The Oracle Machine

A razão do mundo não está nas palavras, menina!

Eleonora Oreggia[1]

Introduction

The Oracle Machine is a research project and a work of art which focuses on decision making mechanisms in contemporary urban and globalised societies. The hypothesis is that there is a specific condition in post-industrial civilized territories, which can be described as lack of will, 'relapsing choice', or 'decision syndrome'. If on one side the globalised and technological world offers variety, fast communication and remote presence, on the other it weakens the relation between humans and natural environment, soothes instincts and induces disorientation, but also fragments identity in the continuous redefinition of perception and the conception of space and time. Lacan's definition of anxiety, described as the affect whose object is unknown, intersects with Heisenberg's 'Uncertainty Principle' (Heisenberg, 1925), which affirms there are no states in which a particle has both a define position and a definite momentum. When the condition of undecidability and that of anxiety are manifest, the unknown object can be interpreted as the very Self, objectified and dissipated in a number of concomitant possibilities.

The practical component of this speculation is a software application which will be implemented in a series of seven machines, a theatrical noise act and a net-art version. If these oracle machines are inspired by the structure of old telephone booths and by the technological schizophrenia of electric speech and talking-at-a-distance, the performative implementation is shaped on a sequence of ritual acts in the form of a collective happening, while the internet version of the work will echo the 'Google knows' paradigm: all these instantiations create systems capable of making decisions for people, solving controversial questions and everyday dilemmas. Important reference underlying the development of the software is Alan Turing, father of modern computer science, who was the first to introduce the concept of 'oracles' in machine theory, in his PhD thesis, where he outlined the notion of relative computing; this was further explored in his later investigations, where the 'oracle' becomes an element able to perform, as if by magic, an uncomputable operation.

Doubt,faith, rational choice

The question of the individual and social navigation of parallel possibilities is analysed in relation to science, oracles, quantum mechanics and the multiverse theory. Moreover, the assumption that extremely rational instruments can lead to irrational practices is one of the main theoretical background to this work. If science is based on postulates, and its definition of truth starts from hypothetical assumptions, then the whole system of rational positive science presents a direct relation with uncertainty and doubt, whereas religion, magic and 'para-scientific' disciplines are attempting to provide a system of knowledge that avoids uncertainty because of its relation with supernatural forces, or dogmas.

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Magic and software

Procedural text is a composition of words having a pragmatic effect. A common example is software, which is handled by interpreters. The word 'oracle' derives from Latin 'orare' which means speaking: the oracular speech is a word having a specific power, either to guess future, or to give a response that influences the future because of the prediction's suggestion. Somehow the prophecy can fulfil itself. Since effectiveness is the mechanism, the process can be obscure. What magic and informatics have in common, is that they are empiric, recalling 16th century's empiricism acceptation, whereas magic and science shared common methods, and these were considered on the base of their results, rather than on the base of theoretical assumptions.

Decision making

The global world is offering individuals the possibility to choose between a broader variety than in the past. People can decide their occupation, their residence, their gender; multinationals and supermarkets are providing the same products all over the world, homogenising reality and trying to shadow seasons and local productions. This claimed variety, the big choice, the wares diversity, is somewhat apparent. Slavery is still present, but in a different, merchandised form. Routes and options appear to be almost pre-described, while people's preferences, starting from the digital domain, are becoming a new form of goods. This reflection generates the following questions: is the lack of will a possible (passive) reaction to globalisation? Can it be considered, in this sense, a specific disease of post-industrial civilised urban territories? If avoiding decision making is a way to boycott the system and the self, reacting to instability and refusing any responsibility from the flow of life, is contemporary freeness only apparent and predetermined?

Ubiquity as a decoy

While contemporary society offers individuals this wide variety of possibilities, still social security and sustainability are not granted to citizens. Precariousness becomes a weapon against the masses, whereas instability is an instrument to manipulate populations and squeeze human rights. When basic needs are luxury, and time is on sale, war is a permanent and invisible state. Continuous movement, acceleration and fast communications are modifying natural perceptions of space and time, increasing disorientation and preparing the ground for the multiple possibilities enigma: the question "What will happen?" is iterating and loops endlessly. Since the environment is unlaced from individuals, instinct can stop functioning. The person, incapable of any will, crashes into a crisis. The answer is a legitimate escape, and ubiquity becomes a decoy.

Meta Universe

The Uncertainty Principle affirms that there are no states in which a particle has both a definite position and a definite momentum. A state which only exists for a short time cannot have a definite energy, because it is possible to define the exact position of a particle only in time: the position of a particle in a specific moment is unknown, because it can only be presumed through a probability distribution. According to this description, reality is not essential and unique, but manifold and contingent; any momentum presents concomitant possibilities, and all of them are actual. The uncertainty principle suggests the generative vision of the multiverse theory: there are an infinite number of universes and every possibility is happening, at the same time in parallel dimensions. In this sense predictability has concomitant directions, and the point of certainty and uncertainty is a struggle to define which potential instantiation will take place. A decision is the act of giving a system (or situation) a definite energy and a perspective on a determinate actualisation.

The limits of logic

An oracle is infinitely more powerful than anything a modern computer can do: Turing defined 'oracle-machines' as machines with an additional configuration in which they 'call the oracle' so as to take an uncomputable step. These oracle-machines are not purely mechanical: they are only partially mechanical, like Turing's choice-machines. Indeed the whole point of the oracle-machine is to explore the realm of what cannot be done by purely mechanical processes and to bring to possibility of logic functioning one step further. Another reference to this work is the Chinese classic text called I Ching (or The book of Change), which is a symbol system used to identify dynamic tendencies in the transforming of events. The text describes an ancient system of cosmology and philosophy that is deeply rooted in archaic Chinese culture. The cosmology centres on the idea of the dynamic balance of opposites, the evolution of events as processes, and the acceptance of the inevitability of change. Based on a combinatory system of two main symbols, the continuous line or the broken line, the 64 symbols show a constant modification and unstable configurations, which can be interpreted, in a sense, as deferring an absolute formalization; this metamorphic structure and its intrinsic binary representation make it one of the first structured binary languages. Both Turing's oracles and the I Ching are systems that manifest at a level above that of logic, they appeal to a sphere of inscrutability which calls upon supernatural intervention, a 'Deus ex-machina' to take us humans out of our impasse.

Formalism and trust

What we learn from our everyday experience in the technologic world of comfort and commodities, is that machines are intrinsically different from humans. First of all, they are honest: machines are not programmed to lie to people, and, whenever they make a mistake, they would declare it. Whereas humans tend to deny or hide mistakes, machines pre-emptively advise us of any possible error. Thus, when we learn how to use machines, we learn how to trust machines. Living in a open Universe, living in a open and relative Universe – where humans have lost their central position - we are exposed to a wide variety of syndromes: whereas we do not have faith, still we trust machines. The machinic identity, its properties and predicates, do make machines closer and more similar to supreme, supernatural entities. But machines are also tools. It is common belief that when humans do not understand what technology is doing, then magic is happening. There are many points of contact between a theory of magic and software mechanisms: both magic and software are formalistic, imply spells and the use of tools, involve numbers and formulas, repetition and loops, and minimal representation. Both magic and software cannot be wordless, they imply transformation, transmutation, a change of state, some result, and a main effect, or event. Between a wish and its fulfilment there is, in magic, no gap, just the time to process the receipt.

As if composing a message

An oracle is an appeal or a question asked to an element or entity of another kind, surpassing the ontological status of humanity. Inside the attitude to ask for answers outside the Self is a diffuse sense of insecurity, and confusion of perceptions, but, also, the tendency to construct a meta-level of comprehension where elements become signifying because a system appears to have a certain structure, and intrinsic and extrinsic relations are considered relevant.

A diffuse level of uncertainty is present whereas articulated language is at use: the path traced by rational science leads to a chasm where concomitant possibilities are obfuscating any image, rendering logicians and their instruments tremendously fragile, and metamorphic: everything depends on the perspective of the observer, and reality becomes slightly out of measurement. While

everything is to be interpreted, the process of interpretation itself is mastering the creation of an alternative reality which states its cohesion and isolation. On a first place, the idea of a software device able to make decisions for others suggests an extreme level of rational complexity. On the other side, the question whether a human-made machine can reach a perfection which stands above uncertainty is controversial, and how to implement this is at stake. Can a machine (made of inert matter) produce divination, if this is an action alchemically composed of intuition, belief and interpretation?

The oracle as a social machine

The oracle machine is not a technical evolution, or a simple software: it is a ritual (and social) experiment. The first type of machine implemented is a sort of Frankenstein, a combination of inorganic parts plus organic elements whose functioning creates a special effect, and the question whether such effect is illusory, real or incidental, is of no importance. The first oracle machine is a collective experience, an art happening in the form of an audiovisual stream which creates a synergy between symbolic objects, a time-space situation, and a collection of digital devices. (There is no oracle without human presence, and there is no oracle without interpretation and language.)

The first two performances of this series took place in Brazil in July 2009, one in Sao Paulo in the context of the Pure Data Convention and the other in Salvador at Interatividade em Sistemas Computacionais Livres[2]. During these events the software interfaces and the performer's body and the public created a continuous flow of energy. A number of symbolic objects disseminated narrative and semantic particles in the act, creating a type of interaction which was not merely technical, but allusive and suggestive: an old telephone was the obsolete device used to contact the oracle, while a sand-glass represented time and an old silver key the possibility to open a passage to outer dimensions. The interaction between these elements happened at a theatrical – rather than technical - level. Each of these performances is unique because a special version is developed each time, following the structure of the specific space and local culture.

The language of Otherness

If we cannot separate our brain from language, and we cannot separate language from symbolic systems, then symbols appear to be intrinsically connected to our capability of thinking. Whereas the question whether computers can think is still under discussion - although surpassed by the reality of simulation, neural networks and gigantic databases - the idea of automated systems able to produce and generate thought is an ancestral dream of humanity. Gottfried Wilhelm von Leibniz in his monograph 'Dissertatio de Arte Combintoria' (Leibniz, 1666), described and analysed in details the idea of a special alphabet whose elements represented not sounds, but concepts. His aim was to create a system in which symbols could 'magically' produce correct answers to problems almost unaided. The conception of such machine compares the functioning of a denotation structure - such as that of traditional Western music - with the production of concepts and spoken language through the use of logic, and of logic through the use of language. Music exists before any system to write and remember it, but the denotation method inspires the creation of other music. When we think of natural languages, we can say that logic is both a set of rules which makes possible for language to make sense (grammar, syntax, logic), and that the elaboration of language through these rules produces other and more knowledge. Leibniz's machine indirectly compares music to thought, and, by seeking to define what level of fragmentation is necessary to identify minimal grammatical elements, and what process is behind the elaboration of concepts, he asserted two main hypothesis: the first is that beauty (harmony) is composed, in formal and ethical sense, of a certain structure drawn by a certain processes (the right answer is ethically beautiful). The second is that a machine

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2 http://iscl2009.wordpress.com/2009/05/04/gt1/

has more abilities than humans; in fact, not only should the machine compose thought, it is supposed to give the correct answer even to unsolvable problems. The language of a machine which can tell the truth participates of that *other-languagedness* which Bakhtin considers at the base of polyglossia, explained as the use and reuse of someone else's words to make and speak any new sentence. "... For the creating literary consciousness, existing in a field illuminated by another's language, it is not the phonetic system of its own language that stands out, nor it is the distinctive features of its own morphology nor its own abstract lexicon - what stands out is precisely that which makes language concrete and which makes its world view ultimately untranslatable, that is, precisely, the style of the language as a totality " (Baktin, 1975). Identity and language do not belong merely to the individual, rather they are shared by all and contain a certain level of otherness, affirms Bakhtin introducing his architectonic model of the human psyche and the concept of heteroglossia. The oracle machine performance follows this dream of an absolute truth - that which can be reached by appealing to the Other (as in non-Self), and this zone of Alterity becomes the source of those words and concepts re-composed (or de-fragmented) into a supernatural speech (whose answer is inscrutable), and the answer to this capitalist schizophrenia is screamed into noise.