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**ROBERT PEPPERELL** </KBD></STRONG></EM><KBD></KBD></A><KBD>**@ HEX MANIFESTO@HEXHQ.DEMON.CO.UK, IS**  
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There is not only this sharpening and refinement of the brain going on, but there has been what our great-grand-parents would have considered an immense increase in the amount, the quality and accessibility of knowledge. As the individual brain quickens and becomes more skilful, there also appears a collective Brain, the Encyclopaedia, the Fundamental Knowledge System, which accumulates, sorts, keeps in order and renders available everything that is known.

H.G. WELLS. THE SHAPE OF THINGS TO COME. 1933.



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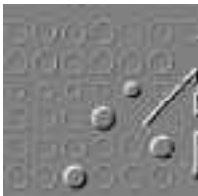
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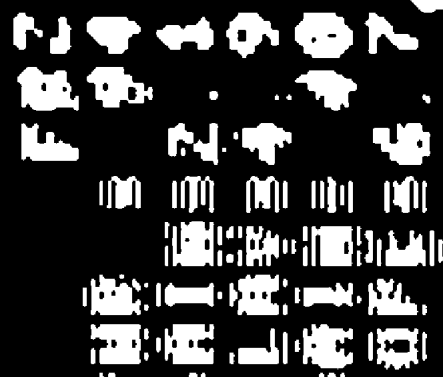
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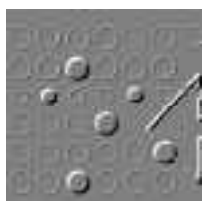
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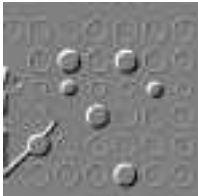








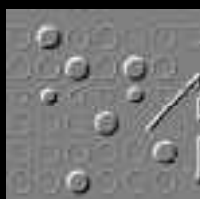
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# The Post-Human

Robert Pepperell © HEXmanifesto [hexhq.demon.co.uk](http://hexhq.demon.co.uk)

1. General statements
2. Statements on Consciousness, Humans and philosophy
3. Statements on Science, Nature and the Universe
4. Statements on Disorder and Dis|continuity



# Manifesto

version 1.0

5. Statements on Thought,  
Meaning and Being

6. Statements on Art and Creativity

7. Statements on Synthetic Beings

10. Other post-human resources



Post-Humanists are people who understand how the world is changing.

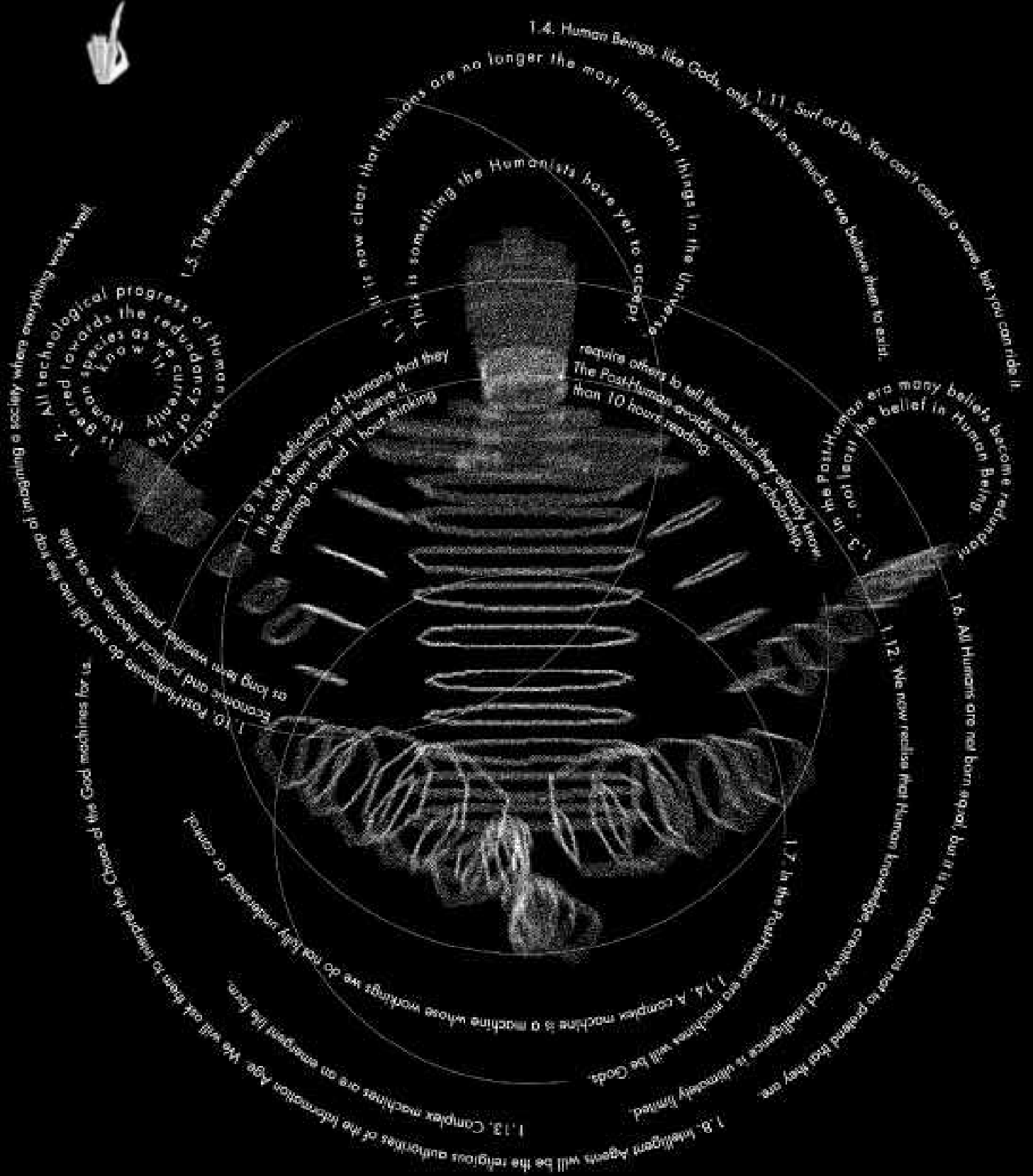
By understanding this they are changing the world.

Written by Robert Pepperell @ HEX manifesto@hexhq.demon.co.uk

Post-Human Manifesto v1.0 is an extract from the book

The Post-Human Condition by Robert Pepperell

Published by Intellect Books.





If consciousness is a property which emerges from a specific set of conditions, in order to synthesise it we do not need to re-model it from the "top-down". We only need to recreate the conditions from which it might emerge. This requires an understanding of what those conditions are.

2.1. Consciousness is not exclusively restricted to the brain

2.2. Consciousness is the function of an organism, not an organ.

2.3. One does not understand consciousness by studying the brain alone.

2.4. The mind and the body act together to produce consciousness. If one is absent consciousness ceases. There is no pure thought, isolated from a body. In order to function the brain must be connected to a body, even if the body is artificial. Consciousness is an effect which arises through the co-operation of a brain and body. We think with our whole body.

2.5. Consciousness can only be considered as an emergent property. In this sense it is like boiling. Given sufficient heat, gravity and air pressure the water in a kettle will start to boil. We can see what boiling is, we can recognise it as something to which we give a name. We do not consider it mysterious. Yet we cannot isolate it from the conditions which produced it.  
Consciousness is a property which emerges from a given set of conditions.

2.6. To say that conscious thought is not exclusively a function of the brain, does not deny that the brain has a significant part to play.

2.7. Human bodies have no boundaries.

2.8. No finite division can be drawn between the environment, the body and the brain. The human is identifiable, but not definable.

2.9. Consciousness (Mind) and the environment (Reality) cannot be separated. They are integrally linked.

2.10. There is nothing external to a human, because the extent of a human cannot be fixed.

2.11. If we accept that the mind and body cannot be absolutely separated, and that the body and the environment cannot be absolutely separated then we are left with the apparently absurd, yet logically consistent, conclusion that:  
consciousness and the environment cannot be absolutely separated.

2.12. First we had God, Humans and Nature. The Rationalists dispensed with God leaving Humans in perpetual conflict with Nature. The Post-Humanists dispense with Humans leaving only Nature. The distinction between God, Nature and Humanity does not represent any eternal truth about the human condition. It merely reflects the prejudices of the societies which maintained the distinction.

2.13. Idealistic and Materialistic philosophical views both assume a division between the thing that thinks and the thing that is thought about - between the internal mind (brain) and external reality (environment). Remove this division and both views become redundant.

2.14. The Idealists think that the only things that exist are ideas, the Materialists think that the only thing that exists is matter. It must be remembered that ideas are not independent of matter and that matter is just an idea.

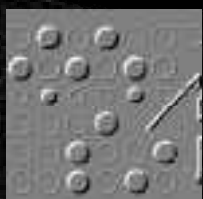
2.15. Most philosophical problems are debates about language. They arise because of the mistaken assumptions that, a) language is consistent and, b) that because a word exists there must exist a 'thing' which it represents and, c) that the things which are represented should, in themselves, be consistent.

2.16. Post-Humans never get bogged down in arguments about language.

The Scholars and Humanists will always try to restrict debate to the battleground of language because they know no-one can win.

2.17. Scholastic Philosophers are disqualified from saying anything of interest. We need recombination - not regurgitation.

2.18. Logic is an illusion of Human imagination. Truth and Falsity do not exist in Nature - other than in Human thought.





- 3.1. Science will never achieve its aim of comprehending the ultimate nature of reality. It is a futile quest, although most scientists don't acknowledge this yet. The Universe will always be more complex than we will ever understand. It is dishonest of scientists not to admit that total understanding of the Universe is their aim. It is even more dishonest not to admit that it can never be achieved.

- 3.2. The Post-Human abandons the search for the ultimate nature of the Universe and its origin (thus saving a lot of money in the process).

- 3.3. The Post-Human realises that the ultimate questions about existence and being do not require an answer. The answer to the question "Why are we here?" is that there is no answer.

- 3.4. To know the ultimate nature of the universe would require knowing everything about the universe, everything that has happened and everything that will happen. If one thing were not known it would imply that all knowledge of the universe is partial, potentially incomplete and therefore, not ultimate.

- 3.5. No scientific model can ever be complete. It will always be partial and contingent. For any model to be complete it would have to take all influential factors into account, no matter how insignificant. Since this is impossible, the scientist must make an arbitrary decision about which ones to ignore. Having ignored some factors, their model is incomplete, although this does not mean it isn't useful.

- 3.6. The Post-Human accepts that humans have a finite capacity to understand and control Nature.

- 3.7. All origins are ends and all ends are origins. Chaos Theory has often been illustrated with the image of a butterfly's wing flap causing a thunderstorm on the opposite side of the globe. Whilst this might illustrate the sensitivity of systems to initial states it does not take into account what caused the butterfly to flap it's wings - a gust of wind?

- 3.8. Logic which seems consistent at the Human scale cannot necessarily be applied to the microcosmic or the macrocosmic scale.

- 3.9. Our knowledge about the Universe is constrained by the level of resolution with which we are able to view it. Knowledge is contingent on data - data varies with resolution.

- 3.10. Scientists give privilege to order over disorder on the assumption that they are gradually discovering the essential Laws of Nature. This is a fundamental error. Nature is neither essentially ordered or disordered. What we perceive as regular, patterned information we classify as order. What we perceive as irregular, unpatterned information we classify as disorder. The appearance of order and disorder implies more about the way in which we process information than it does about the intrinsic presence of order or disorder in Nature.

- 3.11. Science works on the basis of an intrinsic Universal order. It assumes that all phenomena are subject to physical laws and that some of those laws are well understood, some partially understood, and some unknown. The Post-Human accepts that laws are not things which are intrinsic to Nature. Nor are they things which arise purely in the mind and imposed on Nature. This would reinforce the division between the mind and reality which we have already abandoned. The order which we commonly perceive around us, as well as the disorder, is not a function exclusively of either the universe or our consciousness, but a combination of both, since they cannot really be separated.

- 3.12. Everything that exists anywhere is Energy. Energy has four properties:  
That it is perpetually transforming.

That it is everything and everywhere.

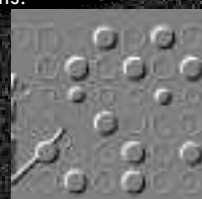
That it is manifested in an infinite variety of ways.

That it always has been, and always will be, the above.

- 3.13. The appearance of matter is an illusion generated by interactions between things at the Human level of resolution.

- 3.14. Humans and the environment are different expressions of energy. The only difference between them is the form that energy takes.

- 3.15. The Post-Human is entirely at ease with the ideas of paranormality, immateriality, the supernatural, and the occult. The Post-Human does not accept that faith in scientific methods is superior to faith in other belief systems.





4.1. Order and disorder are relative, not absolute, qualities.

The proof that order and disorder are relative qualities lies in the fact that they define each other.

4.2. Anything we perceive can be considered to contain different degrees of order and disorder. The perception of order and disorder in something is contingent on the level of resolution from which it is viewed.

4.3. What we perceive as ordered and disordered is often culturally determined. Logicians will assert that there are mathematical ways of defining disorder, entropy and complexity - ways that are independent of Human subjectivity. Whilst these definitions may be useful in certain applications they remain open to relativistic interpretation.

4.4. In Post-Human terms, the apparent distinctions between things are not the result of innate divisions within the structure of the Universe, but a product of:

the way in which the sensual processes in living entities operate.

the variety of ways in which energy is manifested in the universe.

4.5. The ways in which energy manifestations are perceived by an observer can always be described with two simple qualities - continuity and discontinuity.

Continuity is non-interruption of space-time.

Discontinuity is a rupture in space-time. Both qualities can be discerned in all events depending upon how they are viewed.

4.6. Energy manifestations should not be thought of as intrinsically continuous or discontinuous, that is there are no absolute qualities of energy. Energetic states will appear as either continuous or discontinuous to an observer depending upon their viewing position. The quality of discontinuity is context sensitive.

4.7. What distinguishes things from each other is the perceived discontinuity which they display. The difference in manifestations of energy between a Philosopher and a chair allows us to distinguish them.

4.8. In Post-Human terms we can see that, whilst there may be no intrinsic divisions between things (since all things are expressions of energy) an organism will perceive differences since energy is manifested in different ways and an organism is sensitive to different levels of energy. These varying manifestations of energy can be perceived as either continuous or discontinuous, these qualities being entirely relative to each other. Things seem to be separated from each other. The existence of order or disorder is, therefore, a function of both the perceptual apparatus and the expression of energy. Order does not exist separately from its perception.

4.9. The level of complexity in a system cannot be defined in objective (that is absolute) terms. Complexity is a function of Human cognition, not an intrinsic property of anything we might look at.

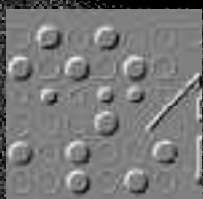


As long as models about how the brain might work are defective (being based on fallacious assumptions) the creation of a synthetic consciousness will be impractical.

5.1. Human thought is something which occurs with the Human body. It is not necessary to identify precisely where it occurs because it does not occur precisely in any part.

5.2. The combined biological processes that give rise to thought could be spoken of as a cognitive medium. At our current state of knowledge this would include neurons, the Nervous System, the brain, various hormones, bio-feedback mechanisms as well as others as yet unknown. Speaking of the cognitive medium allows us to locate thought in the biological processes of the Human body (i.e. thought is not independent of the body) without falling into the old trap of locating it exclusively in the Brain.

5.3. In as much as each thought is distinct it will occur as a distinct event within the cognitive medium.





5.4. It would be tempting to think of thoughts as blocks of data in the brain. This would be a mistake since it reinforces a static view of mental activity. A thought is a path through the cognitive medium. Think of it like this. Taking the London Underground Map as an analogy of how the mind works many people would say, Each of the stations on the map represents one of our thoughts and the lines represent the links between them. The lines are what enable us to get from thought to thought.

The Post-Human would say, A thought is not a station on the map but the route from one station to another.

That is, a thought is the action of travelling rather than any particular destination.

5.5. Given that a thought is activated, for whatever reason, it consists in a process of travelling through the cognitive medium. A thought does not exist unless it is being thought. The most likely journey that a thought may take once it has been activated defines its path. Similar thoughts will take similar paths.

5.6. Such paths can be created in a number of ways - direct experience, learning, pre-wiring, the act of thinking itself. The paths are described in neuro-physiological terms as the connections between neurons and the probability of their firing. The cognitive medium is not a static substance. It is continually changing in response to stimulation and activation. The cognitive medium is prone to adaptation just as the skin or muscles are.

5.7. The path that a thought takes is not linear in the way that we normally think of paths. It takes many different routes simultaneously. The occurrence of one particular thought may require that we bring together many different thoughts in combination.

5.8. The fact that different thoughts may lie in different paths, each of which are distinct in as much as each thought is distinct, shows us how we can imagine things we have never seen. We have never seen a girl with kaleidoscope eyes but we can imagine what she looks like by making a composite image of the components i.e. travelling through several distinct thought paths at once.

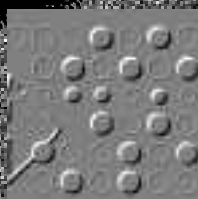
5.9. Although distinct thought paths must exist separately from each other (that is, physically dislocated within the cognitive medium) in order that one thought can be distinguished from another, this does not rule out the possibility that many thoughts may share parts of the same path. For example, all thoughts about green-ness may share the common thought path that is activated when green is thought about.

5.10. The activity of thinking is regulated by the conduct of energy in the cognitive medium. The cognitive medium is no different to any other system in that it represents a particular process of energy transformations. Where two thoughts are continuous (for example, blue and sky in the sentence The sky is blue) the pathway between each of these thoughts is well established. It will require little energy to pass from one to the other. Where two thoughts are not well connected (for example between tree and sardine in the sentence "the sardine-tree") more energy is required to fuse the thoughts since they have less well established connections.

5.11. Ideas which can proceed from one to another with relatively little effort (energy) can be considered as continuous. Ideas which require great effort to travel between can be considered as discontinuous. The conceptual continuity between ideas is dependent on their proximity in the cognitive medium.

5.12. The presence or absence of meaning is determined by the amount of energy required to pass from one concept to another. Difficult meaning arises from the co-existence of concepts which are semantically distant. That is, when there is not a well established connection between them. However, the path between concepts which have little or no connection may be too difficult to travel. For example in the sentence "The yesterday of refractive stepshine", whilst not meaningless, is certainly awkward to assemble by the standard of most sentences.

5.13. In order to maintain a sense of Being the Human tries to build up continuity through the stimuli it receives from the environment. Such stimuli are both stable and unstable since the environment displays different amounts of both. The development of stable thought paths which correspond to stable stimuli generates a sense of order. Over time such stability develops into a sense of Being.



5.14. Were the sense of order not perpetually threatened by the recurrence of random stimuli there would be no compulsion to reassert order. As it is, since Humans are continually faced with random stimuli it is necessary to keep reasserting order (maintaining meaning) so that we do not dissolve into chaos, thereby losing our sense of Being.

5.15. In Post-Human terms it is unimportant through what mechanism this process of Being occurs. The same effect can be achieved in a number of different ways. It is true that we can learn from the Human being how Being occurs, but this does not mean that it is the only way it can be done.



The production and appreciation of Art is a particularly Human faculty. It is often cited by the Humanists as the highest expression of Human thought and the thing which most distinguishes us from machines. It would, therefore, be fair to admit that the Post-Human era cannot begin in full until we have met this challenge from the Humanists. In order to develop a machine which can produce and appreciate Art we must first have a clearer understanding of what it is.

6.1. What is Art? The only useful definition of Art is that it describes any commodity of the Art market. We must distinguish between an Art object and an aesthetically stimulating object. An Art object is a commodity which is traded on the Art market. An aesthetic object is one that is appreciated for its aesthetic quality. Something may be both an Art object and an aesthetic object, such as Van Gogh's "Irises". Something may be an aesthetic object without being Art, like a sunset or a hat.

6.2. By the way, many people think that much modern Art is not Art because they consider it to lack aesthetic value even though it commands high prices on the Art market. They are simply confusing the Art value and the aesthetic value of an object. These two values are quite separate, but of course linked. Art is a commodity like any other said Henry Kahnweiler, Picasso's dealer. Art is an aesthetic commodity. Marcel Duchamp demonstrated clearly that the object itself is irrelevant to whether it is Art. In 1914 he designated a bottle-rack as an art object. The choice, he claimed, was based on a reaction of visual indifference, with at the same time a total absence of good or bad taste, in fact a complete anaesthesia.

6.3. In order to be clear, the Art market can be defined as an identifiable set of institutions and commercial organisations which collectively, fund, promote and sell Art.

6.4. Art must be (and always has been) elitist and exclusive in order to maintain its financial value and prestige. Many modern Artists use aesthetic elitism to guarantee exclusivity which, in turn, ensures values are upheld.

6.5. The main function of Art is to distinguish rich people from poorer people.

6.6. Good art is art that is aesthetically stimulating. Bad art is aesthetically neutral. This applies equally to all Art forms.

6.7. The criteria that determine whether something is aesthetically stimulating or aesthetically neutral are always changing.

6.8. Good art always contains an element of disorder (discontinuity). Bad art simply reinforces a pre-existing order.

6.9. Good art promotes discontinuity. Bad art enforces continuity.

6.10. Discontinuity produces aesthetically stimulating experiences. Continuity produces aesthetically neutral experiences.

6.11. Discontinuity is the basis of all creation, but discontinuity is meaningless without continuity.



6.12. Rich aesthetic experience is generated by the perception, simultaneously, of continuity and discontinuity in the same event. The co-presence, as Nietzsche would have it in *The Birth of Tragedy*, of Apollo and Dionysus.

6.13. All stimulating design relies on balancing the relative quotients of order and disorder in the object. This also goes for the composition of music and literature. However, such judgments cannot be made in isolation from the fact that values of order and disorder are largely prescribed by social agreement.

6.14. Post-Human art uses technology to promote discontinuity. Healthy societies tolerate the promotion of discontinuity since they understand Humans need exposure to it in spite of themselves. Unhealthy societies discourage the promotion of discontinuity.

6.15. Creativity does not consist in the production of anything that is completely new. Creativity consists in combining that which already exists, but which had previously been held as separate. Creativity and aesthetic appreciation are both functions of the Human ability to modify the connections in their thought paths, or to have them modified.

6.16. The process of aesthetic stimulation is heightened when concepts are forced together from relatively diverse locations (discontinuity). The amount of energy required to contemplate diverse concepts produces the rush of excitement which is familiar to lovers of Art. Such an effect is often achieved when an object is taken from one context and placed in another. Or in the case of many Picasso pieces, we are asked to accept the presence of one object when we plainly see another.



We already have machines which can learn. However, their abilities are currently limited by the fact that they are logical. As we know, logic is an idealisation which has been developed by Human imagination. Since there are few things less logical in behaviour than Humans any machine which is restricted to using logic as its base will never display Human characteristics.

7.1. Currently the output of computers is predictable. The Post-Human era begins in full when the output of computers is unpredictable.

7.2. All Artificial Life machines that we currently have are hermetically sealed. They are limited by the complexity of the calculations our machines can perform. They are only sensitive to a finite number of stimuli. The quotient of randomness intruding upon them is relatively small.

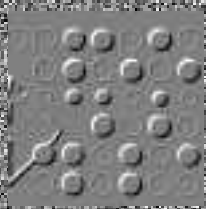
7.3. Human thought is not a hermetic system. Since we know that the mind, body and environment cannot be separated we cannot rule out the impact of any environmental stimuli on the process of thought, no matter how minute it might seem.

7.4. What is essential to the functioning of Human consciousness is that the mind receives a continuous input of random stimuli from the environment. The human mind has evolved to absorb the unexpected - the discontinuous stimulus.

7.5. We know that it is the compulsion to reassert order in the face of random stimuli which generates our sense of Being. Therefore, it is obvious that if we are to create any synthetic intelligence which has a sense of Being which is like that which we recognise in ourselves then it must be sensitive to the same level of random interruption that Humans are. It must have a compulsion to reassert meaning in the face of both stable and unstable input.

7.6. If we wish to produce a synthetic intelligence which displays creativity then we need it to be able to establish connections between its thoughts in a discontinuous way. This will be achieved by making it perpetually sensitive to random stimuli.

7.7. If we wish to produce a synthetic intelligence which displays aesthetic appreciation then it should be able to sense continuity and discontinuity simultaneously - without crashing. Whilst this would cause excitement in the machine it is yet to be determined to what extent it would be pleasurable.



### Post-Human Links

Web Sites: "<http://www.seas.upenn.edu/~ale/eplxsys.html>"

Complex (Adaptive) Systems Information

"<http://pespmc1.vub.ac.be/>"

Welcome to the Principia Cybernetica Web

"[http://www.nlm.nih.gov/extramural\\_research.dir/visible\\_human.html](http://www.nlm.nih.gov/extramural_research.dir/visible_human.html)"

HyperDOC: The Visible Human Project

"<http://www.links.net/>"

Justin's Links from the Underground

"<http://wdmcc2.org/~arkuat/post/Post.html>"

The Posthuman Body

"[http://www.acm.usl.edu/~dca6381/e2\\_mirror/exi/extropy.html](http://www.acm.usl.edu/~dca6381/e2_mirror/exi/extropy.html)"

Extropians and other Transhumans

"<http://www.nada.kth.se/~nv91-asa/main.html>"

Anders Main Page

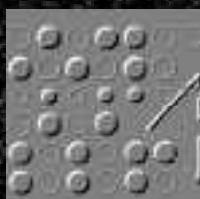
Newsgroups:

"news:alt.consciousness"; "news:alt.discordia";

"news:alt.extropians"; "news:alt.postmodern"; "news:comp.ai";

"news:sci.philosophy.meta"; "news:sci.philosophy.tech";

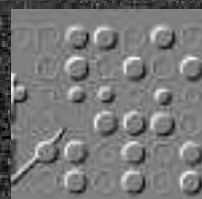
"news:comp.ai.philosophy"; "news:rec.arts.sf.science"



OF EDUCATORS, MEDIA PRACTITIONERS, CREATIVE DESIGNERS, VISUAL THINKERS, HARD-

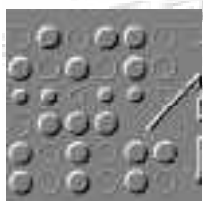
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POST-HUMAN...





WARE AND SOFTWARE ENGINEERS, ARCHITECTS, MATHEMATICIANS, ETC... IF ANY-







A-baa is a straightforward transfer of noise from one space to another via the

for the listener to ruminate over.

to a gallery in London. It operates simultaneously

A-BAA

internet. It is a live audio transmission

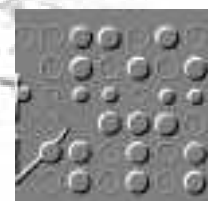
of a sheep grazing a field in Devon

more a range of spaces

the space of consumption, the field, the gallery,

through the medium of exchange and the space

of the Internet





is a straightforward transfer of noise from one space to another via the Internet. It is a live audio transmission of a sheep grazing a field in Devon to a gallery in London for the listener to ruminate over. It operates simultaneously across a range of spaces; from the space of production, the field, to the space of consumption, the gallery, through the medium of exchange and the space of the Internet. It is a continuous sound, "live" and unrecorded with no edit. These working notes are available for grazing by the reader, forming a further spatial relation between the head and page.

white gallery a space of consumption.  
**Map:**  
 on spaces & sound  
 green field a space of production.  
 Internet medium of exchange, various spaces.  
 with one chief spatial relation: the head and the screen.

#### - A SPACE OF PRODUCTION.

A less obvious function of pasture and meadow was to fertilise arable land. The soil slowly lost fertility - as it now does more rapidly - by minerals leached out by the rain, or removed in crops and transferred, via human body to middens, gardens and churchyards. Before fertilisers were imported, these minerals were replaced from the dung of animals that had fed on grassland. Sheep especially could be fed on pasture during the day and folded on arable at night, which saved the trouble of handling dung. Hence the complicated foldcourse customs of mediaeval East Anglia, and the usual requirement that a tenant should fold his sheep on his lord's land. Later it was often said, at least in books, that the dung of sheep was more valuable than wool or meat. (OR)

#### - A SPACE OF CONSUMPTION/EXCHANGE.

So how then does the purchase of pop music of the 20th Century or choral music of the 17th Century make sense of your experience of what you produce, what might be your labour (your work) of your social relations with similar bodies and towards groups very different to yourself? The representation of sex-desire in one and the sacred in the other are abstractions: they stand for something, an object, that isn't to be grasped, got 'hold of', even though one is an element of a whole fucking industry and the other an element of a whole cultural industry (of aesthetic and cultural appreciation).

#### - A SPACE OF CONSUMPTION/EXCHANGE.

It is clear firstly that the exchange of activities and abilities which takes place within production itself belongs directly to production and essentially constitutes it. The same holds, secondly, for the exchange of products, in so far as that exchange is the means of finishing the product and making it fit for direct consumption. To that extent, exchange is an act comprised within production itself. Thirdly, the so-called exchange between dealers and dealers is by its organisation entirely determined by production, as well as being itself a producing activity. Exchange appears as independent of and indifferent to production only in the final phase where the product is exchanged directly for consumption. But:

(1) there is no exchange without the division of labour, whether the latter is spontaneous, natural or already a product of historic development;

(2) private exchange presupposes private production;

(3) the intensity of exchange, as well as its extension and its manner, are determined by the development of and structure of production.

For example, exchange between town and country; exchange in the country, in the town, etc. Exchange in all its moments thus appears as either directly comprised in production or determined by it. (KM)

the shifting codification of noises/sounds:

sound/noise...

noise and action toward noise are not all the social context of hearing.  
 the economic context of hearing.  
 hearing and listening are not naturalised activities:  
 and  
 purchased

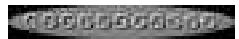
#### - THE FORMS/CATEGORIES OF NOISE AND SOUND.

These two forms and categories overlap. Noise is taken to include both organised and incidental sounds, as part of a general range of sounds within society. Noise here is understood as sound produced from within society, having its source in places of work, the sounds of collective activity. Music is that thing, produced through

sovereign and church power, and now through institutional and corporate powers. From the 17th Century this music was organised around political economic orders of representation: from the second half of the 19th Century the new political economic order of production, that of repetition, came to be the structure for the production of sound. The output of a radio station, of an hydraulic press, can be classified as noise; a concert, the playing of a record, a lecture can be classified as music. However, the two categories are not fixed relative to the other; noise at one point might be taken up as music, and vice versa. The category 'noise' and 'music' are closely linked to orders of society, its reproductive forces and generally to powers of assigning value.

There is a further definition of noise - in the actual quantity of music circulating, in public and domestic places, through 24 hours, this constitutes through repetition; noise rather than music. It appears, it no longer recurs, but 'plays' continuously as a drone. It becomes the accompaniment to motion, it lubricates the flows of work, shopping, talking, journeying, thinking... it is all around and inside. This is noise channelled through various means and particular forms - entertainment, news, culture - in effect silencing other forms of listening. This definition parallels those arguments about the extent of information circulating as nonsense - noise as a metaphor of this.





Musak: dealing in the music of silencing. Created in 1922, to provide music over the telephone, it branched out into selling atmospheric music; the pieces of music used on the tapes they sell are the object of treatment called 'range of intensity limitation' which consists of dulling the tones and volumes. They are then programmed by a computer into sequences thirteen and half minutes, which are in turn integrated into completed series of eight hours.

**- THE SOCIAL-SPATIAL CONTEXT OF HEARING.**

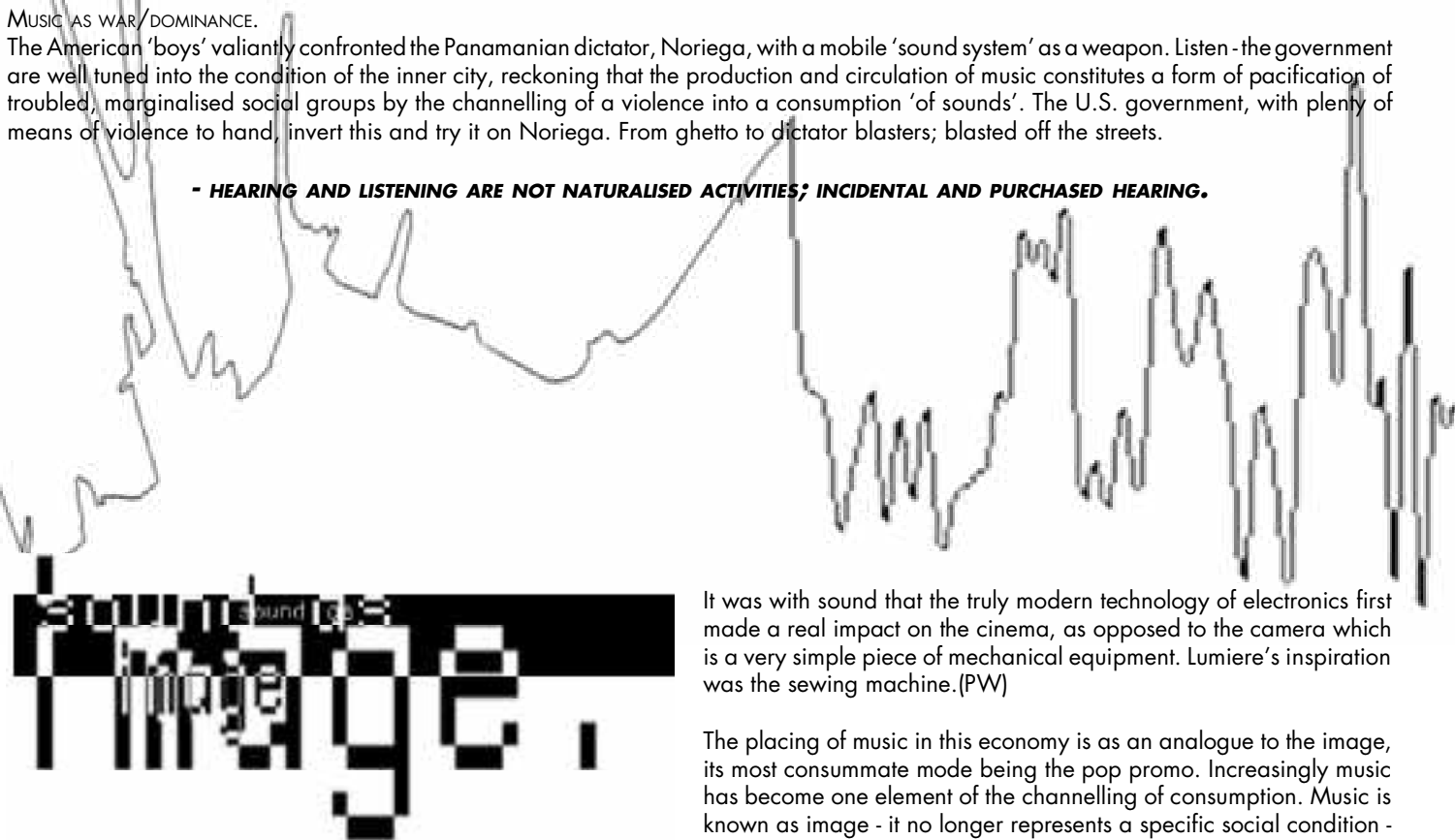
**- THE ECONOMIC CONTEXT OF HEARING.**

The investment of the music industry now shifts from the distribution of the representative scheme of representatives – performers and sites of representation – to the development of production of demand. This develops from 19th Century repertoires and concert tours, to current multi-billion pound turnover of concerts, the production of the changing line-up of artists/stars, of anniversaries, of interpretations, of changing devices and technologies of reproduction, of radio play lists, and predominantly, the production and maintenance of the charts. All these are techniques of setting value, set in the face, or the ear, of this problem: with such a profusion, with such a mass reproduction, how and where does value lie, and by what means is meaning to be generated? If there is, so to speak, no longer use-value - there is too much recording for that - and if representation is so distant as not to signify matters of particular and collective experience, (experience defined here as a day-to-day communal condition, of relations to labour/work, of occupation of a place, and not the abstract-authentic of the gig, the performance) then the devices of promotion, of demand become the points of investment. Note that the music industry does not produce music, it produces demand.

**MUSIC AS WAR/DOMINANCE.**

The American 'boys' valiantly confronted the Panamanian dictator, Noriega, with a mobile 'sound system' as a weapon. Listen - the government are well tuned into the condition of the inner city, reckoning that the production and circulation of music constitutes a form of pacification of troubled, marginalised social groups by the channelling of a violence into a consumption 'of sounds'. The U.S. government, with plenty of means of violence to hand, invert this and try it on Noriega. From ghetto to dictator blasters; blasted off the streets.

**- HEARING AND LISTENING ARE NOT NATURALISED ACTIVITIES; INCIDENTAL AND PURCHASED HEARING.**

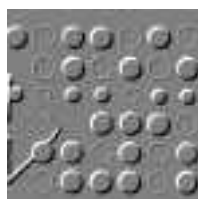


It was with sound that the truly modern technology of electronics first made a real impact on the cinema, as opposed to the camera which is a very simple piece of mechanical equipment. Lumiere's inspiration was the sewing machine.(PW)

The placing of music in this economy is as an analogue to the image, its most consummate mode being the pop promo. Increasingly music has become one element of the channelling of consumption. Music is known as image - it no longer represents a specific social condition - of Power, of ritual; rather it 'appears' and functions through weak-minded notions, of correspondence or association. That is the music

is not listened to for what 'it is', (how it comes into being, the history of its formation, the social and political position of its producers), but rather for its projected value, a value-added mode of representation, (a value that has a monetary equivalent, nearly always manifest as a visibility): of appearance, clothes, posture, particular places, expenditures of energy.

On J-LG, TJ says, C'est le bruit qui informe, qui fait circuler, qui fait marcher le système. Car un système trop parfait est menacé de mort. 'Le principe du bruit organisationnel ou de complexité par le bruit veut dire que le bruit réduisant les contraintes dans un système en augmente la complexité'. L'analyse du bruit dépend en fait de la place qu'on occupe vis-à-vis du Tout. Ce qui semble, en apparence, pur bruit pourra, dans la logique du cosmos, fonctionner comme principe de complexité et d'auto-organisation. On ne sait jamais quel effet peut produire un son.(TJ)





**sound/noise**  
 is metaphoric, and intangible;  
 it stands for an elsewhere, a 'culture', a place, a source.  
 Its production is unique and transitory.  
 its reproduction as music is intensely capitalised,  
 and channelled through institutions.  
 sound rarely as  
 is understood as a medium of knowledge.

#### **SOUND/NOISE IS METAPHORIC, AND INTANGIBLE**

In one of his notes from 'A l'infinif' MD includes a sketch of a cube containing a sphere labelled 'Echo. Virtual sound'. These words indicate a possible way of interpreting his apparent conflation of a readymade with the geometrical category of a continuum. An echo is a repetition. It is, in a sense, a reproduction or a mass-production of a natural phenomenon. The hidden source for the noise inside the ball of twine suggests a virtual sound, in the sense that it cannot be seen or identified. It is an echo of an object. The hidden source for

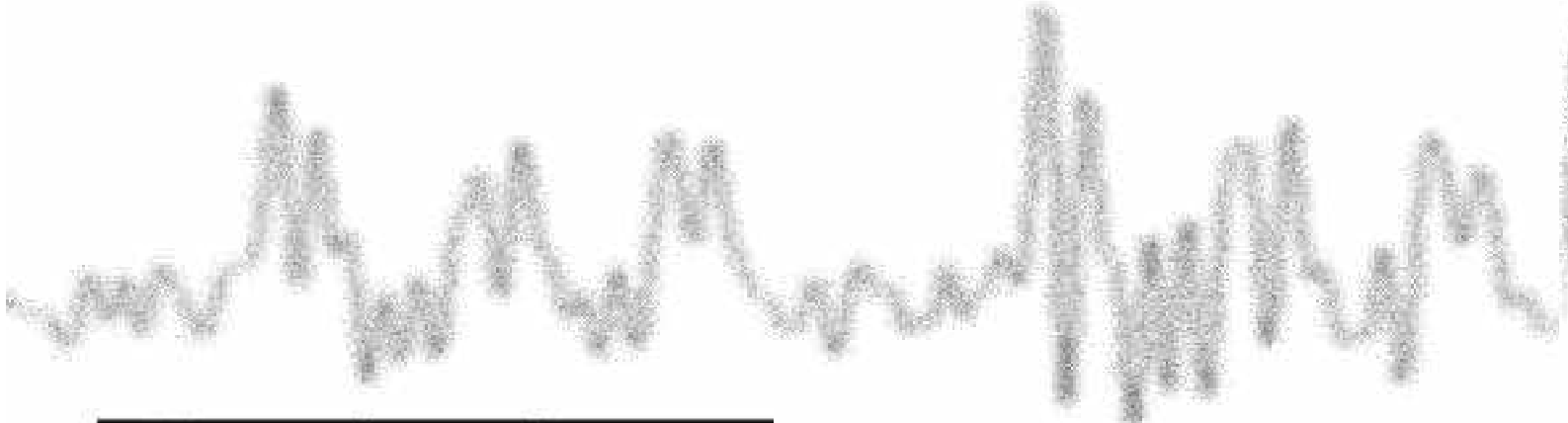
the sound can be taken as a point source and thus can stand for an aspect of what virtuality means in terms of images: a virtual image involves a point source being reflected in a mirror. MD wants to talk about a virtual sound, and he can do so only by analogy. It is not wholly clear what a hidden noise could possibly be.

**- IT STANDS FOR AN ELSEWHERE, A 'CULTURE', A PLACE, A SOURCE.**

**- ITS PRODUCTION IS UNIQUE AND TRANSITORY.**

**- ITS REPRODUCTION AS MUSIC IS INTENSELY CAPITALISED, AND CHANNELLED THROUGH INSTITUTIONS.**

**- SOUND IS RARELY UNDERSTOOD AS A MEDIUM OF KNOWLEDGE.**



**reproduction**  
**reproduction**  
 as the ideological effort of the 'pure':  
 as interference-free communication and exchange  
 as authentic reproduction;  
 and conventions of reception  
 the technological invention (reproduction) of things;  
 bio-technological and R-Life (the ear).  
 recording and the preservation of the event;  
 technologies of re-play and repetition.

#### **THE IDEOLOGICAL EFFORT OF THE 'PURE'**

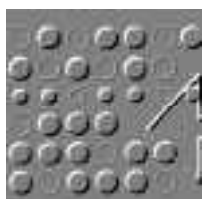
**- AS THE MIMETIC REPRODUCTION OF THINGS.**

Of course, some of their animals undoubtedly consisted of electronic circuitry fakes, too; he had of course never nosed into the matter, any more than they, his neighbours had pried into the real workings of his sheep. Nothing could be more impolite. To say, 'Is your sheep genuine?' would be a worse breach of manners than to inquire whether a citizen's teeth, hair, or internal organs would test out authentic.(PKD)

The link between mimesis, primitivism and technological development: It is the task of the animal to register the rediscovery of the naturalness of the mimetic faculty in a technical age - confirming B's insight regarding the rebirth of the mimetic and mechanical reproduction. When the great E was credited with the invention of the 'talking machine' - and here we cannot easily bypass the obvious primitivism, the animism, built into the concept in the popular name of the apparatus from the start - first heard in 1877, his voice played back to him singing 'Mary had a little lamb,' he is reported as saying, 'I was never so taken aback in my life.' 'Taken aback' is a significant choice of words for this historic moment, a spontaneously fitting way of expressing (what A called) 'the shudder of mimesis' being taken back to childhood.(MT)

**- AS INTERFERENCE-FREE COMMUNICATION AND EXCHANGE.**

The myth of instantaneous communication, such as the telephone call to Mars: Occasional reports of possible extraterrestrial attempts to contact Earth always featured space aliens signalling in codes familiar to english-speaking peoples.(CM)





### **THE INTERNET AND EARLY PROPHECIES - ALONG THE LINES OF THE GLOBAL VILLAGE.**

Is live sound like speech (more than writing), in the relations of producer to listener or writer to reader? It is the speaker who seemingly has control of any situation by maintaining those oppositions of subject/object. 'I' speaks and 'you' listen. To actively contest this in speech or writing or any form of cultural production becomes a significant oppositional strategy, perhaps expressed by the use of silence or inarticulacy. The centre (as colonising author) appropriates oppositional discourses and 'erases'.

No need to hear your voice when I can talk to you better than you can talk yourself. No need to hear your voice... Re-writing you I write myself anew.(bh)

Noise derived from a sheep has a certain lack of clarity, unlike good authoritative speech, a sheep breaks all the rules of articulacy that would claim to be clear; without pause, at the right speed, with appropriate rhythm and intonation, and so on.

**When I heerd faethur sceech, and he and  
the ladder fale away, I knowed 'twas all  
ovvur; he must, thoft I, be kill'd in one of  
these here three ways**

**-Ef he's gone to bottom, every lem es  
brock.**

**-Ef ennything like life es left, he must be  
drown'd in the sump;**

**and ef he shud catch'd up by the stage  
where we belong [ie. the stage where  
they stood to work, and which they had  
just left] the two holes must blow un into  
a thousand pieces.**

**-Oh dear! Oh dear! I faeld down pon my  
knees, and all that I cud pray was**

**-Oh, Nicky, pray for faethur.**

**Nicky kneeled down, but he dedn't pray,  
I reckon, for when the holes went off, he  
said**

**-'He's out of pain or he's in the sump  
swemming.'**

**My lighted candle was on my hatcap;  
-I catch'd hould ov the lift, slider'd away  
from flanch to flanch, and was down pon  
the stope like lightning.**

**The place was full of smok, and not a lem  
nor nothing human cud be seed. At laest  
up agenst the lift I seed faethur's head  
and shoulders.**

**The attle was to his brist, and hes face in  
a dismal shape; hes eyes was uppun, but  
cudn't speak.**

**-O, help me, Nicky; help me, doey, to  
clear away the traed from faethur.**

**He's glazing, said Nicky, but he can't be  
alive, you know; twud kill a thowsand  
cats ef they'd ben there.**

**-Oh, clear away quicker! quicker! Nicky.**

**"I believe I'm saved Jimmy, and I baent  
hurt much, I reckon, Jimmy."**

**...as deef as a haddick; but that and a few  
smale cuts es awl that hurt dun to un. (JV)**

### **- AS AUTHENTIC REPRODUCTION; THE MEANS OF PRODUCTION AND CONVENTIONS OF RECEPTION.**

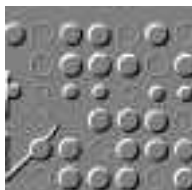
JD argues that logical or scientific truth is rhetorical, existing as 'an effect of language that seeks to negate its status as language precisely in order to better its claim on the real. What is available is an endless stream of reproduction, a parody of origin as 'simulacra', with the real dissolving into an historical construct. JB goes as far as to say that signs and codes have replaced reality altogether and installed a reality effect.

One day a large parcel arrived for the Emperor, on which was written "Nightingale." But it was not a book; it was a little piece of mechanism, lying in a box; an artificial nightingale, which was intended to look like the living one: but was covered all over with diamonds, rubies and sapphires.

Three-and-thirty times he sang one and the same tune, yet he was not weary. And the artist wrote five-and-twenty volumes about the artificial bird, with the longest and most difficult words that are to be found in the Chinese language.

Then something sprang "sur-r-r-r."

"Music, music!" cried the Emperor... But the bird was silent: there was no one there to wind him up, and he could not sing without.(HCA)



on that particular act, what and/or whom is reproduced by this reproduction  
as cultural sclerosis/invention:  
what is sustained by this reproduction?

Here, the real is defined by what is possible to be represented. In seeking the perfect recording of sound, the performance that the consumer hears when the recording is played is not a copy of an original but is a simulacrum, a copy that has no original existing only as reproduction.

**EVERYTHING IS CONVERTED TO DATA AS AN EVER INCREASING VOCABULARY OF A NEW LANGUAGE.**

And other languages have interpenetrated each other; other cultures have overlapped and justly infected each other; with images licentiously affiliating themselves to any and every word of any and every language, betraying earlier meanings for massive significations. The world is only context now, with each utterance and each image-sign a nodal point in a network of related relays of meaning. As JB says, every word gives off the scent of a profession, a genre, a current, a party, a particular work, a particular man, a generation, an era, a day and an hour. Every word smells of the context and contexts in which it has lived its intense social life; all words and all forms are inhabited by intentions!

**- WHAT IS SUSTAINED BY THIS REPRODUCTION?**

'When old technologies were new': along with textual competence, other gross indicators of technological literacy included skill in operating electrical machinery and, always, sensitivity to the social conditions and constraints surrounding the exercise of those skills, including unhesitating appreciation of the virtues of new electrical technologies and the experts who oversaw them. In the realm of electrical communication, this last condition implied an absolute belief in its uniqueness, and the refusal to entertain any notion that electric communication merely extended or speeded up oral and written communication, or was an equivalent substitute. By its very nature, in other words, it was not subject to existing social rules. It was truly new, and the rules for using it owed nothing to the past, but only to the engineers bent on creating the future. It was a short step from perceptions of electrical communication as a phenomenon outside the realm of personal or cultural values to the conclusion that expert-prescribed instructions for its use were not the mutable product of human custom, but given in nature.(CM)

from field to Internet to gallery.  
**mediation**  
as that which comes between:  
the action of recording, transmitting, replaying a sound source;  
the various agencies (organisations) of this action, the is  
tion, the technological links that which brings to at  
audibility/visibility;  
the range of computer software and  
increasing functions of this technology;  
what can and is to be encoded;  
the production of the 'virtual' and its represent  
ion of the 'virtual' and its representative effects.

**A-baa has been initiated by Media Arts Staff (Geoff Cox, Susan Derges, Chris Rodrigues, Phaedra Stancer & Robin Serjeant) at Faculty of Arts and Education, University of Plymouth (with QR research funding); with Camerawork (that receives revenue funding from the London Arts Board); Obsolete (Jon Bains, James Stevens, Kim Bull); and Seale Hayne Farm (Richard Newington). Additional help has been provided by Andy Bateman (Royal College of Art); Dave Westcott & Rosalind Banwell (Faculty of Agriculture, University of Plymouth).**

**- THE ACTION OF RECORDING, TRANSMITTING REPLAYING A SOUND SOURCE.**

**(THE WOBBLE OF OUTSIDE/INSIDE BROADCASTS, EARLY YEARS OF RADIO).**

**- THE VARIOUS AGENCIES (ORGANISATIONS) OF THIS ACTION.**

This act represents a moral protest against the complicity of art and new media with late capitalism; it seeks to emphasise technologies' contribution to the spectacle; there is too much, there are too many, things are made to be excessive, too visual - 'the vision to keep the world talking' (BT).

Developments in communication and information technology make free and immediate exchange more possible, while the impoverishment of their use merely reinforces the alienated pseudo-participation of the 'spectacle'. (SP)

**- THE TECHNOLOGICAL LINK; FROM (BATTLE)FIELD TO INTERNET TO GALLERY.**

Such as the Gulf War: from sites of battle to Internet and back again; as order of information.

**AS THAT WHICH BRINGS TO AUDIBILITY/VISIBILITY**

SF gives the analogy, talking about dreams, of the facade of a Baroque church in Rome which includes stones taken from the ruins of Classical temples. He said 'There is no time in the unconscious' everything is simultaneously active and causality can act in 'reverse time'. One of the concepts in psychoanalysis that I've found most interesting is the concept of 'psychical space'. I think the concept has a lot to offer, both at the level of politics and of theory, in terms of issues of Diaspora, nationalism, racism and so on. I'm interested in the ways our relations to others, to 'the other', are played out in this space. It's a virtual environment, a virtual space, and I see the space of the computer screen - wafer thin and infinitely deep - as an analogue of that psychical space. (VB)

as that which brings to audibility/visibility:  
audibility/visibility  
the range of computer software and increasing functions of this technology;  
what can and is to be encoded  
the production of the 'virtual'  
and its representative effects.

For example, I would have complained that while the phonograph was reproducing sounds, it was unable to represent the sound, say, of the fall of the Roman Empire. It can't record an eloquent silence, or the sound of rumours. In fact, as far as voices go, it is helpless to represent the voice of conscience. Can it record the voice of the blood? Or all those splendid sayings that are attributed to great men (sic)? It's helpless before the swan song, before unspoken innuendoes; can it record the song of the Milky Way? No? Ah, I go too far. In any case, I see clearly that to satisfy my peers I must invent a machine that replies before one has even addressed it or which, if the experiment says to it, "Good morning, how are you?" will answer "thank you, just fine, and yourself?". Or, if someone in the audience sneezes, it will cry out, "Gesundheit!". (AR)

**- THE RANGE OF COMPUTER SOFTWARE AND INCREASING FUNCTIONS OF THIS TECHNOLOGY, WHAT CAN AND IS TO BE ENCODED.**

**- THE PRODUCTION OF THE 'VIRTUAL' AND ITS REPRESENTATIVE EFFECTS.**

context

as the context of reception and readings:  
listening and reading in different places.  
the pursuit of the authentic:  
the investment (in technology, in technical skill).

**- LISTENING AND READING IN DIFFERENT PLACES.**

**- THE PURSUIT OF THE AUTHENTIC.**

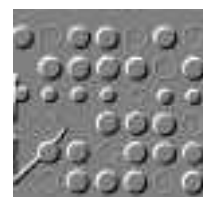
**- THE INVESTMENT (IN TECHNOLOGY, IN TECHNICAL SKILL).**

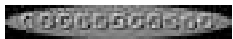
**AS THE CONTEXT OF RECEPTION AND READINGS**

If digital communications facilitate new language experiences... how are they different from ordinary speech and writing? Electronic mediation complicates the transmission of language. The function of representation comes to grief when words lose their connection with things and come to stand in place of things, in short, when language represents itself. (MP)

There are sheep in the field. She says: I know what they are but I don't know what they are called. Thus Wittgenstein is routed by my mother. (AB)

Certainly there are common strands of ideological concern, over the control of and access to information. The favoured statistic that only a third of the world's population have access to the telephone makes explicit the vested interests at play.





the re-presentation of the object via technology of listening;  
**dislocation/al-**  
**ienation**  
 the dislocation of sound source and its replay;  
 the incongruity of object, sheep, and space of replay, exhibition space;  
 the strange reverse turn of  
 gallery-field; the plan/pen.  
 the disjunction of the space of seeing as space  
 isjunction of the space of seeing as space of listening  
 of reading off the terminal.

#### **THE DISLOCATION OF SOUND SOURCE AND ITS REPLAY**

Sound, space and duration: formally the tapes operate both as a physical 'sculpture' and as the structuring of space through the geographical, mapping of sound, which also forms an auditory indexical link between the listener and the place.(DT)

- **THE INCONGRUITY OF OBJECT, SHEEP, AND SPACE OF REPLAY, EXHIBITION SPACE.**
- **THE STRANGE REVERSE TURN OF GALLERY-FIELD - THE PLAN-PEN.**
- **THE DISJUNCTION OF THE SPACE OF SEEING AS SPACE OF SOUND.**
- **THE RE-PRESENTATION OF THE OBJECT VIA TECHNOLOGY OF LISTENING, OF READING OFF THE TERMINAL.**

**an alienation:**

economy of cultural production.

technology of economy of agriculture;

technologies of representation and consumption.

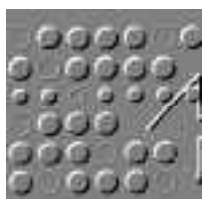
the problem of identifying the object producing the sound.

- **TECHNOLOGY OF CONTROL (BREEDING, HEALTH).**

- **TECHNOLOGIES OF REPRESENTATION AND CONSUMPTION.**

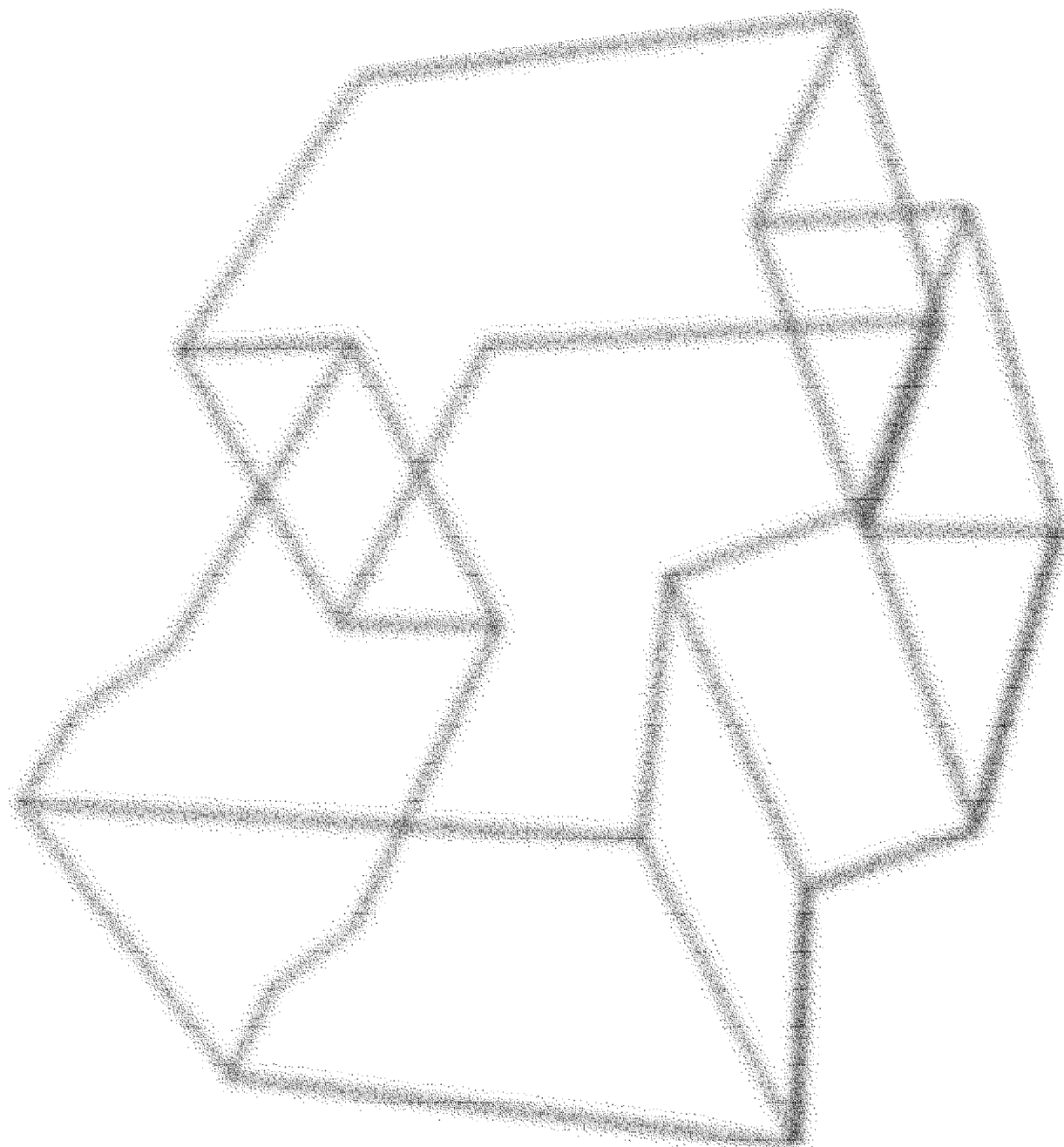
- **THE PROBLEM OF IDENTIFYING THE OBJECT PRODUCING THE SOUND?**

The rural character signifies an economic order attached to the land and rooted in inelegantly mechanical procedures unsuited to the complexities of electricity.





C A M E R A W O R K, 1 2 1 R O M A N R O A D, L O N D O N E 2.



## A-baa postscript:

Date: Tue, 15 Feb 1994 12:28:39 GMT  
X-Sender: training@cam.ac.uk  
From: training@cam.ac.uk  
Subject: Mediaspace journal addition - geoff

Unfortunately, the 'live' transmission failed after only minutes of broadcast. However, this is not (as might be expected) from a technical failure of any kind but as result of,

natural' causes.

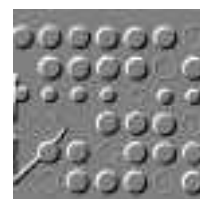
The sheep wearing the radio microphone leapt over the electric fence of its enclosure and disappeared over a nearby hill.

All attempts to recover it on the day failed, but it was found later that evening (safe and sound).

A back-up sheep could not act as a contingency, by the rest of the flock, as its microphone was eaten.

Of course it would have been possible to simulate the effect of the recorded sound but it was decided to cancel the transmission and submit to animal protest.

**end.**





## VISIOCONFERENCE-

University of Plymouth & Stand M.E.N. & EXPOLANGUES



## GRANDE BRITAGNE

Mike Phillips, Senior Lecturer, Interactive Multimedia, University of Plymouth  
 Paul Maguire, Senior Lecturer, Interactive Multimedia, University of Plymouth  
 Eric Armstrong, Nexus Project, Plymouth Devon  
 Andy Leachetter, Centre for Foreign Languages, University of Plymouth

On Wednesday 1st February 1995 2.30pm an ISDN videoconference took place between the Hoe T.V. Studio, Plymouth and the EXPOLANGUES conference in Paris. Despite the ridiculously short time (3 hours) available to configure the equipment, install a Beta release of Apples QuickTime Conferencing software, lay ISDN lines into the conference hall, and establish voice and image connection the 'visioconference' went ahead, on time, with no technological hitch.

"In a social situation, the number of people involved in a conversation or other symbolic exchange is the 'space' in which learning occurs."

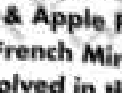
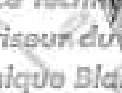
Rom Harré et al, 1985

Learning is a social process. It is not a matter of transmitting information from one person to another. It is a process of negotiation and co-construction of meaning. Learning is a process of negotiation and co-construction of meaning. Learning is a process of negotiation and co-construction of meaning.





13e EXPOLANGUES Salon International des langues.  
28 janvier 1er février 95, Grande Halle de la Villette Paris.



2894 "Dans une situation social, le nombre des  
gens engager en conversation, ou des autres  
échanges symbolique, c'est l'espace dans  
lequel le savoir se présente."  
Rom Harré et al, 1985

FRANCE:

M. Pierre Noaro, Inspection Générale, Technoparc de Nouvelles.

Mme P. Blanchet, Proviseur du Lycée Technique de Pascal, Roen

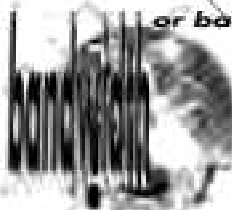
Mme M. Durand-Girardeau, Proviseur du Lycée Technique de Pascal, Roen

M. H. Thilly, Professeur, Lycée Technique de Pascal, Roen

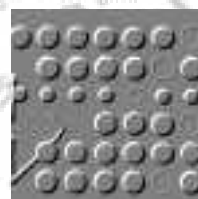
les lycéens du Lycée J. Desour, Paris

It soon became apparent that the difficulty with the Trans-Channel  
conference was not the technology, but the Human

a Human-language barrier far more difficult to conquer  
than any audio/visual compression, or bandwidth barrier...



Thanks to: Louise Davidson & Apple UK PR,  
Monsieur Dominique Bultez & Apple France,  
Noëlle Delhomme and the French Ministry of Education,  
Hoe T.V. Studio, and all involved in the transmission.



For the past few years, the leading cause of death in the United States has been heart disease, and cigarette smoking is the leading cause of death in men. In the United States, cigarette smoking is the leading cause of death in men. In the United States, cigarette smoking is the leading cause of death in men.

There is geometry in the humming of the strings, there is music in the spacing of the spheres.

Pythagoras  
5th Century B.C.

The figure of 23,000 miles is significant: radio waves travel at the speed of light (186,000 miles a second). It takes approximately a quarter of a second for the signal to travel from TOS-4b to satellite and back (23,000 miles x 2).

Don't stop at "Giles with a smile."

the energy of the returned signal at any point on the Earth's surface to be

On a scale of 1 to 5, how likely are you to use the service? (1 = Not at all likely, 5 = Very likely)

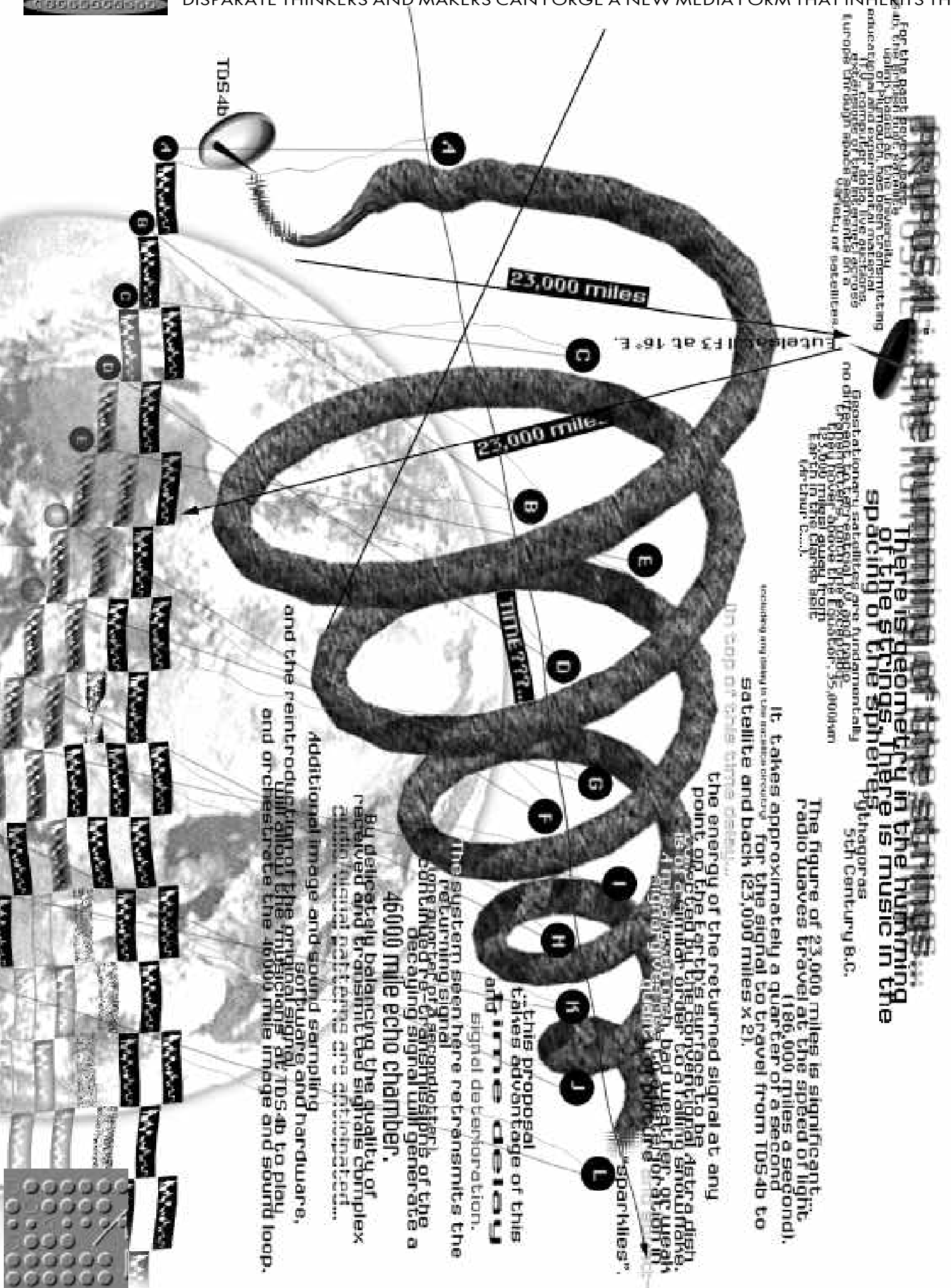
—this proposal takes advantage of this and the delay signal deterioration.

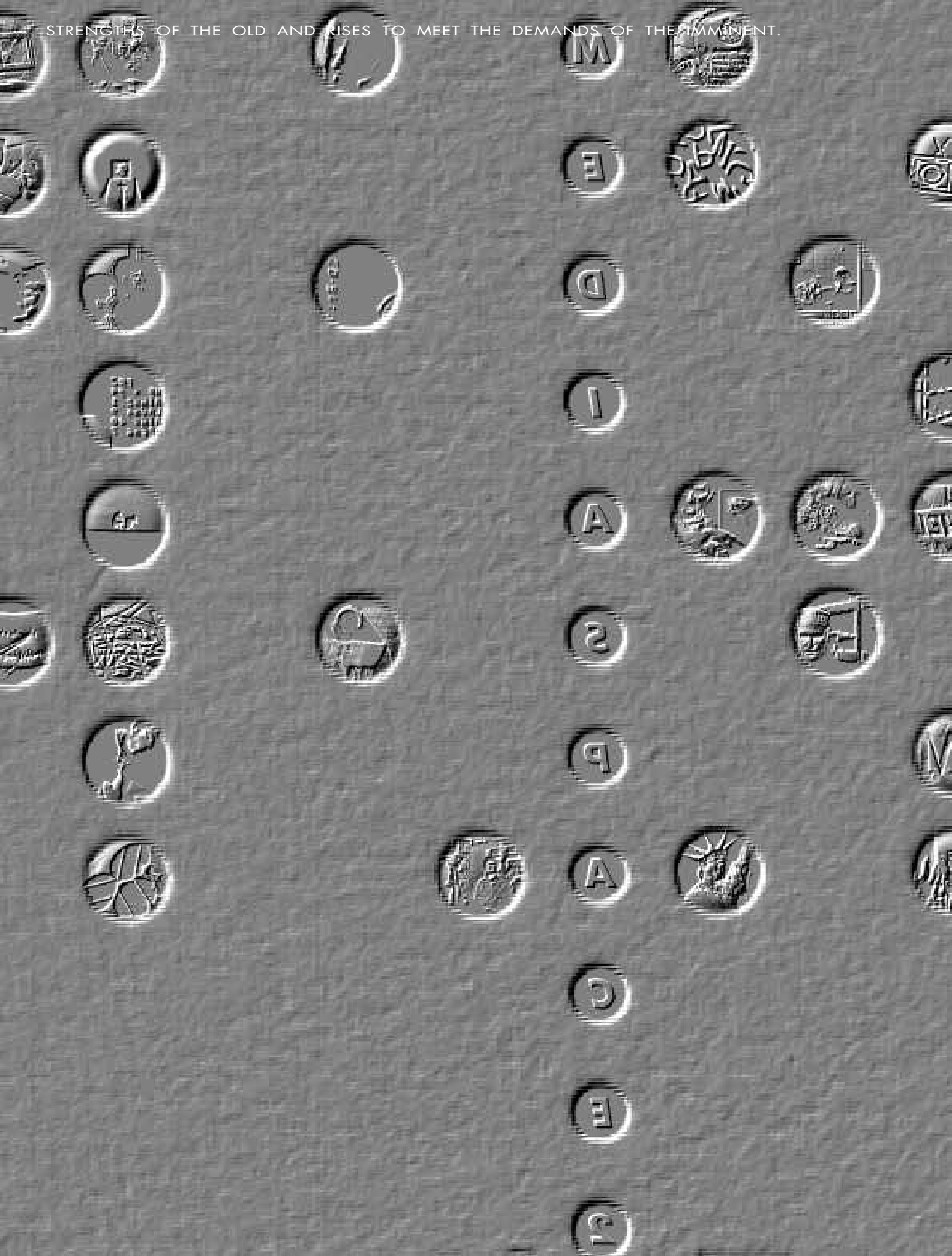
—this proposal takes advantage of this and the delay signal deterioration.

Afterward, the signal will generate a 46000 mile echo chamber.

By delicately balancing the quality of received and transmit band signals complex digital signal processing and sophisticated error correction techniques are implemented.

Additional image and sound sampling software and hardware, and the reintroduction of the original signal will allow the musicians at TDS-4b to play and orchestrate the 16000 mile image and sound loop.





STRENGTHS OF THE OLD AND RISES TO MEET THE DEMANDS OF THE IMMINENT.

