Cosmolalia
Christophe Bruno

Christophe Bruno's paper is a description of an artistic project. It is itself an artistic work performed by an ex-physicist and ex-mathematician who developed quite a few well-received art projects very soon after he left his scientific career. Bruno also has a strong interest in language, one of the most mysterious of human's capacities (products?), and in culture as it is fused with markets. The ideas Bruno puts forward in the present piece of writing have been bothering many and have been researched by well-known philosophers, political theorists or economists; however, he suggests his own way of interpreting and struggling with the reality of today.

The «present day» might be remembered in the future as a time when science and «unscience» — religion, myth, language, and the otherwise unquantifiable — both pushed forward with intense fervor, often made to work awkwardly in tandem despite their inherent contradictions. Religions, disguised as countries, continued to go to war with one another as they'd done for thousands of years — possibly millions, depending on whether one subscribed to a scientific or unscientific viewpoint. And a particularly controversial yet powerful group of unscientists argued that while it was impossible to scientifically determine that the temperature of the earth was increasing, it was on the other hand possible to use a scientific mapping of market trends to predict when their enemies would attack. Markets, it seemed, held a special, elevated status,

one that was somehow outside of and immune to the limitations of both science and unscience, yet in harmony with both.

Christophe Bruno's «Cosmolalia» begins at this complicated place, where science, maps, and markets collide with the the unscientific, the unmappable, the unsellable — and tries to create a place where the latter group can be safe. He does so by proposing a strategy for creating maps only an individual human could create — maps of connections between religion, myth, language, and the otherwise unquantifiable. Bruno is considering eventually developing Cosmolalia into a software-based system. Given that science already claims to have unlocked many of the mysteries of human perception in «unscientific» domains like art and language, as well as the secrets to human mapmaking (Pescovitz*), one wonders whether Cosmolalia could, despite Bruno's best efforts, wind up a marketable product after all? The answer may lie not in the lack of tangibility of some of the data Bruno maps (myths, memory, etc.) but in the individuality of the human thought «algorithm.» Whether individuality is truly a product of nature, nurture, or both doesn't really matter here. What is important is that it can't be replicated in a lab and can't be mass-produced in a factory. As such, it remains useless to both science and markets. Perhaps the key to survival of the «present day» is, in the end, creative uselessness.

<div align="right">Amy Alexander, Olga Goriunova</div>

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*   Pescovitz, David. *«Visualizing Better Human-Computer Interaction»* in
     Lab Notes: Research from the College of Engineering, University of California,
     Berkeley. Volume 5, Issue 9, Oct/Nov 2005. http://www.coe.berkeley.edu/
     labnotes/1005/agrawala.html

1. The taylorisation of speech

Last year, Patrick LeLay, the CEO of TF1, the biggest French private TV channel, made the following statement:

«(...) basically, TF1's job is to help Coca-cola, for example, to sell its product (...). However, for an advertisement to be perceived, it is necessary that the brain of the spectator should be available. The role of our programs is to make it available: i.e. to entertain it, to relax it in order to prepare it between two messages. What we sell to Coca-cola is some time of available human brain (...).

Nothing is more difficult than obtaining this availability. There lies the permanent change. It is necessary to seek at all times the programs that will fit, to follow the latest fashions, to surf on the trends of the moment, in a context where information accelerates, multiplies and gets more pervasive».[1]

The first part of this cynical statement caused a scandal in France, but the second part struck me as accounting for what could become the large-scale economic dynamics of late capitalism. Patrick LeLay is complaining that «spectacle providers» are unable to measure the effect of their messages and hence, that they need an additional control structure that would observe the deviations so that the spectacle would be able to optimize the preparation of the brain of the spectator.

This mechanism is precisely what recent developments of the Web have started to implement. For instance, when Google bought Blogger, they took hold of a gold mine, constituted by the exploitation rights of the intimate speech of millions of internauts. In this transaction, we get the possibility to express freely

and easily, but we have absolutely no idea of what we give to Google. Nobody can tell what the price of this intimate speech is, and I think it is legitimate to ask ourselves if it is a fair transaction. The argument put forward by Google, the one that is used in the current trials about Google Print, that this is a «fair use», leaves one absolutely speechless.

So, spectacle providers send messages, the effect of which will be analized by the panoptic part of the Web, namely Google et al., the society of control, and the information will be sold back to big media. I called this enslavement mechanism the «Taylorisation of speech»: at the end of the nineteenth century, the issue of capitalism was to optimize the production process, but now, in the *«Age of Access»*,[2] where commodification of speech has appeared to daylight, as is described in my piece *«The Google Adwords Happening»*,[3] the stake is to optimize this process of circulation of information, desire and advertising.

2. The blind spot of Science

Hard science has become one of the main marketing tools of this «ultimate stage of capitalism». The exploitation of the gold mine of free speech makes use of means that, I believe, are contemporary of a change in sociological positioning of Science. The heroic days of the crisis in the foundations of mathematics, the breakthroughs of Kurt Gödel and Alan Turing, have been over for long.

The recent works of Albert-Laszlo Barabasi & al,[4] which started the renewal of graph theory, seemed to pave the way to this old idea of establishing a map of ourselves. On one hand, this can be considered as a very naïve, almost childish approach in a sense. But on the other hand, its accomplishment would achieve one of the greatest fantasy of Science, which corresponds to a totalitarian planification enterprise reminding us of the ideological

attempts of the beginning of the twentieth century — going back to Jeremy Bentham's utilitarianism, but — irony of history — through the hijack of the libertarian side of the Web that Google has achieved.

You can have a quick look at the following mathematic papers.

I think the titles are clear enough: *«The small world of human language»*,[5] *«Automatic meaning discovery using Google»*.[6]

HAVE YOU BEEN TOUCHED
BY HIS NOODLY APPENDAGE?

Underlining that this is a blind spot of Science has practically no effect. This blind spot is as old as the world, and there would be nothing new here if this very blind spot had not become the main battlefield of the economic dynamics of the network age. The resurgence of Creationism, with its marketing agency called «Intelligent Design» is the indication of the resurgence of that battle, as well as the ironical answer of the «Flying Spaghetti Monster».

3. No-market place

Facing this situation, artists have been positioning their practice. Among these many positions, I would like to underline a few:

In my article *«A glimpse beyond search engines»*,[7] I already commented the indirect answer by Edgar Allan Poe[8] to the totalizing knowl-

edge of Jeremy Bentham's panopticon, suggesting that utilitarianism breaks down at some point articulated with the question of performativity in the symbolic field. In 1887, Stéphane Mallarmé, who translated many of the works of Edgar Allan Poe, published a poem called *«Crisis in Verse»*,[9] where he compares the use of language to the exchange of used coins of money, passed on from hand to hand in silence. This amazing intuition opposes a prosaic use of language to what he redefines as poetry, evoking «la disparition élocutoire du poête»: the vanishing of the poet behind the words.

- A somehow mirroring position is Jean Baudrillard's, in a text called *«The absolute merchandise»*,[10] where he draws a straight line between Charles Baudelaire and Andy Warhol, underlining the situation of Pop, in which the market loses its essence because the idea of commodity has been pushed to its extreme.

- In these different situations, the idea is to put the finger on this mythical place where the concept of market vanishes. In both situations, this place — I should say this absence of place — has no dimension; as soon as we put the finger on it, it vanishes. This is of course problematic if we want to investigate it further.

- The idea of Cosmolalia is that these extreme positions might delimitate something like a no-market's territory, the intersection of the blind spot of science, myths and performative art practice... The status of this pseudo-place is to remain ill-defined. Because, if you could define it, it would most probably come back into the market place of language.

- The paradoxical status of the object as commodity also appears in tales such as *«The good little mouse»*,[11] a French tale from the seventeenth century, which is considered as one of the possible origins of the legend of the tooth fairy. This tale discusses the possibility of a residual object that cannot be subjected to any trade. The impossibility of establishing a market between the different

objects (as they appear in the tale: mouse — foetus — peas — meal — nose — ear — child — tooth…) implies that there is at least one object that eschews any idea of a market: an object the loss of which would be irreducible,[12] which is something that Science cannot admit, since Science is based on the principle of conservation of some quantities (like energy, etc…).

I think it's quite amusing that one of the representatives of the new alliance between Science and Capitalism, namely Richard Dawkins, in *«Viruses of the Mind»* (1991), starts with the following evocation: *«A beautiful child close to me, six and the apple of her father's eye, believes that Thomas the Tank Engine really exists. She believes in Father Christmas, and when she grows up her ambition is to be a tooth fairy…».*[13] After which, missing the point of the irreducible loss, he tries to fill in the gap by developing his ideas about Memetics in which language spreads as a virus through replication mechanisms inspired by genetics — the problem being that any attempt to objectify language leaves the very question of speech wide open.

Again, this mythical place of no-market, the blind spot of Science, is not new; it has always been here. The only claim I make is: there is a new situation because this no-market's land now overlaps with the new battlefield of late capitalism: the intuition of Stéphane Mallarmé has been turned into reality by Google.

4. Map Hacks

Cosmolalia aims at coping with this paradoxical territory where the concept of market, as well as the concept of map, break down. Necessarily, it will have to deal with this fantasy of building a map of ourselves — «map of the Empire that has the size of the Empire» as in Jorge Luis Borges short story *«Del rigor en la Ciencia» («On Exactitude in Science»)*[14] — that has been undertaken by the panoptic structures of the Web.

Over the last few years, artists have been intensively exploring and
   hijacking the concepts of Map (until the recent effervescence
   around Google Maps) and information visualization. In 1997,
   M. River and T. Whid proposed their famous simple Net Art
   Diagram:[15]
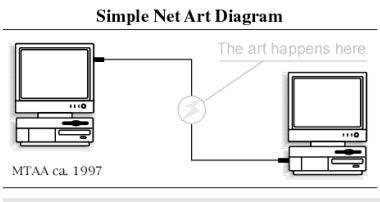
This is not only a manifest for net.art, but also an ironical criti-
   cal position towards the very idea of a map, repositioning the
   mysterious artistic process but taking great care to keep its
   obscurity. I suggest you also have a look at the even more ironi-
   cal answer by Abe Linkoln in 2004, in which the «trajectory»
   of art loses itself in some exhilarating «collage» map.[16]
There are other examples that illustrate the question of the interre-
   lation between maps, markets, performativity and irreducible
   loss: *«Stock Market Skirt»*[17] (1998) by Nancy Paterson, inspired by
   the *«Skirt Length Theory»*;[18] Molle Industria, *«Where Next»*[19]
   (2005); and Heath Bunting, *«Star Map»*[20] (1998).
The latter, superimposing the question of the network (the network
   of stars) and the question of the irreducible loss of the original
   plenitude (pornographic images instead of mythological repre-
   sentations) provides a perfect transition to what I want to deal
   with now: mythologies.

5. From Khaos to Chaos

Mythologies provide a kind of psychogeographic cartography —
   as we would say nowadays — of a pre-scientific world haunted

with an idea of globalization, which culminated later with the advent of monotheism. The propagating mode of myths, which were airborne, transmitted by speech (viral propagation within a «small-world», showing a slow evolution of the ecosystem of mythology), and at some point were frozen by historians into writings, is to be compared to what happens today on the Web: the real-time constitution of an authorless global text, a transmutation of writing within a new kind of «small-world» with a relational viral structure, which was implicit in the past but has now reached its tipping point and emerged into daylight.

However this «small world» of mythologies is absolutely not organized as we would expect by following the scientific paths, and as I would like to point out now, beyond this viral aspect, a very simple recurrent structure arises, as noted by Gilles Deleuze and Félix Guattari when they developed their idea of the Rhizome.[21]

It is quite symptomatic that the term «Chaos» has been subjected to a shift of meaning: the original Greek term «Khaos» means «Gap», «Béance» in French.[22] The modern meaning related to complexity and disorder is characteristic of the obliteration of the idea of «loss» by the discourse of Science.

Somehow, mythologies look like an interesting model to look at, if we want to understand further what is going on nowadays. Pandora, the first woman, from whom all the «viruses» of the world escaped instantaneously, Prometheus separating men from gods by setting a «hoax» to Zeus, the recurrent apparition of the symbolic of the network in many myths, all these elements suddenly start to find an echo in our network age.

6. Prometheus, prototype of the (h)ac(k)tivist

Before talking about Prometheus, let me first recall a few of the mythological stories that have struck me and surprisingly seemed to shed some light in my understanding of our global-

ized world. My idea here is to show you how these mythologies make use of very elementary structural themes, which are the theme of HOAX, the theme of gap, of separation: KHAOS, and the theme of NETWORK. I don't make a full, exhaustive study of mythologies here of course, I am just telling you about my own experience of reading quite a few of them.

KHAOS is in almost every story, starting from the original gap, then the separation of Gaia & Uranus. Khronos throws the castrated penis of Uranus into the sea. This castration is at the origin of the birth of time: it allows generations of children to escape from Gaia's womb, and is thus the starting point of the genealogy of Gods and Men, of the ramification of time, which itself is a primordial aspect of the concept of NETWORK.

Much later, Perseus cut the head of the Gorgon. The castration motif is repeated, but this time developed: the gaze of the Gorgon escapes mistakenly from the bag of Perseus and petrifies the seaweeds, giving birth to coral, a presentification of the NETWORK.

We have the idea of NETWORK again, following another separation,

when the milky way (the network of stars) spurts out in the sky from the breast of Hera feeding Herakles.

The theme of HOAX is everywhere as well. But it is most developed in the story of Prometheus: the separation of Men and Gods, which is followed by the separation of Men and Women: *viruses* spread all over the world from Pandora's jar.

According to Hesiod:

«*For when the gods and mortal men fell to disputing at Mekone, Prometheus, acting in a spirit of kindness, divided and dished up a great ox, deceiving the mind of Zeus. On the one side he put the flesh and the rich and fat inner parts hidden under the skin, concealed in the paunch of the ox; on the other side he put the ox's white bones, arranging them well with skilful deception, concealed in silvery fat. [...] Zeus: « [...] how very unfairly you make this division!»*

[...] Prometheus: « [...] choose for yourself of these helpings the one that your heart desires.»

Thus he spoke with deceit, but Zeus, whose plans are unfailing, saw through the trick and wasn't deceived, but planned in his heart evil, which he would bring to fulfilment for mortal men. Then as in both hands he took up the helping shining with fat anger swelled in his breast, wrath entered into his heart, for he beheld the white bones of the ox and the skilful deception.»[23]

The Hoax of Prometheus is mirrored by another myth in our era, called the «Turing Test», the myth of the separation of Man and Machine. I have represented Prometheus' hoax in the following way, to make contact with the questions of the roots of mathematics that are underlying here:

The symbol on the left stands for the bad-looking stomach filled with tasty flesh and the symbol on the right for the nice-looking envelop filled with bones.

7. Cosmolalia

Cosmolalia is built with this minimal syntax HOAX, KHAOS and NETWORK. By construction, this syntax has been chosen to try to prevent Cosmolalia from becoming a map or a network or a software.

HOAX accounts for everything that involves the questions of performativity of speech and fake; it is related to the paradoxes of set theory and the crisis in the roots of mathematics, as well as contemporary (h)ac(k)tivists performances or the splitting of the subject in psychoanalysis.

KHAOS, the gap, the loss, accounts for whatever is cut off from the symbolic field in an irreducible way.

NETWORK includes any form of science that aims at a reductionist explanation of human nature and language: this includes Cognitivism, Memetics, Genetics, Graph theory, Computer Science, Cartography, Data Mining, Quantitative Linguistics... whatever scientific or pseudo-scientific field which, at some point, intended to tell us something about ourselves.

NETWORK does not include these moments of Science where the question of truth destabilized the whole edifice of human knowledge, like the crisis in the foundations of mathematics. However, as it happens in myths, NETWORK arises at the moment after the crisis: the separation, HOAX + KHAOS (Prometheus's hoax, Pandora's womb, Heracles separated from Hera, the castration/decapitation of the Gorgon, etc.) is followed by the resurgence of the NETWORK (fennel, viruses, stars, corals respectively).

We have here a premonition of the shift of meaning I was talking about concerning the word «Chaos». This phenomenon of resurgence of the NETWORK, following the KHAOS happened in the History of Science, if we look at it on a large scale. The «Turing Test», i.e., as I said, the myth of separation

of Man and Machine, is made possible by the work of Gödel, and then allows Turing to anticipate on the development of Computer Science and algorithmics upon which the Web will be based. Darwin, another separator of Men and Gods, builds the theory of evolution. Galileo, to deal with the concept of motion, needs to extirpate the concept of desire from the physical world, in order to give birth to modern Science, and to formulate the first law of conservation. In that sense, NETWORK is a denegation of KHAOS, of the irreducible loss, a denegation on which the laws of conservation of physics are based. The objectivation of the human subject by the discourse of Science reveals the role of the NETWORK, as a panoptical graph of causes and effects where the concept of loss has no place.

There are other concepts in Cosmolalia, which could be considered as fundamental as the three I mentioned: for instance the concept of CLONE is a blend of the HOAX and the NETWORK. The CLONE is the objectivation of the subject within Science, resulting into a HOAX, the paradox of gemelity.

Another one is the HAPAX. As NETWORK is a denegation of KHAOS, HAPAX is a negation of NETWORK within the symbolic field. A hapax is a word that appears once and only once in literature. The most famous is the hapax «ptyx» by Mallarmé:

> *Sur les crédences, au salon vide : nul ptyx,*
> *Aboli bibelot d'inanité sonore,*
> *(Car le Maître est allé puiser des pleurs au Styx*
> *Avec ce seul objet dont le Néant s'honore.)*[24]

The following representation, using basic animated gifs, logos and images I found on the Web, is an attempt to represent my reading of both mythologies and my understanding of the economic dynamics of network capitalism. It shows in the central part our

present era, dominated by the discourse of science and capitalism. The circle is closed by Patrick LeLay who makes the junction between the society of control and the society of spectacle.

Two rivers separate our world from the mythological regions, on the left the birth of Man, and on the right, the Death region.

In principle, these regions are separated by the gaps of the rivers. However, there are ways of fording these rivers. The first one is the mirroring between Prometheus and Turing. There is a second way represented here (there are others of course), which is the story of Pinocchio by Collodi, the separation between man and inanimate matter: Pinocchio's name is, among other things, a pun on «Finocchio», fennel in Italian, the very vegetable in which Prometheus brought back fire to men from the Olympus.

I don't have enough room here to clarify further (each step of the drawing should be carefully explained and commented), but you will find further developments on my website http://www.cosmolalia.com

Let me just end on the connection with the death region: it is made thanks to the Styx/Ptyx of Mallarme and to a chain constituted by art pieces of mine *The Google AdWords Happening*,[25] and *Hapax*,[26] which is based on a personal memory from my childhood. This pseudo-map is therefore intransmissible because one of its keys is contained in my personal history. This intransmissibility is the least we could expect from Cosmolalia.

1   *Les dirigeants face au changement*, Editions du Huitième jour, 2004
2   Jeremy Rifkin, *The Age of Access,* Penguin, 2000
3   Available at: http://www.iterature.com/adwords
4   Albert-Laszlo Barabasi, *Linked: How Everything Is Connected to Everything Else and What It Means for Business, Science and Everyday Life*, Penguin, 2002
5   Ramon Ferrer i Cancho and Ricard V. Sole, *The small world of human language*. Available at: http://complex.upf.es/~ricard/SWPRS.pdf
6   Rudi Cilibrasi and Paul Vitanyi, *Automatic Meaning discovery using Google*. Available at: http://www.arxiv.org/PS_cache/cs/pdf/0412/0412098.pdf
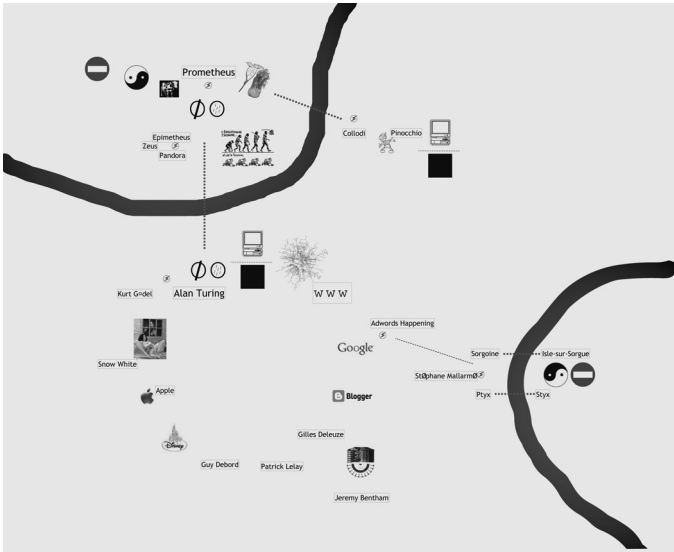
7   Christophe Bruno, *A glimpse beyond search engines*. Available at:
     http://art.runme.org/1107861771-3038-0/bruno.pdf

8   Edgar Poe, *The purloined letter*. Available at:
     http://xroads.virginia.edu/~HYPER/POE/purloine.html

9   Stéphane Mallarmé, *Crise de Vers*. Available at:
     http://www.tierslivre.net/litt/mallarmCDV.html

10   Jean Baudrillard, *De la marchandise absolue*, in *Artstudio*, N°8,
     Printemps 1988, «Spécial Andy Warhol»

11   *La bonne petite souris*, Available at:
     http://lescontesdefees.free.fr/Contes/la_bonne_petite_souris.htm

12 cf. the *objet a* of Jacques Lacan (*Le Séminaire)*

13 Available at: http://cscs.umich.edu/~crshalizi/Dawkins/viruses-of-the-mind.html

14 Jorge Luis Borges, *Del rigor en la Ciencia*, one paragraph short-story published in *Historia Universal de la Infamia,* 1946. Available in English at: http://www.kyb.tuebin-gen.mpg.de/bu/people/bs/borges.html

15 Available at: http://www.mteww.com/nad.html

16 Available at: http://www.linkoln.net/complex/

17 Available at: http://www.vacuumwoman.com/MediaWorks/Stock/stock.html

18 The idea that skirt lengths are a predictor of the stock market direction. According to the theory, if skirts are short, it means the markets are going up. And if skirts are long, it means the markets are heading down. The idea behind this theory is that shorter skirts tend to appear in times when general consumer confidence and excitement is high, meaning the markets are bullish. In contrast, the theory says long skirts are worn more in times of fear and general gloom, indicating that things are bearish. (from investopedia.com)

19 Available at: http://www.where-next.com

20 Available at: http://www.irational.org/heath/starmap/

21 A Rhizome, according to Gilles Deleuze and Felix Guattari, is a grouping of «heterogeneous elements» like the woman, the snake and the tree, which form a Rhizome where one element somehow reproduces itself within the other element's image, and vice versa. (Gilles Deleuze et Félix Guattari, *Capitalisme et Schizophrénie : Mille Plateaux,* Editions de Minuit, 1980)

22 Jean-Pierre Vernant, *L'Univers, les Dieux, les Hommes*, Editions du Seuil, 1999.

23 Hesiod, *Theogony,* Available at: http://www.sacred-texts.com/cla/hesiod/theogony.htm .

24 Stéphane Mallarmé, second version (untitled) of the *«Sonnet allégorique de lui-même»,* 1868 – 1887. Available at: http://www.unice.fr/AGREGATION/ConfMallarme.html

25 Available at: http://www.iterature.com/adwords

26 Available at: http://www.iterature.com/hapax