past. It is now time to ACT, to DO - to manifest the dreamtime onto the physical plane. This can only be done by using what is offered to us through our environment and culture. We can build a new world with the tools of the old. To change the world it is first necessary to change oneself and then extend this change onto the environment. The first step has already been taken - it is now time for the second.

No-one can transform a culture without first being informed of its contents. To affect something one must to some extent participate in it. We can participate in a whole only if we are willing to accept at least some of its means of expression and forms of thinking and knowing. But this does not mean that we must accept its aims or the use to which it puts its knowledge. It is this which must be changed. Technology if used with responsibility can be another means by which we can transform planet Earth onto a spiritually higher plane. To do this, the manipulation of technology and the forming of our environment can no longer be left in the hands of people

CONTINUED UNDER THIS SYMBOL

Gentle penetration - burst the mind hymen - release the vital energy required to shift this planetary consciousness into Aquarian overdrive - stop asking Flakey Foont questions - how, why - it's true - read 'journey to Ixtlan' and get angry with Casteneda - try to 'see' yourself, not in a mirror - you will not understand what is meant by scientific control unless you are the first subject of your experiments - the space between the leaves of the trees is the air we breath - become a warrior - take responsibility for your every action - the individual attains significance by limitation in his life style and determination in his duty - what you want to do and what you have to do become the same thing - do nothing else - do (and do not do) unto others as you would have others do (and not do) unto you - the 'others' are to include other species, entities and beings in this universe - understand the nature of duality - to know yin is a simultaneous comprehensive revelation of yang - love is these forces recognising one another in an eternal dance through the cosmos - love is the product of love making - love making is the physical manifestation of deep feelings of affection between two entities - it is not screwing, or balling or a one-O-one nor is it that

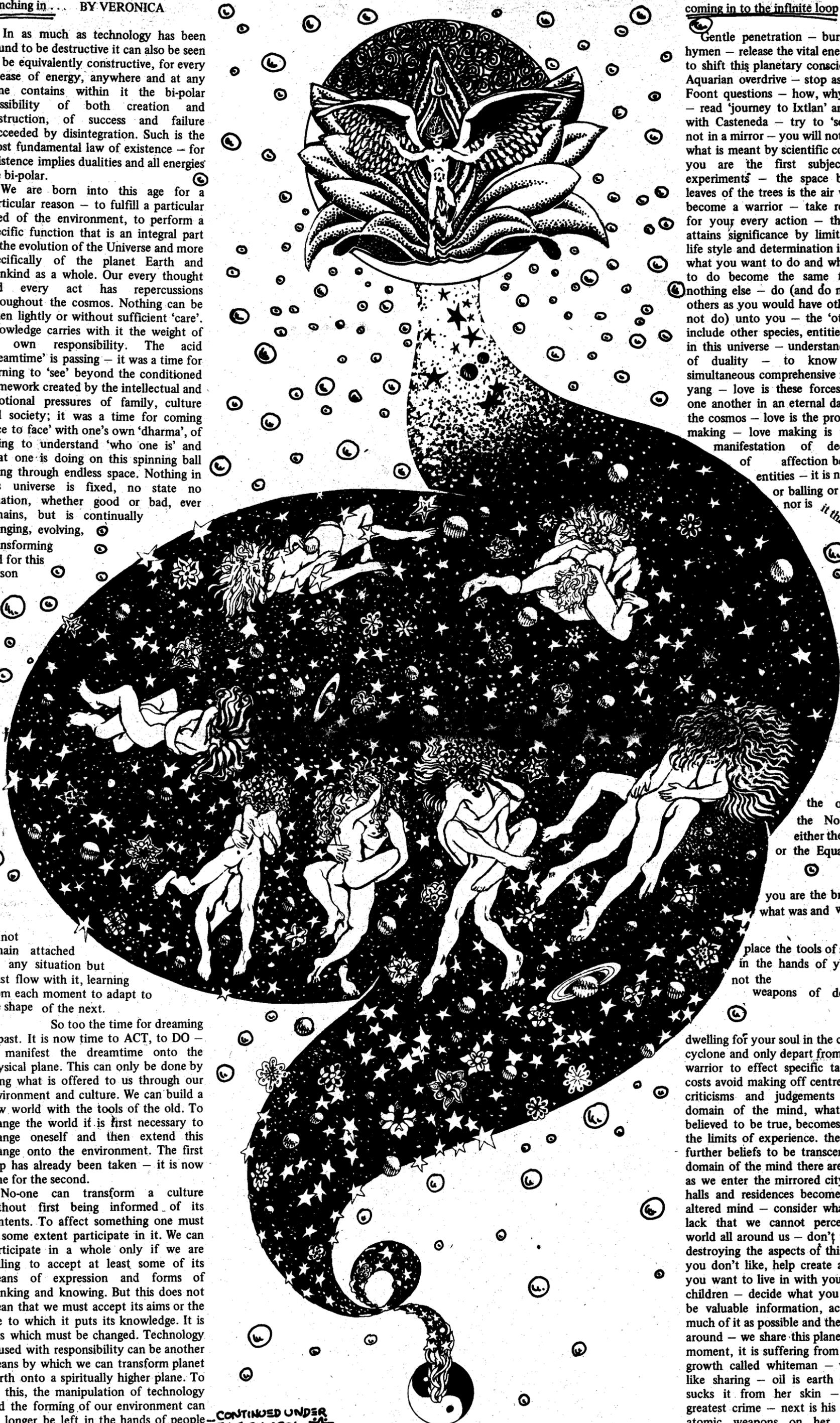
the opposite of the North pole is either the South pole or the Equator -

you are the bridge between what was and what will be -

place the tools of survival in the hands of your children, not the weapons of destruction -

create a dwelling for your soul in the centre of the cyclone and only depart from there like a warrior to effect specific tasks - at all costs avoid making off centred decisions, criticisms and judgements - in the domain of the mind, what is true or believed to be true, becomes true within the limits of experience. these limits are further beliefs to be transcended. in the domain of the mind there are no limits - as we enter the mirrored city its ancient halls and residences become real in the altered mind - consider what senses we lack that we cannot perceive another world all around us - don't worry about destroying the aspects of this world that you don't like, help create a world that you want to live in with your lovers and children - decide what you consider to be valuable information, accumulate as much of it as possible and then share it all around - we share this planet and, at the moment, it is suffering from a malignant growth called whiteman - who doesn't like sharing - oil is earth blood - he sucks it from her skin - this is his greatest crime - next is his attacks with atomic weapons on her oceans and

CONTINUED UNDER THE SYMBOL



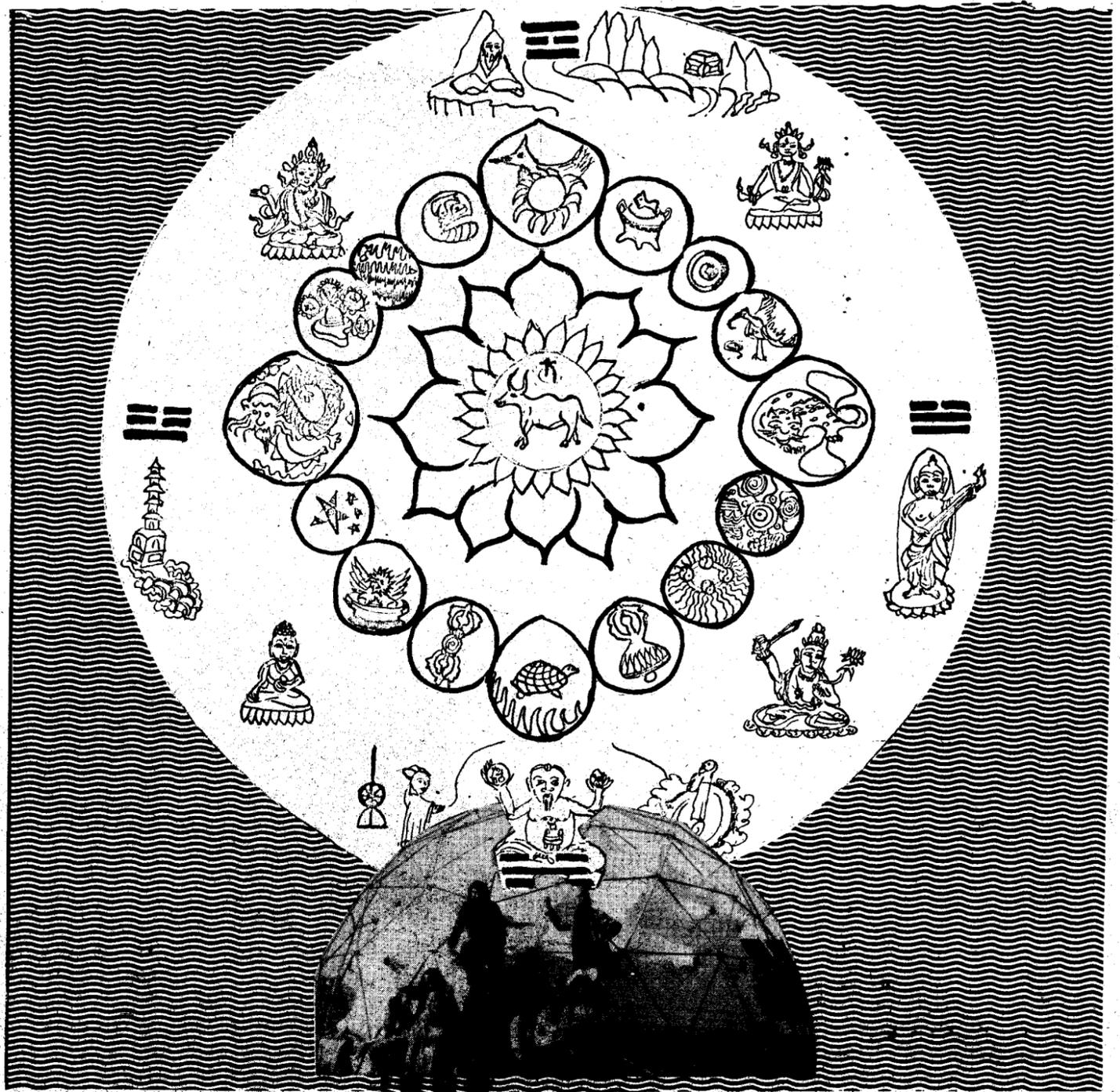
⑥ COMIN' IN TO OO LOOP
CONT.-

deserts - the atmosphere that enfolds her is being broken down with carbon gasses - they are crimes against the cosmos - we have a short time to rest the controls of spaceship earth from the hands of the money, power madmen - in the event that we don't we will have achieved a distinctly finite moment of evolution - if the planet dies Buddha will shed a tear for us - but if our progression means the progression of evil then we will be sacrificed - this is true for no other reason than that i believe it to be true - i am a whiteman and i will describe the danger that is upon us and how you can avoid it - the battle ground is within our own psyches - quote, 'Life, with all its complex features and contradictions, is either the unfolding of an intelligently conceived purpose, to a pre-ordained pattern of growth or it is not' - it is quite obvious to all of us that a lot of what is happening should not be happening - how this comes about is really quite simple - if you take full responsibility for your every action - even to the point of saying 'i am now going to be irresponsible for an hour' - then it will not be possible for negative forces to operate through you - concentrate on what you are doing - death is our life long companion and he is waiting for you to take your eyes off the road so that he can get you or use you to get someone else - this is true - all accidents can be ascribed to inattention - the inattention or negligence or carelessness while engaged in doing something is the crime of allowing the opportunity for old spooky to come through you and cause destruction - witness what happens when it comes through someone in a position of power - dont be an instrument of negation - practice focusing your mind like a laser beam magnification lens on whatever you are doing - at the same time try to do it with humour - think about the consequences of things that you might get involved in - make sure you know who and what it will affect either beneficially or detrimentally - then, having decided to do it, do it with all your heart, in fact do it with every molecule of your body - with as much intelligence, warmth and grace as you can - give of yourself and you will reap the benefits - we all have a lot to do - only you know what it is that you have to do - get in touch with the people who can assist you in getting it done, say a prayer to the god in you, and get into it - do it gently - after the battle is done we can sit back and smoke in a world without paranoia and tell amazing stories to our grand children who will probably think we're exaggerating - imagine it.

SYNCRING IN CONT.-

who wield their power with such unprecedented irresponsibility. We must take over their tools - not run away from them, but use them with awareness, towards directions that are communally joyous and enlightening.

No situation occurs by chance. The more adept one becomes at 'seeing' the more able one is to discern the pattern that connects one thing to another. There are no loose ends. Astrologically, Aquarius is ruled by the planet Uranus, under whose influence comes also television and video. That we have in our hands the use of communal video systems just as the new age is approaching is wrought with significance. The Aquarian symbol is that of the Water Bearer, who carries on his shoulder an 'Urn' from which flows down to earth a stream of water. The urn is a symbol of the mystic seed-bag, releasing from celestial heights the cosmically charged living water to fecundate the human kingdom below. Power flows always from a higher to a lower potential, from the fulfilled to the yet incomplete or expectant. The video could be seen as the urn, the transmitter for the outpourings of cosmic programming - the medium through which we relate to one another the ideas that flow from the Universal Plastic Mediator.



ALPHA WAVES AND THE MANDALIC WORLD CLOCK

Centering in a cosmic mandala icon image mirror the radiating biofeedback of the diamond body. Cybernetic acupuncture tantric tattvas and nadis and alpha wave or video moog recreate the cherished goal of the yogis-the wisdom of prajna.

The Buddha Samantaohara signifies identical self image; as above so below an the thin wed of neural gestalt reacts against spontaneity to weave starsparks lotuslife and lamanist wheels of life. The thousand rays of the nirvanic memory enter the myriad networks of the subtle body and the philosophical charts of its cybernetic companions. Supercosmic lazerlord to global village, bionic mirrorsea of coded nucluric intricacies.

Brain waves measured in cycles per second (bikes away) are seen as Delta, the slowest (0 to 4) cycles per second related to drowsiness creativity and dreamsleap. Alpha brainwaves 8 to 13 per second connected with a relaxed alert state similar to Chan monks and eastern seer in zazen or meditation. Beta waves are the fastest running 13 to 26 cycles per second and even faster in hyper alert states called divine madness. Biofeedback or the circulation of neural currents in luminous essence are measured EEG Brainwaves Ekg Electrocardigrams for heat transformations, CSR to measure skin responses and EMG electromyograph to check muscle tension.

Aesthetic and mystical experience come through the cutting down of attention to the outside world. Starring at television for long hours of concentration increases awareness and may lead to the hyperalert state and the now tune in to alpha and mute beata. The yogic science also advocates a fine analyze of all inflowing and peripheral states of being and related them to the nerve pathways of the spine and cackra centres. The Samkayan passages of the Bhavad Gita advise one to sit in padma asana and press the sence gates on the face to reverse the flow of energy and discover in the yoni mundra the ignition bindu spark of the eye flicker in the cerable sinus enstasis.

These images of thought have merged in the flood of feedback. The technical excellences the natural need for eastern meditation and the awareness of the scientific challenge to the old concept of involuntary body functions merge in the prophetic revolution of the Jungian mandalic microcosm. Ecological adaption of natural rhythms and a retracing to the origin of all product of human invention and the elimination of those unnecessary or harmful to our brother worker will eventually allow us to reallocate and group our forces around those artifacts which reveal the pasyanti motives of the higher self. Gone will be the harsh cybernetic reactions which force refuge in illusory cravings that are a blinding bar to original creative intuition. Biofeedback is a chart of change in an undulating cerable cortex, the electric energy in the brain measures 20 to 150 microvolts, this operates a complex system of about 10 billion nerve cells.

Empirical evidence supports the sublimative regenerative power aroused in meditation with a guide to alpha brain training procedures. With the stilling of the mind comes a synchronous firing of cortical neurons. When the subjects energies shift from active processing of thoughts, feelings and perceptions dysynchronization occurs. The alpha rhythm is blocked and other pattern, betas low amplitude and delta drowsiness merge in altered stages of consciousness. These sheathes are named vijanas saptas or tanmantras in the Buddhist diagrams of the factors of perception. The also radiate within spectrums that vary from the rainbow areas to the cosmic rays of the scintilla.

'If though wouldst complete the diamond body diligently heat the roots of consciousness and life. Kindle the light in the blessed country near at hand. And there hidden let thy true self eternally dwell.

The experimenters have discovered with hyper ventilation and physical exercises, stimulation from orgone and alpha rays meter may break open new

circuits of expanding spheres and reverse currents into stored memory freeing the thunderbolts of numisinal being. Trance and rapture, the facility of freedoms muse may inspire us to alay vijana or cosmopolite communal brotherhood. Here the ancient scintillating diagrams of the astrologer and the infinite graduations of the uncarved boulders of the Tao merge and dissolve into retinal and revaltory voidness.

Interior mystical visions described in Evan Wentz Yoga and Secret Doctrines parallel the science of thought transference with an ancient theme of the subtle light body. The signs following include an injunction by Sri Yogananda 'Behold form is but light' and nouce paints illumined pictures on the wall of the cave.

The Chinese practised the balancing of interior circuitry and were aware of these currents constructed a world clock of the astericism elements seasons and meridians.

The Yellow Emporers Book of Internal Medicine outlines the decent of the etherial yang and the equilibrating tendencies within the primal elements of wind wood fire earth and void. The train acupuncturist after twelve years may diagnose by auras and devolpes clairvoyant powers, harmony essence is a prearation for the dawing of the sagely communing the ascendant heavenlies Son of Heaven white sun inner arisen. Cybernetic acupuncture directs the transmission of light alpha waves and metabolic currents to these trigram centres.

Master Pan Shan exclaims:

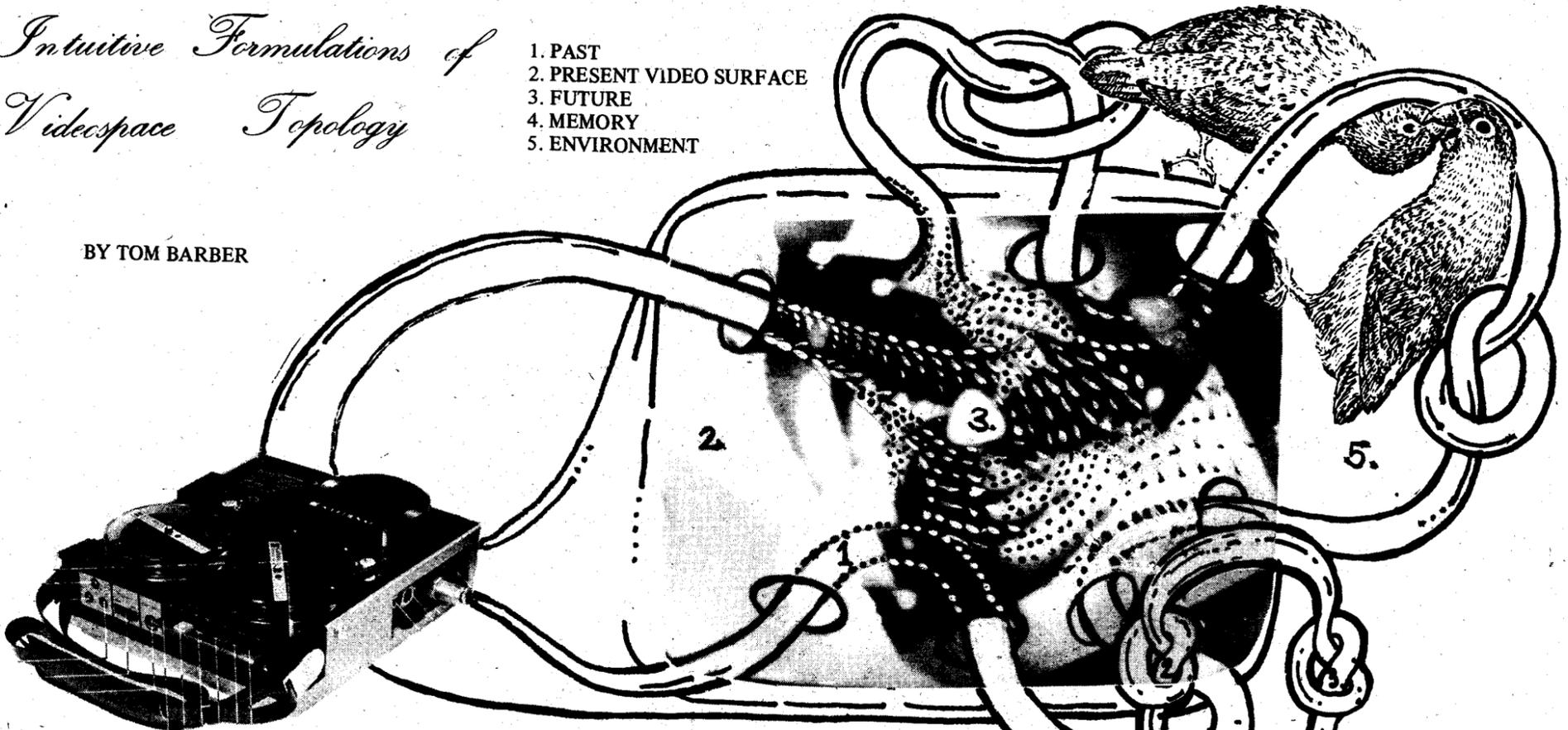
The world of the mind encloses the whole universe in its light. It is the cosmic life and the cosmic spirit and at the same time the individual life and the individual spirit.

Reference:
The Yellow Emporers Book of Internal Medicine, Ilza Veith University of California.
Creativity and Taoism, Chang Chung Yuan, Princeton.
Rairdance Radical Software.
Alpha Waves Jodhi Lawrence, Avon.

Intuitive Formulations of Videospace Topology

BY TOM BARBER

1. PAST
2. PRESENT VIDEO SURFACE
3. FUTURE
4. MEMORY
5. ENVIRONMENT



Communication is the inside-outing and outside-inning of information — out from my head into your head. Teleology is the process of transformation of a subjective-idea into its objective realization. Television is teleologic communication and seasonal degree looping, i.e. communication inside-outing squared on to the second power. Information that is outered affects that which is innered by feedback loopings.

TOPOLOGY is a non-metric elastic geometry concerned with transformation of shapes and properties such as nearness, inside, outside . . . perhaps the easiest way to define topological properties which stay the same in spite of stretching or bonding. Rubber Sheet Geometry.

VIDEOSPACE is perhaps most accurately defined by the weird topological form invented in 1882 by the great German mathematician Felix Klein, called the "Klein bottle" — which is closed one-sided surface without an inside or outside. . .

THE KLEIN BOTTLE seems to be a conceptual tool for formulation of energy inside outing structures, e.g. Matter/energy transformations

Energy/information
Entropy/Syntrophy

Visible cycles of nature — cloud topological inside-outing, chemical element cycles, Biochemical cycles etc.

VIDEO KLEIN BOTTLE SPACE could be a rich matrix for such universe energy modulation monitoring and processing, and a powerful educational tool for such universe process modelling via World Games world resources inventory.

They are deepest and most fundamental of all geometrical properties, since they persist under the most drastic changes in shape. There are no solids, no straight lines, only waves, no things, only energy events, only behaviours, only verbs, movement, only relationships, they allow information on a surface: a relation into the third dimension. The information on the 2D video transforms to the third dimension, through your imagination, your intuition. TOPOLOGY is a conceptive transport device upon which video information spins in your mind.

No continuum of feedback loops allows participation of the mind, in not receiving but doing, you are the perceiver on the surface contained within the system. There is no division of inside and outside, in the Klein bottle you in relation to the transponative, relate to a continuous bio-feedback, inside and outsideness. No relationship is triadic, it is the fist in the hand, the mind within the brain the word within the pen, the eye within the video, it allows a qualitative view of relations, through the step of intergrating waves intuition in the field.

Topology space is continuum of surface, with respect only to an immediately governing transformation. It is a geometry of the rubber sheet where surfaces are stretched from one shape, to another whilst still retaining the relation of relative position to its immediate neighbours in shape alone. It is the entering of room through the keyhole, by sucking the room out through that key and examining it as an inside on the outside. Euler's postulate relating to surface states that $V - F + E = 2$ or the number of vertices minus the number of faces + the number of edges = 2. This information the V, F and E can be deformed to any shape still satisfying the equation. This equation works for a sphere but if a small hole is cut in that sphere and the information pulled onto the small hole cut $V - F + E = 2 - 1$ or 1. This is the equation of a flat sheet. Or the description of an edge. The torus ring or doughnut is a continually spinning loop which has an inside and an

outside, as in the sphere but $V - F + E = 0$ or its genus is 2 or p. Higher shapes are described as spheres with handles with up to $p = 8$ or 9. These loops feed upon each other as continuously, restrained cycles of withinness and withoutness. Representation of this is the carbon cycle in nature used as the information, with loops of ocean food chains, terrestrial food chains, able to be represented as growing and expanding volumes, bubbles, with its energy events determined the volume of the shape contained within that space. The biadic relationship between inner and outer, with you being the outer, observer, flows when you feed into the cycles energy as meta-video swell the affected areas, with ocean food chain balancing information. The washing over of information slushes through the closed system, with a particular loop of video tape, once put through a recorder can be fed upon, keyed over as a mapping problem. The ever changing nature of quantitative facts expand and contract spreading balancing ripples through the whole system.

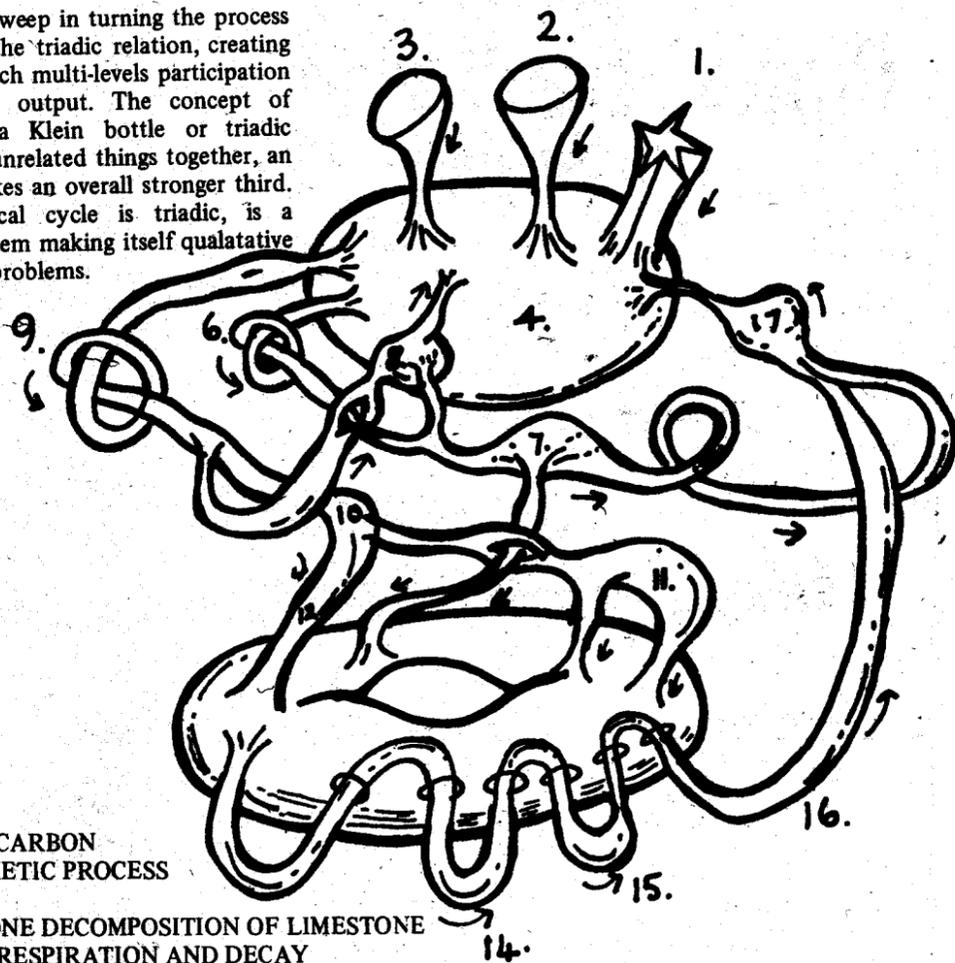
The carbon cycle is a biadic relation of withinness and withoutness, of observer and observed, with you as the active gathering, feeding in agent. A more complex relation, a triadic, relation allows itself to be represented topologically as the Klein bottle, a space, shape of continuous insideness and outsideness, where there are three relationships, an inside and an outside, coming together as one. The triadic relationship allows qualatative statements, two things can be compared, with an apriori objective.

The feedback loop can sweep in turning the process of video manifesting, into the triadic relation, creating an intuitive space upon which multi-levels participation in the actual information output. The concept of cryseng in chemistry is a Klein bottle or triadic relationship, it brings two unrelated things together, an inside and outside and makes an overall stronger third.

The nitrogen biochemical cycle is triadic, is a self-regulating feedback system making itself qualatative answers to its environment problems.

1. NITROGEN GAS
2. PROTOPLASM
3. AMINO-ACIDS
4. AMMONIA
5. NITRITES
6. NITRATES

THE NITROGEN BIOGEOCHEMICAL CYCLE



1. STAR-DUST
2. SOLAR ENERGY
3. OXYGEN
4. ATMOSPHERIC FREE CARBON
5. PLANT PHOTO SYNTHETIC PROCESS
6. OCEAN FOOD CHAIN
7. CHALK AND LIMESTONE DECOMPOSITION OF LIMESTONE
8. PLANT AND ANIMAL RESPIRATION AND DECAY
9. TERRESTRIAL FOOD CHAIN
10. EXCRETA AND CELLULAR CARBON IN HUMUS
11. MICROBE ACTIVITY
12. WOOD, GRASSES, ANIMAL, OIL BURNED
13. HOUSEHOLD HEATING
14. INDUSTRIAL DECOMPOSITION OF LIMESTONE
15. INDUSTRIAL DECOMPOSITION FOR PROCESSING
16. CULTIVATION AERATES SOIL AND INCREASES CARBON RELEASE
17. RETURNED THROUGH OTHER PROCESSES

WORLD CARBON CYCLE

....BLEEP.....THIS IS THE EDITORIAL.....PLEEP.....PLAH.....BLEEP.....PLOOP,BLOP,PAM,ZAP,ZOWIE,

WELL
WELL
WELL

A tape of student and resident action against landlord extremism in Adelaide is flown to Sydney overnight. The next day students see the videotape replayed on monitors in recreation areas and passageways around campus. That night, people interested in resident action come out to the uni to see the tape. They can immediately obtain information about the strike action without relying on commercial media. A tape can be flown in from New Zealand showing the latest anti American demonstrations and suggesting tactics for an Australian situation.

Lectures, tutorials, instructions, advice, AUS travel information, student union news and gossip, and on ... a campus video network working as an information exchange utilizing 1/2" J standard video gear. The possibilities are enormous.

The media show arrives in Wellington, smalltown NSW, The dome is erected and some street theatre lets the locals know that the travelling media circus is in town. the next week or two the kids at the schools are shown how to make tv shows, put out papers, use radio....shows in the dome during day and night get the locals involved in considering the need for closer examination of the problems of blacks in the area.

Myths about the omnipresence of commercial media are undone as people see how the media can work for them.

media should be accessible
community media must be a reality not a dream
we have a right to have access to tools to communicate
no true perspective of socialism will be presented by capitalist interests who have too much to lose

WE CAN MAKE IT HAPPEN.... Paul Coulter

This issue of Tharunka XL5 is all about media, but the underlying question of media is what does it transmit and the influence it has on an audience. Media is communication.

The first weeks back for this session have shown how the communication of doing things together can be more effective. Foundation Day (or week) this year rejuvenated student involvement.

Although much of the involvement was self-indulgent, the Foundation Day Tharunka (lacking pornography and satire) made a point about our city. The charities should receive over \$2,000 and the Tharunkas which were not sold will be distributed to Resident Action Groups.

The first weeks of this session have seen an upsurge in student interest in other things besides the degree at university. Let's hope interest continues and spreads to reevaluation of the degree itself.

Finally, THANK YOU on behalf of the Foundation Day organisers to all the people who did the shit work for Foundation Day, especially those who gave up part of their holiday to sell Tharunkas on the day.

Colin

Victoria Street
Party Sunday 12th
BLERTA, MICK FOWLER
afternoon.....
squatters needed

last weeks assorted odd's&sodd's
from Woroni, Arena, RATS, Radical
Software, Ixtlan, Man, etc etc.

Professional hell-raiser Richard Neville, the Australian famous for the obscenity trial of Oz magazine in Britain, has returned to Australia after seven years, -blasting our society.

As guest editor of this month's POL magazine Richard thumps home his controversial opinions and calls on a team of special writers who slam our system!

Read
● The School Kids' POL. Our local secondary students speak out against the sex roles they are expected to play in schools. Could POL's publication of student opinions lead to a

repetition of the British Oz scandal?

● The Mushrooming Laundromat Phenomenon. Why automated washing centres have led to the exploitation of modern day washer-women.

● The problem most women have—and hate! It itches, it depresses, it's hell for your sex life... and it isn't V.D.!

● Stepping out in drag—Zandra Rhodes gear goes gay with Sylvia and the Synthetics.

● Does L.S.D. fry your brains? Three people give their opinions on the controversial drug.

● Derelict Liberation—the fight to allow our city derelicts to drop out with dignity.

Read all this and more in this month's POL—if you dare!

DEMO Protest the Repression in France

ON JUNE 28 THE FRENCH GOVERNMENT BANNED THE LIGUE COMMUNISTE, THE FRENCH SECTION OF THE FOURTH INTERNATIONAL, AND ARRESTED TWO OF ITS LEADERS, ALAIN KRIVINE AND PIERRE ROUSSET, SHORTLY AFTER. THE BAN CAME AFTER THE LIGUE AND OTHER LEFT-WING ORGANISATIONS PROTESTED THE MEETING OF THE FASCIST ORDRE NOUVEAU GROUP. THE BAN HAS MET WITH MASSIVE PROTEST FROM ALL SECTIONS OF THE LEFT AND LABOR MOVEMENT IN FRANCE.

PROTEST THIS BLATANT ATTACK ON DEMOCRATIC RIGHTS IN FRANCE AND LET THE FRENCH GOVERNMENT KNOW ITS REPRESSIVE ACTIONS HAVE NOT GONE UNNOTICED ABROAD.

Lift the ban on the Ligue Communiste! Release Krivine & Rousset!

FRENCH CONSULATE WYNYARD 4.30pm
FRIDAY AUGUST 10

New Polemical Pamphlet:—
"A FALSE PHILOSOPHY EXPLODED!"
by W.J. Brown

Read this reply to E. Aarons' pamphlet "Philosophy for an Exploding World." It gives the philosophical basis for what happened to the Communist Party of Australia. A "must" for all followers of Australia's current political scene.

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WELFARE COLUMN

With the present cold of winter and high price of woollen blankets, one needs a cheap way to keep warm, and that is with another person. So in addition to our woollen blanket we need our ever reliable contraceptives to stave off the pattering of little feet next winter. Unfortunately the Student Health Centre fails to prescribe the pill so one must go elsewhere, the best place being the Family Planning Clinic at Prince of Wales Hospital. If you have any problems at all regarding any form of contraception, these people are really great to see as they're always sympathetic to your requests.

PRINCE HENRY HOSPITAL, Outpatients Dept., Anzac Parade, Little Bay 2036. Telephone (besides above numbers): 661-0111 Tuesday 6 p.m. - 8 p.m.

PRINCE OF WALES HOSPITAL, Outpatients Dept., High Street, Randwick 2031. Telephone (besides above numbers) 399-0111. Wednesday 6 p.m. - 8 p.m. Thursday 6 p.m. - 8 p.m.

If your favourite contraceptive has failed (you take it once a day dear not once a week) then you can arrange to have pregnancy testing done at the Student Health Centre at the case of Baser Steps to decide if it is one, none or twins.

In the meantime sleep warm and smile. With a smile,

Stephen Collocott
Vicki Whitehead

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BHP CAN CAMPAIGN EXPOSED

In March of this year an Adelaide ecology action group 'friends of the earth,' made a film exposing BHP's fraudulent recycling public relations programme. Ironically it was BHP who paid 'friends of the earth' to make this film. Gabriell Laffite who exposed the steel can fraud to the media was instrumental in obtaining this sum for FOE from BHPO.

Once finished the film was seized by Flinders University drama department and a three way battle ensued between the University, FOE and BHP to get control of the film. The University, under pressure from students and FOE's lawyers were made to release the film and next Wednesday, August 8, as a prelude to national anti-can campaign, the film will be screened in the Wurth Room commencing at 1.05 pm.

The film is not a technical accounting of can recycling - rather it is an account of how the gimmick of recycling, and the fraud that perpetuated that gimmick caused one man to reveal the whole fiasco. The film title, "Pandion" means duality - a PR front and the reality are shown to result in a crisis.

TRAIN CONCESSIONS

The position so far is that students are entitled to rail concessions any time of the year if they are travelling interstate. AUS is still negotiating for the same concessions intrastate. The present system gives the concessions only during vacations.

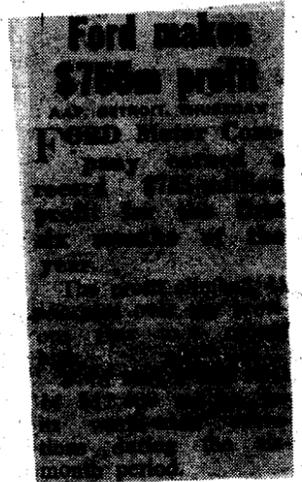
CHEAP CHILD MINDING CO-OP

The original purpose of Pooh Corner was to provide a cheap minding centre for children of students. Limited numbers and high costs have meant that only a few benefit from it. Obviously something which is within the reach of more students is needed.

If enough parents are interested, an independent child minding co-operative can be set up near campus. It will be staffed on a roster system by parent/s of children who attend. It is hoped that each parent will bring toys etc. to be shared.

The costs will only be enough to cover rent. Anyone interested please leave your name, address, phone number, times available for roster at Students' Union Office.

Pauline Lenga,
Local AUS Secretary



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90-2964

COMMONWEALTH SCHOLARSHIPS

Education Officers from the Department of Education will be available for interview in Room 1 Hut G (near the Student Counselling Unit and Student Health Service) during term.

Commonwealth Postgraduate Awards: -
Every Thursday afternoon
Commonwealth University Scholarships: -
Every Wednesday 9 am - 4.30 pm

If you have a problem or wish to make an enquiry about Commonwealth Scholarships, you can come to Hut G Room 1 or ring there for an appointment on 663-0351 Ext. 2672.

STAFF EMBARGO AT R.M.I.T.

Any person contemplating any academic appointment at RMIT is advised that the Victoria Institute of Colleges Staff Associations Council has placed an embargo on that College due to disputes relating to SECURITY OF TENURE.

This action has the support of the RMIT Association of Professional Staff which advises prospective applicants that its members have decided to withhold their professional co-operation from any person who accepts a position at RMIT during the embargo.

Any person considering an academic appointment at RMIT is advised to contact VICSAC for further information.

Authorised: R.W. Hinkley, General Secretary, VICSAC, 172 Chetwynd Street, North Melbourne 3051. Phone: (03)329-0372.

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