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Visual programming: Locus Solus Design
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Presentation: Emmanuel Grimaud
Text: Zaven Paré
Tradução: Giovanni Vinti
Photographers: Andreas Valentin [46, 66], Amélie Kestermans [95], Bel Pedrosa [capa, 4, 6, 10, 16, 44, 45,46, 51, 55, 60, 62, 64, 69, 74, 75, 78, 79, 80, 81, 82, 93, 96], Brigitte Pougeoise [25], Cecile Bouchier [43], Rémi Rose [84], Zaven Paré [26, 27, 29, 31, 33, 35, 37, 38, 40, 47, 49, 50, 56, 67, 70, 76, 87, 88, 89]
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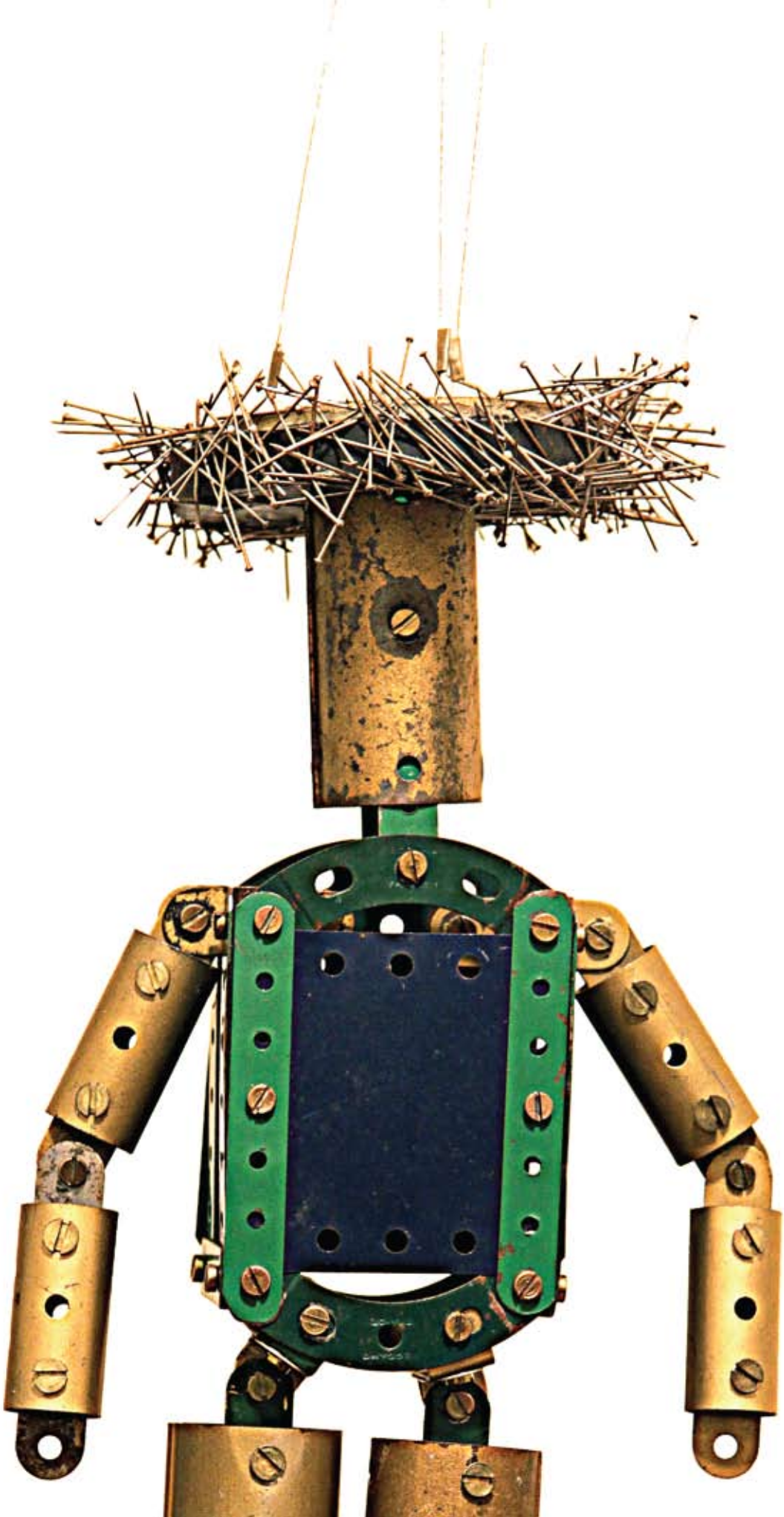
Zaven Paré

(1999-2009)



Technological animism

The life and death of machines in general and the machines of Zaven Paré in particular

What does it mean to be human? And more precisely: what is it within us that can be termed as being "specifically human"? This is one question that permeates the work of Zaven Paré but that also more generally guides robotics and everyone who has participated and who still participates in this great ontological adventure between the arts and sciences which consists of making artificial creatures. What better way could there be to reflect on what makes up a human than attempting to recreate one? It makes us aware of the extraordinary complexity of human beings, but also as the roboticist Rodney Brooks has already shown us ("Intelligence without representation"), we become aware of the scale of many operations or acts which at times are complicated and rare or as trivial as walking, orienting oneself, blinking our eyes, etc. We are not surprised by the fact that the machines of Zaven Paré flirt with everything at stake in the fundamentals of robotics as well as with literature (Cervantes, Mary Shelley, Madame Bovary) as the latter is capable of conceiving machines which are as alive as they are provocative. Zaven Paré uses uncanniness and the unfamiliar techniques, in other words the means which we have at our disposal to disturb our perception of familiar things or, on the contrary, to familiarise us with the unthinkable. This is a long story that goes beyond the separation between the arts and the sciences. Robotics has this ability, but so does literature and in particular, science fiction, which lends itself to this role when proposing images of what machines are able to do and feel.

In 1970, the Japanese roboticist Masahiro Mori wrote a short, article that was much debated in the robotics community, entitled "The uncanny valley"[1]. Without a doubt this is one of the most synthetic but also most interesting theories on the conception of artificial creatures. We can summarise Mori's reasoning as follows:

The more that a robot or doll appears like a person, the more that our emotional response is positive when we are faced with it. But when we get to a certain point, where the robot can be considered almost human, there is a sharp drop in this positive feeling, at the moment when a small difference suddenly reveals that it is not one of us, and so creates a psychological shock. So, in giving robots a human appearance, we run the risk of achieving the opposite effect to what we are looking for, since the robot no longer meets our expectations, which can disappoint or upset us and make it more difficult for us to utilise their specific capabilities. When a creature is sufficiently devoid of human characteristics, by being immediately identified as a robot, humans tend to notice its human aspects and feel a certain empathy

LOEW
Mecano, magnet and needles
Size: 35 cm
Rio de Janeiro (2000)

for this machine which behaves a little like a human but which is no more human than an animal. When this creature has a totally human appearance, to the point of creating confusion, each of its non-human aspects create a feeling of strangeness.

Mori used the example of an artificial hand: If you shake the hand of someone who is using a prosthesis, you run the risk fear when you realise that this hand does not have the same consistency of touch, even though it has the same appearance, of a real hand. A robot located in this "uncanny valley" is no longer judged according to the criteria for a well made robot that can pass itself off as being human, but rather it is unconsciously judged as a human that is unable to act in a normal manner. A large part of robotics (which attempts to create humanoids) explores this troublesome area of the "uncanny valley". Or it tries to avoid this area (and this was without a doubt the purpose of the proposition which Mori made to roboticists) or becomes the subject of a work. And in this case, another world of experimentation opens, as testified by the subtly anthropomorphic machines of Zaven Paré.

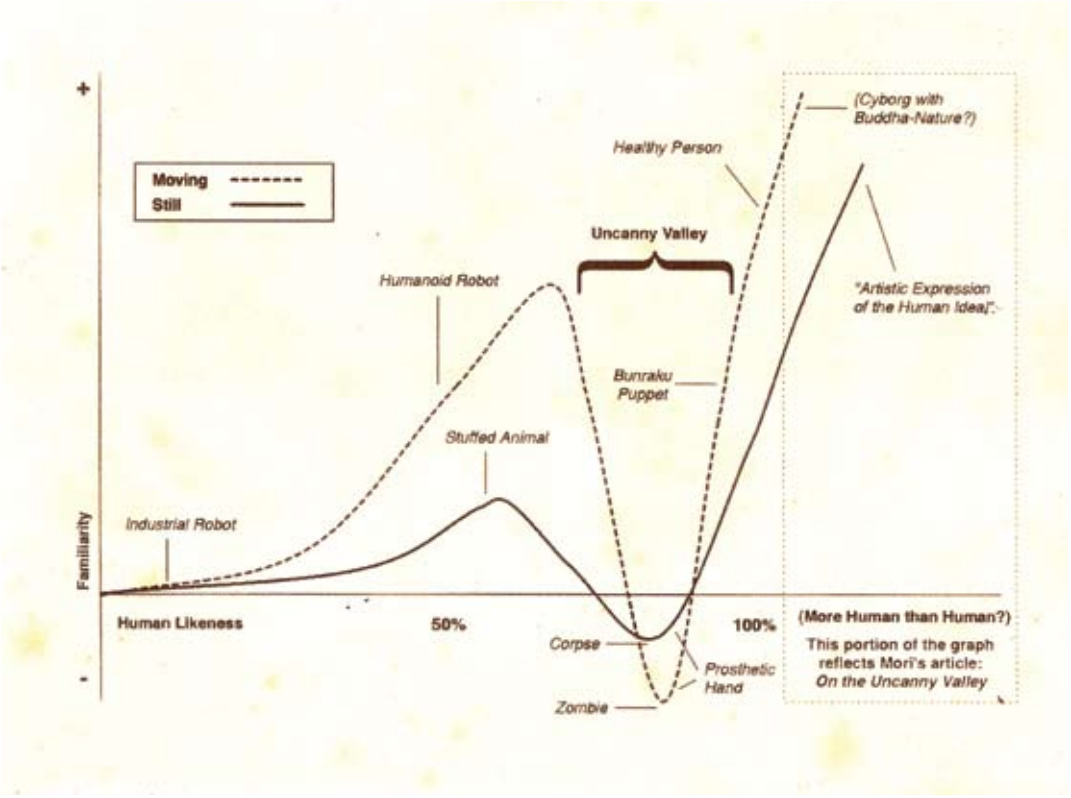
In 2005 when Mori was head of the Mukta Institute, he made a decisive addition to his initial graph, attempting to promote a curiously hybrid form of robotics, broadly inspired by Buddhist theology:

> It is my great honor and pleasure to hear that the workshop on the notion of uncanny valley, which I proposed thirty-five years ago, is held to discuss the subject in various aspects including neuroscience, pattern recognition, artificial intelligence, psychology, and sociology. Unfortunately, another meeting where I have to be the chair prevents me from attending the workshop. So, here I make two brief comments on this subject from my present point of view to make up for my absence.
>
> (1) A dead person's face may indeed be uncanny: it loses color and animation with no blinking. However, according to my experience, sometimes it gives us a more comfortable impression than the one given by a living person's face. Dead persons are free from the troubles of life, and I think this is the reason why their faces look so calm and peaceful. In our mind there is always an antinomic conflict that if you take one thing you will lose the other. Such a conflict appears on one's face as troubles, and makes his, or her, expression less comfortable. When a person dies he, or she, is released from this antinomy, and has a quiet expression. If so, then, where should we position this on the curve of the uncanny valley? This is an issue of my current interest.
>
> (2) Once I positioned living human beings on the highest point of the curve in the right-hand side of the uncanny valley. Recently, however, I came to think that there is something more attractive and amiable than human beings in the further right-hand side of the valley. It is the face of a Buddhist statue as the artistic expression of the human ideal. You will find such a face, for example, in Miroku Bosatsu (Maitreya Bodhisattva) in Kohryuji in Kyoto, or in Miroku Bosatsu in Chuguji and in Gakkoh Bosatsu (Candraprabha) in Yakushiji in

Nara. Those faces are full of elegance, beyond worries of life, and have aura of dignity. I think those are the very things that should be positioned on the highest point of the curve.

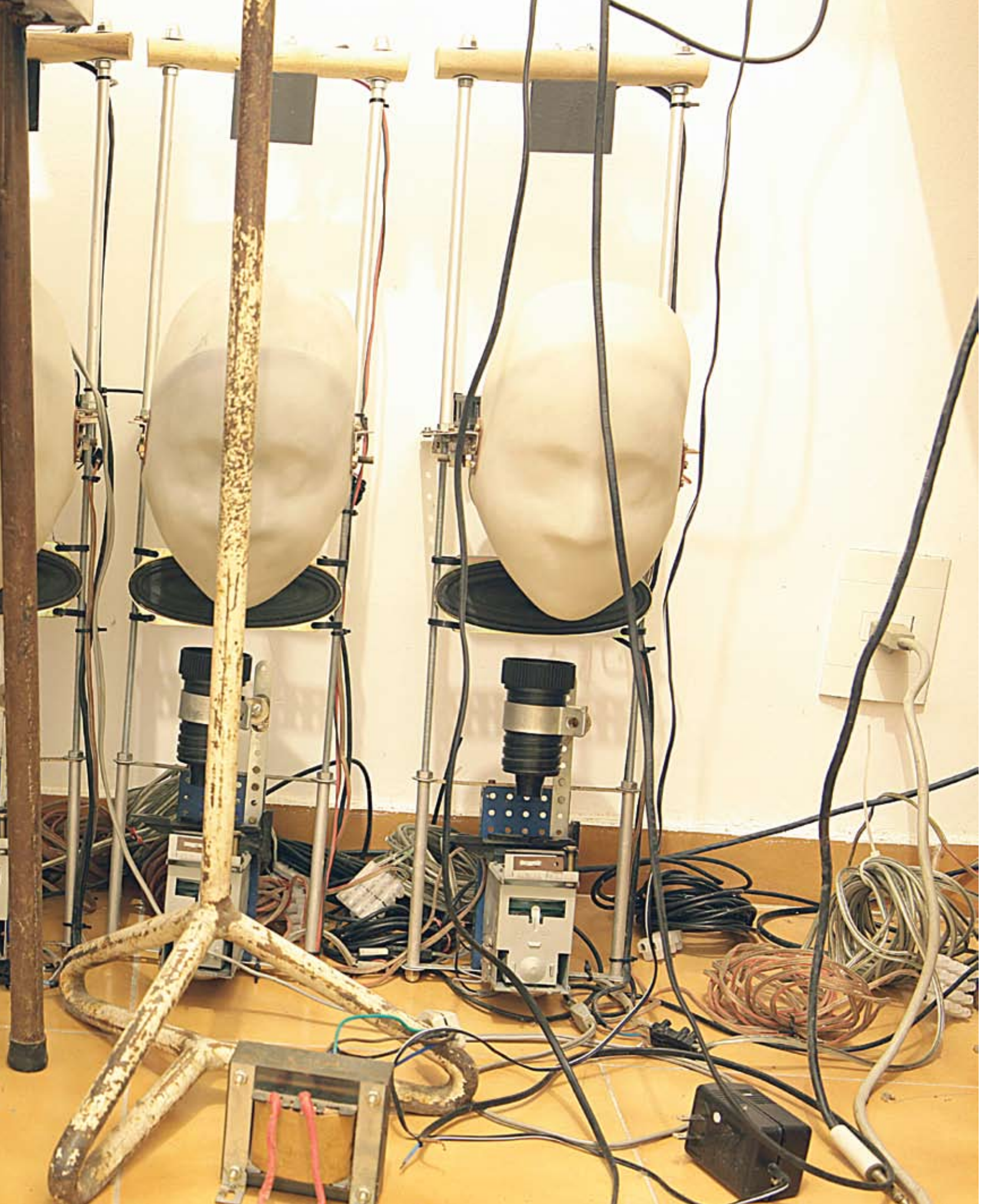
While I introduced the notion of the uncanny valley, I have not examined it closely so far. I hope the above-mentioned two respects will help the further research of the uncanny valley. August 18, 2005

The initial graph now assumes a new extension:



Mori celebrated the face of a Buddhist statue in this way and the face of a cadaver in all of its simplicity. Once we have surpassed the "uncanny valley", both have the same presence. And nevertheless, it is not about artificial creatures which require a high investment in technology. Whilst all of his colleagues were thinking about designing increasingly complex electronic circuits, Mori praised a statue, an artefact that at the end of the day is static and inert and that has a inanimate, plasticized face (of a corpse), but to which Mori attributed an intense inner life.

It is regrettable that Mori did not continue with his schematisation, which without a doubt is one of the strongest illustrations of anthropomorphic research amongst roboticists in its inclusion of other cases and innumerable creatures



from robotic art. Every person can wonder how to include the “creatures” of Zaven Paré within this scheme and how to measure his level or potential for creating disquiet or uncanniness. The low-tech experiments carried out by Zaven Paré follow the same direction as Mori’s paradox. It is not because the machines are endowed with sophisticated movements or that they reproduce human movements in a very precise form that they are alive. Despite being inert and static, a statue of the Buddha can have a much greater presence that the most realistic Hollywood animatronic. Where then should we place the creatures made by Zaven Paré? At the bottom of the “uncanny valley”, that is besides the disturbing robots, because they give us a great impression of humanity, or to the far right of Mori’s graph, in other words next to the Buddhist robots which acquire the prowess to acquiesce to life, despite of (or by virtue of) their lethargy?

We will allow ourselves here a final diversion to mention the author Philip K. Dick, the distinguished writer of science fiction and author of lectures such as *If You Find this World Bad*, *You Should See Some of the Others*, 1977, *How to Build a Universe that Doesn’t Fall Apart Two Days Later*, 1977, *The Android and the Human*, 1972, and additionally *Man, Android and Machine*,1976[2]. Philip Dick suggests several plans for machines which are strangely reminiscent of certain inventions by Zaven Paré. Like the latter, Dick’s machines attempt to reduce the limits of what we can call “technological animism” by unusual and in general politically incorrect means, that is, the different ways in which it is possible to attribute a being, soul and life to machines, or simply a way of existing that would be inherent to them.

> I have, in some of my stories and novels, written about androids or robots or simulacra - the name doesn’t matter; what is meant is artificial constructs masquerading as humans. Usually with a sinister purpose in mind. I suppose I took it for granted that if such a construct, a robot for example, had a benign or anyhow decent purpose in mind, it would not need to so disguise itself. Now, to me, that theme seems obsolete. The constructs do not mimic humans; they are, in many deep ways, actually human already. They are not trying to fool us, for a purpose of any sort; they merely follow lines we follow, in order that they, too, may overcome such common problems as the breakdown of vital parts, loss of power source, attack by such foes as storms, short circuits - and I’m sure any one of us here can testify that a short circuit, especially in our power supply, can ruin our entire day and make us utterly unable to get to our daily job, or, once at the office, useless as far as doing the work set forth on our desk.
>
> What would occur to me as a recasting of the robot-appearing-as-human theme would be a gleaming robot with a telescan-lens and a helium battery powerback, who, when jostled, bleeds. Underneath the metal hull is a heart, such as we ourselves have. Perhaps I will write that. Or, as in stories already in print, a computer, when asked some ultimate question such as, “Why is there

> water?", prints out First Corinthians. One story I wrote, which I'm afraid I failed to take seriously enough, dealt with a computer which, when able to answer a question put to it, ate the questioner. Presumably - I failed to go into this -- had the computer been unable to answer a question, the human questioner would have eaten it. Anyhow, I inadvertently blended the human and the construct, and didn't notice that such a blend might, in time, actually begin to become part of our reality. Like Lem, I think this will be so, more and more. But to project past Lem's idea: a time may come when, if a man tries to rape a sewing machine, the sewing machine will have him arrested and testify perhaps even a little hysterically against him in court. This leads to all sorts of spinoff ideas: false testimony by suborned sewing machines who accuse innocent men unfairly, paternity tests, and, of course, abortions for sewing machines which have become pregnant against their will. And would there be birth control pills for sewing machines? Probably, like one of my previous wives, certain sewing machines would complain that the pills made them overweight -- or rather, in their case, that it made them sew irregular stitches. And there would be unreliable sewing machines that would forget to take birth control pills. And, last but not least, there would have to be Planned Parenthood Clinics at which sewing machines just off the assembly lines would be conseled as to the dangers of promiscuity, with severe warnings of venereal diseases visited on such immoral machines by an outraged God - Himself, no doubt, able to sew buttonholes and fancy needlework at a rate that would dazzle the credulous merely metal and plastic sewing machines always ready, like ourselves, to kowtow before divine miracles.

In the robot that bleeds when we mistreat it, the evangelical computer or the hysterical sewing machine, we are not far away from the stomach of Madame Bovary that spits out ink or the debate about the robotic dogs by Zaven Paré. It involves a paradigm inherent to the long history of "technological animism". A list of the numerous experiments which mark this history would be extensive, but we will mention here at least the experiment by Valentino Braitenberg in Vehicles[3] , and which incidentally, is familiar to Zaven Paré. Despite being robots with extremely simple structures, Braitenberg's vehicles were capable of reproducing complex behaviours and emotions such as shyness, love, agression, fear, etc. If this history of emotional machines is not linear, as it does not go from the least to the most evolved (some more rudimentary animation techniques reappear in a new form and with a new vitality, when they had already fallen into disuse), the challenge is no longer to attribute behaviours to the machines, to project human or inhuman qualities onto them with the effect of a spontaneous anthropomorphism, but to invent "physiological" machines which are endowed with an anatomical depth and why not, capable of showing physical or psychological dysfunctionality. A mixture of the heat of the bile and blood with the coolness of the pulleys, motors and circuits: this is the exciting proposition, largely unprecedented, which Zaven Paré offers us. A sensation or surprise emotion would emanate from his friction or interlacement with the physical characteristics of the machine. So the machines would no

longer live by proxy, having access to life solely due to the supposed qualities which humans projected onto them. Endowed with a life that is all their own, a life that for sure is different to ours, to that of human beings and strengthened by this acknowledgement, they would then be able to be born, die and reanimate in peace.

Emmanuel Grimaud

Anthropologist, researcher for the CNRS (Paris, France)
Co-founder of ARTMAP (www.artmap-research.com)

Author of:

Bollywood Film Studio, CNRS Editions, 2004.
Le sosie de Gandhi / Gandhi's Duplicate, CNRS Editions, 2007.
with Tomotaka Takahashi (éds) Robo-Garage, Isthme Editions, 2007.
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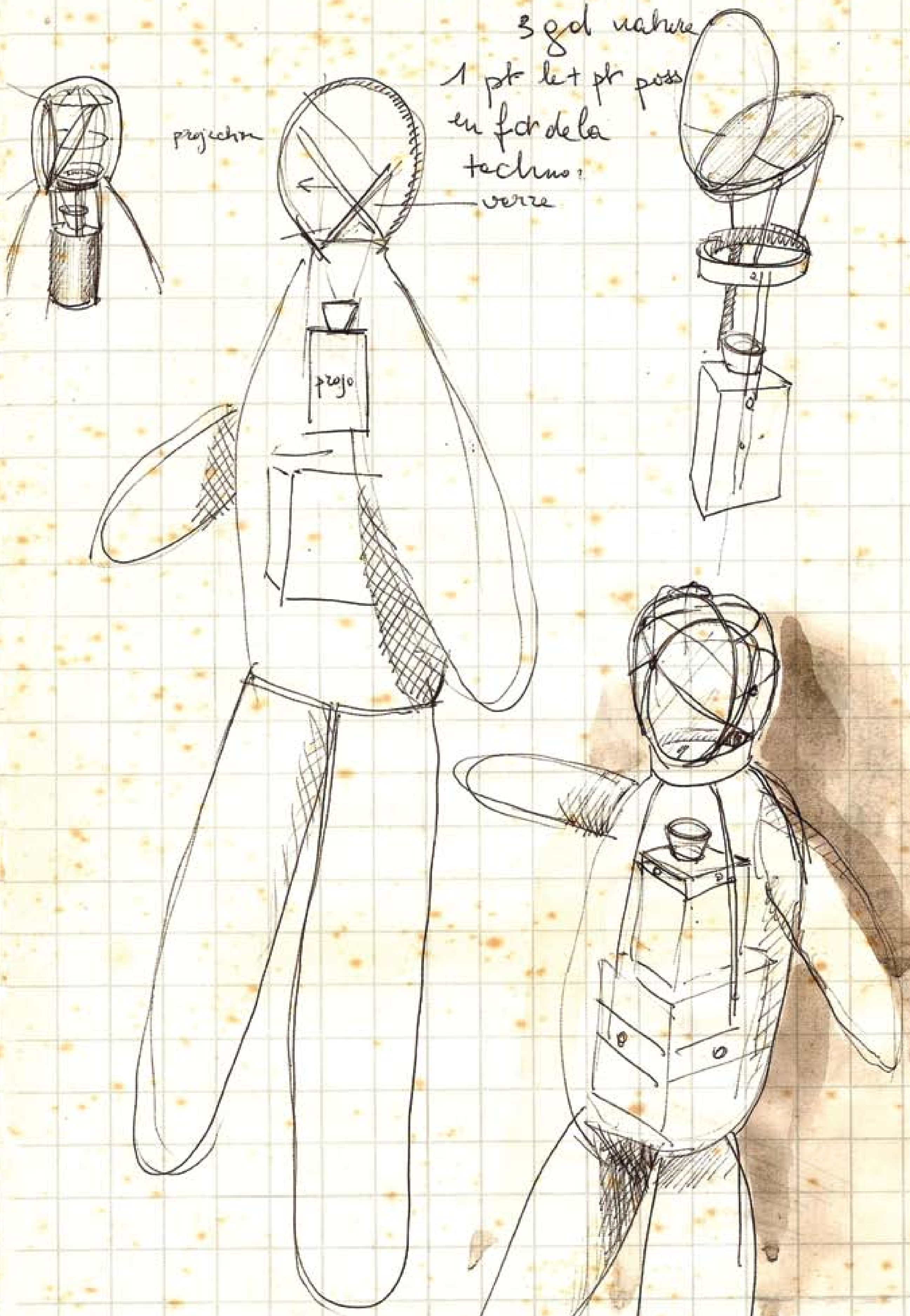
NOTES

1. Mori, Masahiro."*The uncanny valley Bukimi No Tani"*. Energy, 1970.
2. All of these lectures were published in: Sutin Lawrence (ed.). *The Shifting Realities of Philip K. Dick*. New York: Pantheon Books, 1995.
3. Braitenberg, V. *Vehicles: Experiments in synthetic psychology*. Cambridge, MA: MIT Press, 1984.

THE ELECTRONIC PUPPET
The first draft of the electronic puppet
Retroprojected video system
Montreal, Canada (1996)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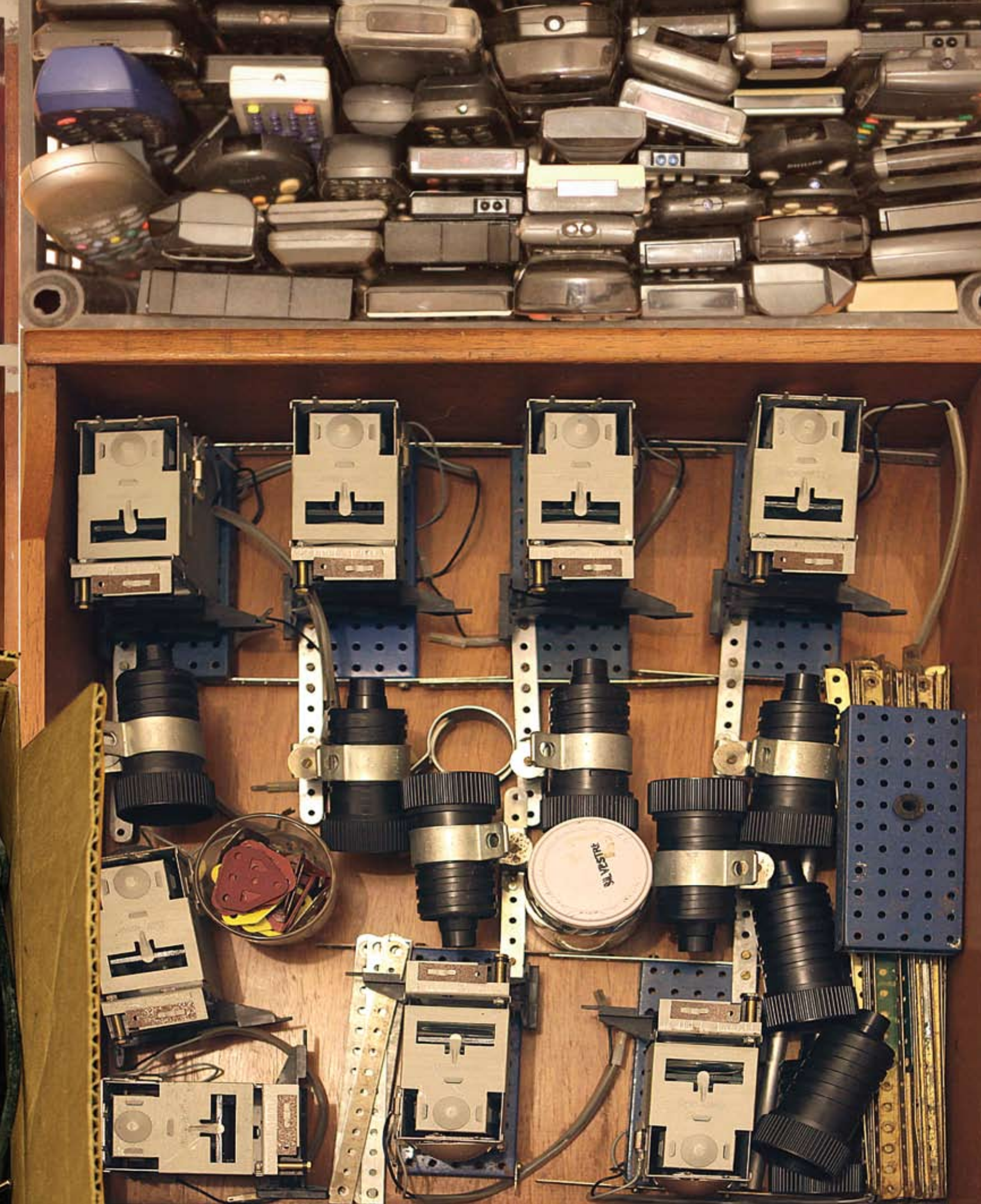
LIGHT EXPRESS
FLUORESCENT



Introduction

These machines were conceived and constructed over the last ten years. They are marionettes, automatons or robots, anthropomorphic objects, fragments of human bodies or of animals in the form of prototypes, sculptures or installations and making up a list of devices and assemblies which function according to specific propositions. In the same way that artistic manifestos are “literary constitutions,” these machine can be likened to true “technical constitutions”.

Science just as literature and the arts in general does not imitate life. Rather it contributes to the creation of viable myths and thus legitimises objects discovered. Increasingly these days, it is no longer objects but practices which represent ready-made truths. Inside ready-made practices, scientific and technological progress feeds the imagination and debates by pioneering approaches and offering new themes and unfamiliar objects. For example, in the reconstitution of tissues – skin, bones and cartilages and in transplants – liver, heart, kidneys, etc. and recently a hand and even a face lead one to consider that this evolution in surgical and post-surgical technologies could result in a head transplant being carried out on human beings. However this scientific plan does not rest on attempting to reproduce the brain in all of its functionality but in putting into practice assemblies and juxtapositions of an experimental nature.

In 1970, the professor and neuro-surgeon Robert J. White and his colleagues from Case Western University transplanted the head of a monkey onto the body of another, decapitated, monkey. When the monkey woke from the anaesthesia, it regained consciousness and brain activity, as was measured by its reactions, agressivity, ability to eat and eye movements. It survived for 8 days.[1]

A transplant of this kind on a human being would proceed in a similar manner and would perhaps be even easier, given the size of the tissues to be repaired and our familiarity with human anatomy. When brain death has been confirmed, it is already possible to carry out multiple organ transplants. However a head transplant would not enable either walking or movement in the patient and would at best extend the life of the organism. As a result, the development of technologies which would enable the possibility of this “radical transplant” would not in theory raise bioethical issues: it would effectively involve transplanting a head from one body and not vice-versa, since the other body would remain paralysed.

> This last experience though has been attempted [...] to see whether it would be possible to maintain the departing soul and prolong life for several vital moments after the fatal blow. The person was a young criminal who had been sentenced to decapitation for his crimes. Once he had been executed, the surgeons staunched the blood flowing from his upper body with astringents.

> Others held his head and with the greatest of care and dexterity, reconnected the head to its base, vertebra to vertebra, nerve to nerve, artery to artery. The incision was protected with swabs […] and in the end strong liqueurs were brought close to the patient's nostrils. Then the head seemed to return to life. We saw a significant movement of the facial muscles and a flicker of the eyelids. A shout of shock and admiration was heard: the youth was carefully lifted and taken very slowly to a nearby house, where he expired. This fact appears incontestable, but it seems to me that the experiment was very badly performed and extremely poor precautions were taken.[2]

Such pseudo-scientific descriptions, like other reports which at times are phantasmagorical, bear witness to how fiction triumphs over reality. The portrayal of the human body has changed since the times of the *"Man a machine"* by the Illuminist Julien Offray de La Mettrie, to the criminal automaton described by criminologist Cesare Lombroso and bearing in mind the discovery of electricity. The "spark of life" which suggests the great opportunities offered by Galvanism, inspired writer Mary Shelley, to inaugurate Frankenstein, her "modern Prometheus" - a kind of machine in human form. The first sigh by creature Victor Frankenstein, agitated by its convulsive movements, announced a new and powerful machine. Throughout the novel, the issue of Frankenstein's eventual regression to material lifelessness was not a euphemism for death but the evocation of the possibility of seeing this infernal machine suddenly halted. At the crucial moment, when the machine seemed to take on human characteristics, it was the throwing of the interrupter that determined whether or not the object really acted like a machine.

In turn the man machine of La Mettrie, a criminal sentenced to decapitation, pits his human mechanics against the mechanics of the guillotine whilst the criminal sentenced to the electric chair sets a machine against another machine. This was how the dramatist Alfred Jarry defined the *Surmâle* [The Super Male] :

> If André Marceuil were a machine or a organism made from iron and defying machines, this would mean that the union of the engineer, the chemist and the doctor could set one machine against another for the greater salvation of bourgeois science, medicine and humanity. [3]

In three stages, Jarry charted the actor as a machine: Firstly, by inducing mechanical movements; then by using masks and finally by substituting the actors for marionettes and "inventions". It is not out of a cultural preference for the false or synthetic that his symbolist contemporaries, and later the futurists and surrealists, would praise his initiatives, but rather because of the way in which he restored the meaning of the actor: a machine worthy of the sacrifice of the Eucharist.

Similarly in the book "Anecdotes about the beheaded" by Auberive, the final nature of decapitation is an element favoured by Japanese theatre repertory

and is found in a number of plays (Sugawara denju tenarai kagami, Yoshitsune sembonzakura, Ōmi enji senjin yakuta), mainly in the historical genre (Jidai-mono). In these plays, the head of the deceased, whether death occurred through murder or suicide, is examined to confirm that the person really is dead. Using a handkerchief, the blood is then cleaned from the head. The actor prepares himself to inspect the head. He begins by slowly opening its eyes. From his expression it can be seen that he recognises the head and proceeds to assume different attitudes: firstly, contemplation, followed by various reflections which are all represented in his face. He holds the head in his hands above a small tray and proffers some words of reverence. Then, after having lifted the tray with the head, his oratory is accompanied by a gesture. In Kabuki theatre, these stages of inspecting the head are based on the recognition of the body of the other. At that point in time, the head represents embodiment and at the same time its absence. Bodily attributes are fundamental to our understanding of intellectual functioning.

> Normally, the public thinks that artificial intelligence is something specific to computers, but if we extend this notion, and if we want to universalise and generalise its approach, then we will need to integrate our notion of body when thinking about artificial intelligence.[4]

Most information exchanged between human beings is transmitted by means of facial and vocal expressions. The writer Villiers de L'Isle-Adam in the words of his character Edison, the electrician in the novel *"Tomorrow's Eve"* explains that

> […] our movements, except those of people suffering from convulsions or who are very nervous are almost always the same: different life situations give them nuance and make them appear different. But, he [Edison], calculated that when broken down into their derivatives, a maximum of twenty-eight movements would make for a rare personality.[5]

Therefore robotics is also a schematic representation of man. The anthropomorphism of robots is made up essentially of the outline of the head (facing forwards) and the artifice of the legs (standing vertically and moving) The verticality, scale, proportions, combination of the interfaces of the senses (principally the eyes, ears and mouth) do not conform to any technical criteria. Apart from imitating a human being, the aim of the robots which do not have a domestic function or which are aimed at a specific restricted work, is to theatricalise technology.

Following the path of creation of these machines is like crossing a cybernetic forest populated with mechanical and electrical trees made by the sculptors Nicolas Schöffer and Jean Tinguely. It was in New York in 2000, with apprehension about the densification of the human forest, that the opportunity arose for me to reveal my first machines as a true performance. They appeared like a

message from a mysterious universe, but later came to be known as “electronic marionettes”.

It is fascinating to learn that the film-maker Georges Méliès, in absolute hardship, parted with all of his possessions and work files with the exception of ten automatons made by the illusionist Robert Houdin. The inventor of cinema imagined the supremacy of objects in motion over animated images. We now know how these objects can seem childish, at times anecdotal, but it is impossible to deny the importance they play in a visionary mechanistic culture.

The idea to create a new medium was based on attempts to sketch portraits (from sculptures to projections) in such as way as to find an archetype for every type of “potential actor” which would allow the redrafting of the rules for the director, author, gesture, breath and word in installations and scenic spaces. Actors are marionettes in the hands of the director, but these marionettes needed to resemble the forms of machines without falling into the representation of mechanical instruments. All that remained was to design and then construct them.

When machines such as robots are created, the actual act of construction - the choice of the protocols for the movements and manipulations - takes precedence over any other issue. The lover of scrap metal or electronics becomes curiously confused with the woodcarver Geppetto. As for the father of Pinocchio, the creation of a new type of machine is an activity which is both inventive and destructive: *“This Geppetto may seem to be a courageous man, but he is a veritable tyrant of children! If we left this pitiful puppet in his hands, he would probably be capable of reducing it (Pinocchio) to pieces!”* [6]

Reference is also made here to the issue of the assembly of parts, of assembling devices from other devices and so forth to create a larger machine, figure or effigy. In this way, whether we consider Craig’s *“surmarionnete”* [super marionette][7] or the actor reduced to pestilent organs by Artaud [8], the elaboration of new effigies is achieved through destruction, deconstruction, reconstruction and *“surconstruction”* [“super construction”]. The first electronic marionette created was born in this way from a reduction into pieces, in the midst of a certain shadow as recommended by the writer Maeterlink in *The death of Tintagiles* with the aim of “dematerialising” the presence of the body of the actor.

In this sense, the relationship with the body, gesture and voice is gradually substituted by all manner of prostheses and by anthropomorphic delineations. The robot (or animatronic) and its electronic components, the combination of the arts of puppetry, new technologies and video images are expressions of the problem of the search for new props of artistic expression.

LEGS OF SÃO SEBASTIÃO (p. 20, 21 e 25)

Wood and metal

Size: 1 m

Rio de Janeiro (2003)

NOTES

1. Robert J. White. *"Your Bionic Future"*. In: *Scientific American*, vol. 10 , no. 3, 1999.
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3. Alfred Jarry. *Le Surmâle. La machine amoureuse.* Paris: Mille et Une Nuits, 1996, chapter XIV, p. 128.
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5. Villiers de L'Isle-Adam. *L'Eve future*. Paris: Flammarion, 1992, book V, chapter I.
6. Carlo Collodi. *Les aventures de Pinocchio*. Paris: Actes Sud, 1995, p. 39.
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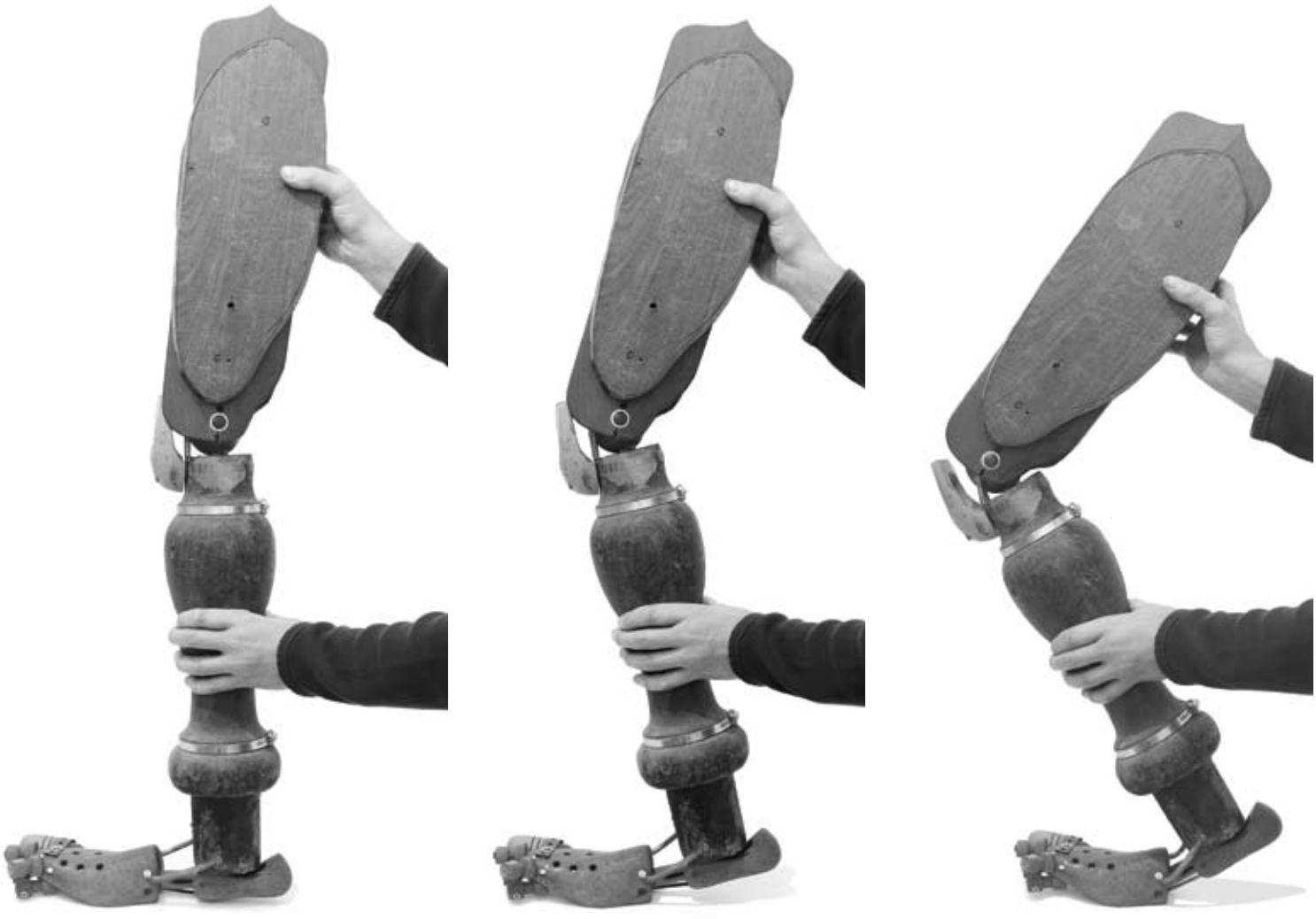
8. Antonin Artaud. « *Le théâtre et la peste* ». In: *Le théâtre et son double*. Paris: Gallimard, 1939.



robot


The theater is empty: Adam enter.


How is it that we speak? Let the Meat express itself.


He leaves. Enter the Meat:


Homo Automaticus, Heightomaticus, Omo Onomaticus...


They embrace the Hole of Science and leave.


The character, nebulous with speech,


cluster of words, spiral narratives,


reminiscences, breathed meanderings,


chains of spoken dances.


In the theater where we best see time is bound,


memory itself breathes.


The character reminisce and resuscitates, like respiration...

The Observer (1999)

Because the articulation and locus for a certain aspiration to transcendence was not found, portrait art has returned in recent times to form the video prop that resorts to the "rhetoric" juxtaposition of sound, image and text. This new use consists of strategic devices to interfere with and criticise this media.

The robot-clone of the writer Valère Novarina is an example of this. It consists of a mould of Novarina's head that has been thermo-formed and an X-ray of his lungs. The robot's breathing is simulated by a pneumatic piston and pulses of light.

> The only two organs effectively corrupted by the plague, the brain and the lungs both find themselves under the direct subordination of consciousness and the will. We can impede our breathing or our thoughts, we can anticipate our breath, give it rhythm and make it conscious or unconscious at will, in search of a balance between the two types of breathing: the automatic breath, which is under the direct control of the sympathetic nervous system and the other breath that obeys the newly conscious reflexes of the brain.[1]

The prop of a projection of this video portrait of Valère Novarina is added to a robotic prop. At the beginning, it consists of a frozen, instantaneous image. The manipulator has electronic controls at his disposal which allow this frozen image to be recomposed from all of the possible programmed movements.

THE OBSERVER
(p. 26, 27 e 28)
Electronic puppet
Retroprojected video system
Metal, wood, glass, plastic
Retroprojected video
"The Theater Ears" of Valère Novarina
***Institut International de la Marionnette*, Charleville Mézières, França (2001)**

The face of the "Observer" remains impenetrable and static: neither rapid nor slow movements seem to alter his watchful expression. It is about understanding the portrait, or better still, understanding how an image can remain fixed at such a point which manages to reach a certain perfection of suspension of time (or "compression" of time). In this sense, finding the associated movement can help in identifying the movement that is separated. This new type of video prop allows us to move from a static, pictorial portrait to a dramatization of the representation of the other, in the form of a machine.

Using a small video projector and an appropriate mirror, the image of the model's face (in this case, Novarina) is projected onto a mould of this same face. The moulded face is made from plastic that has been treated to avoid hot spots in the focal centre of the projected image, around the nose. Twelve sequences of movements, each of ten seconds are programmed onto a loop on a CD-Rom and are controlled using a computer keyboard. These perceptive-motor facial movements have eight gaze positions: 1) gaze to the left; 2) diagonal gaze, to the left side and above; 3) upwards gaze; 4) diagonal gaze, to the right side and above; 5) right gaze; 6) diagonal gaze, to the right side and below; and 8) diagonal gaze, to the left side and below. There are also four static positions: 1) eyes open with mouth closed; 2) eyes closed with mouth closed; 3) eyes closed with mouth open; 4) eyes open with mouth open. Any movement requires a return to position 1.

The electronic marionette does not mimic or make expressions. The movements are similar to mechanical movements, where the face of an actor is normally an important source of information about his attitude and inner emotions, such as happiness, sadness, anger or surprise, On the contrary, the movements chosen for this machine are like indicators which may appear as simple reactions to stimuli. The viewer can interpret all of these movements, but from the beginning they do not appear to be directly aimed at the audience, or rather, they do not make up the necessary elements for establishing "face-to-face" communication. The marionette should give the impression of having an intrinsic mechanical life. In this sense, we have an infinite range of possible variations of mechanical movements at our disposal which are *a priori* self-centred.

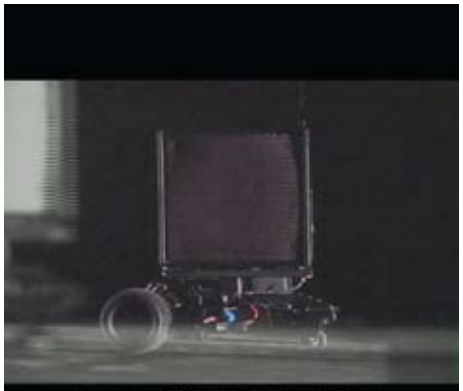
Following this, every one of these movements assumes a meaning derived from the perception and means of reception of the viewer, the dramaturgy, theatricality (the situation) or from the particular type of acting (the action).

The movements, which are simple and predictable such as the movements of the eyes or mouth can be perceived as expressions and depending on the context, of the action which revolves around the marionette, of the sounds, simulations and stimuli or from the gathering of external information in general.

> Only the observer of the creature deduces a central representation or a central control. The creature does not have this within itself, only a series of competing or opposing behaviours occur. Coherent behaviours for the viewer arise from the local chaos of these very interactions.[2]

Suddenly the theatricality of the situation-action relationship supersedes the programmatic nature of the intention-action-reaction relationship. It is from the economy of facial movements and the illusion that the production of the effect of the acting appears. In the same way as the work of biomechanic Vsevolod Meyerhold, who searched for a new theatricality of the body, there is a parallel between what can be observed about this marionette and the studies of Iván

COME AND GO
Video of speakers movements
"*Teatre of the Ears*" of Valère Novarina
***California Institute of the Arts*, Valencia, California (1999)**



Mouth, anus. Sphincters. Round muscles
closing our holes.

The opening and the closing of the word.
Attack cleanly (teeth, lips, muscled mouth)

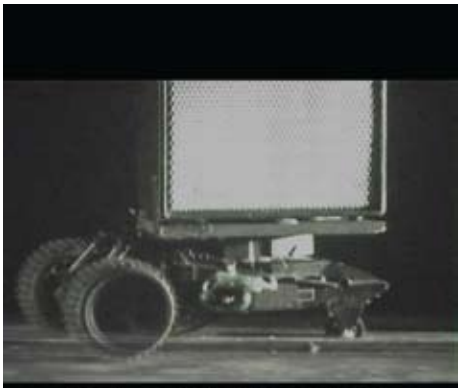
Finish cleanly (cut off the air). Stop cleanly.
Chew and eat the text.

A blind spectator should be able to hear
it crunched and swallowed

to ask what is being eaten over there, on stage.
What are they eating?

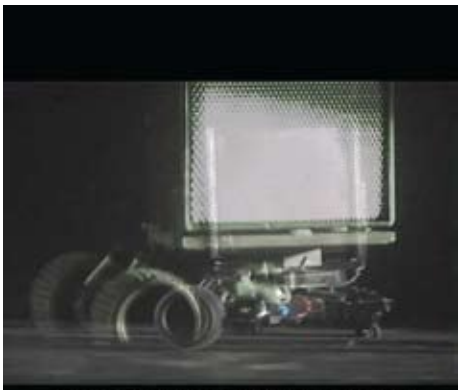
They're eating themselves? Chewing or swallowing.
Mastication, sucking, swallowing.

Pieces of the text must be bitten off,
viciously attacked by the female eaters (lips, teeth);

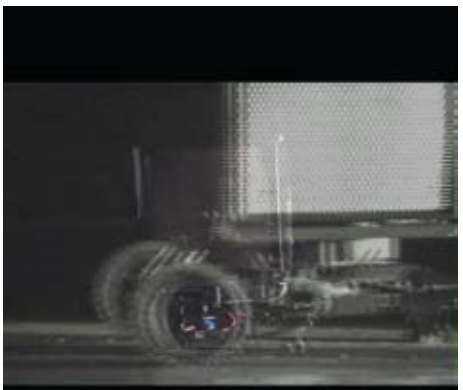


other pieces must be quickly gulped down,
swallowed, gobbled up, breathed in, guzzled.

Eat, gulp, eat, chew, dry lun, chew, masticate,
cannibal!

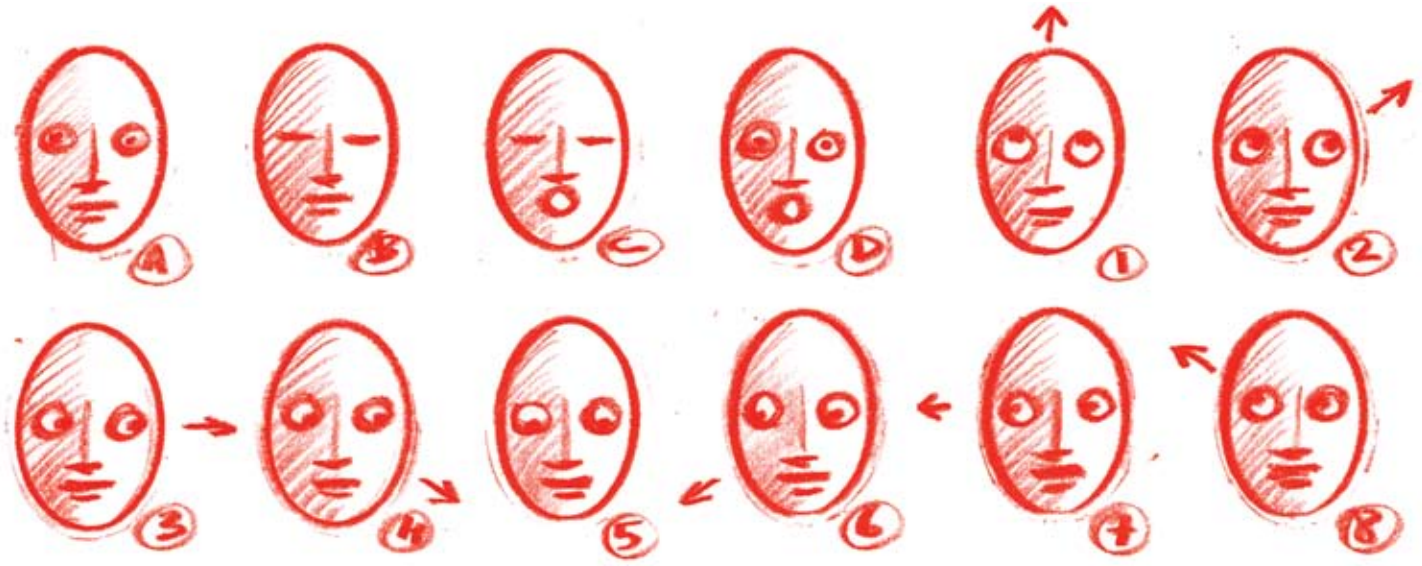


Much of the text must be cast out in one breath,
using it up entirely,



without breathing in. Expend everything

Don't keep anything in reserve,
don't be scared to get winded.



Petrovich Pavlov[3], Vladimir M. Bekhterev[4] and William James[5]. These connections between behavioural studies and theatre studies however can easily lead us for example to the archaeology of cybernetics. It is also for this reason that the history of robots has a filiation with the genealogy of marionettes. These observations allow us to measure the extent to which the marionettes with their specific qualities can progressively shape their profiles on robotic models and gradually appropriate their technological and cognitive forms.

Constructed as part of a theatrical *mise en scène*[6], Novarina, the cloned author is ultimately manipulated; he is exhibited as the passive observer of the space. This machine represents the fragmentation of a person who is then reconstructed to create his own copy where the puppet's strings are substituted by wires. The juxtaposition is evidence of a certain transparency of the technical aspects of construction of this new genre of marionette and allows the magical aspect of the technology to be neutralised. When reconstructed in this way, the author becomes a type of electronic actor, who is synthetic and immobile. An actor who is both plausible and implausible because he is mute. His gaze follows the strained juxtaposition of the space like a viewer facing the new possibilities of dramatic art. The person who changed robes, masks and voice in early Greek theatre plays is here in the centre of the scene, as if transfixed in its own silence.

Valère Novarina allowed his face to be moulded and then filmed. Like a Samurai who has accepted defeat, he his head to be cut off the head. But it was not the frame of the armour of the Samurai that was reused, but the head as if it had rolled onto the floor to be picked up. In this installation, the decapitated head allows the redefinition of various parameters of representation of the actor and therefore points towards his mechanisation.

Outside of the field of mimetic, this marionette put in danger the representation of the actor. It was not created to make the familiar unfamiliar but rather to break the continuity of acting by the actors: the components of this machine

EYES AND MOUTH

Movements of the eyes and the mouth

Electronic puppet

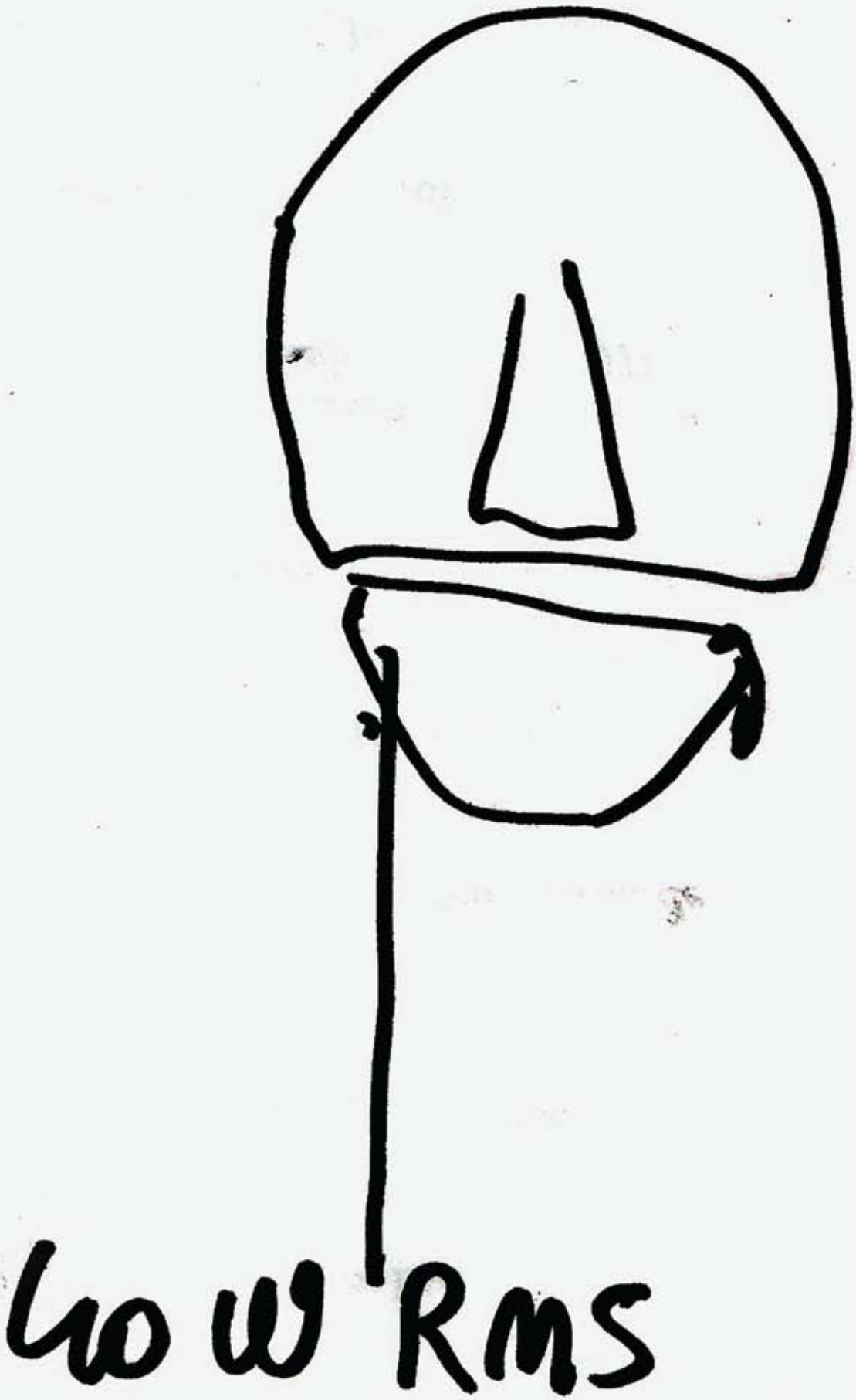
Draft of the filmed movements and keyboard

***California Institute of the Arts*, Valencia, California (1999)**

were assembled to create a new type of theatrical interface - an interface that processes the control of facial movements and the simultaneity of these movements in time and which gives the impression of a true co-presence. Prolonging the acting of the actor through the performance of a robot is the way which attempts to demonstrate whilst reconstituting a shattered reality: fragments of materials serve for the construction of a new figure, as "fragments of movements" serve to define a new morphology.

NOTES

1. *Idem*
2. Rodney Brooks, "*Intelligence without representation*". In: *A.I.*, vol. 47, 1991, p. 139-160.
3. Ivan Petrovich Pavlov (1849-1936), Russian physiologist, received the Nobel Prize in 1904 and was recognised for his description of conditioned reflexes.
4. Vladimir Bekhterev (1857-1927), Russian neurologist and psychiatrist who applied the studies of Ivan Pavlov to human behaviour.
5. William James (1842-1910), American psychologist and philosopher attempted to establish a scientific psychology.
6. The play "*The Theatre of the Ears"*, by Valère Novarina, was performed with the electronic marionette in October 1999, at CalArts (*Californian Institute of the Arts*), Los Angeles.


40 W RMS

The Vehicle (2003)

This other robot is a clone of the French actor Dominique Pinon made for the staging of the play *"La scène"* by Valère Novarina (Vidy theatre, Lausanne, Switzerland, 2003) that was created from separate moulds of his head and ears. The fixed image of his face is also projected. The interface allows his jaw to be moved and his voice to be controlled from a distance by means of a transmitter and a receiver connected to an electronic circuit composed of a sensor, a motor and two speakers. The unit is powered by a 12 volt battery, allowing the machine to be independent. Cloned in this way, the actor fulfils some of the functions of a vehicle, conveying words.

This type of device firstly allows the actor to remain in the wings, starting from the principle that *"to save the theatre, the theatre must be de-*

THE MAXILLAIRE
Draft of the head
of the vehicle
Rio de Janeiro (2002)

THE VEHICLE
Agnès Sourdillon with
the electronic puppet
of Dominique Pinon
"La Scène" of Valère Novarina
Théâtre de Vidy, Lausanne,
Switzerland (2003)

stroyed; the actors and actresses must all die of the plague [...] they make Art impossible".[1]

Here the reproduction of the actor is achieved by means of a mask hinged at the jaw. The head of the clone of the author Valère Novarina was more of a listening than a speaking head. This time, the head of actor Dominique Pinon has at long last gained the ability to articulate speech.

Firstly the idea was to be able to utilise the head of this robot as the head of a ventriloquist's dummy, but with the ability to be able to control its jaw by radio. Secondly, it needed to be moved and transported on a trolley with wheels. This second robot is an object that is activated by a switch and which then functions autonomously using a continuous low voltage electricity supply. The cable controls are this time replaced by a sensor that reacts to sounds and allows the jaw movements of the marionette to be activated.

During the *Edo* period, in the eighteenth century, which was the same period as the height of the *Bunraku* and *Kabuki* theatres, the Japanese created ingenious automatons known as *Chahakobi-Ningyô*. This form of entertainment was disseminated, in a variety of manners from the *Karakuri-dashi* to the floats of ritual festivals or the *Karakuri-ningyô* table automatons. Their complex mechanisms, made up of bamboo wooden cranks, wheels and gears and springs made from fish bones formed part of the leisure activities of aristocrats and Samurai. The heads of these dolls were brought to life in a similar way to the heads of the *Bunraku* dolls. In this branch of marionette theatre, these heads, or *Kashira*, are classified according to age, sex, social class or personality. The head represents the doll, the power of its eloquence and expresses its subtleties and emotional states. For some characters, the head was cut behind the ears. In the hollowed part at the front, mechanisms for moving the eyes, eyebrows and mouth were inserted. A reading of *Karakurizui*[6] or the study of the *Bunraku*, is in a certain way part of robotics and shows that the goal of each of these techniques was not intended to be limited to the full reproduction of humans. If traditional theatrical processes using brushes or sculpted wood imitate aspects of life, it is only in order to reveal an outline and an artifice that seduces and touches the sensibility of the viewer.

The actor Dominique Pinon has had his head cut off using special effects and has even already been cloned in the cinema. Contrary to the theatre and the devices of artistic installations which are obliged to confront the viewer in real time, cinema is easily capable of transporting the viewer to another dimension from his seat. "The vehicle" of Dominque Pinon functions like a prop for an experience to be lived, a little like the journeys tried in the film *Being John Malkovitch*.[3] In this affiliation between robots, automatons and marionettes, the coexistence of the traditions of robotics in Japan allows us to consider this new model of machine from another perspective. After the first digital electronic marionette, this second marionette was conceived as a technological and especially analogical delineation.

THE VEHICLE

Retroprojected image in the mold of Dominique Pinon

"*La scène*" of Valère Novarina (2003)

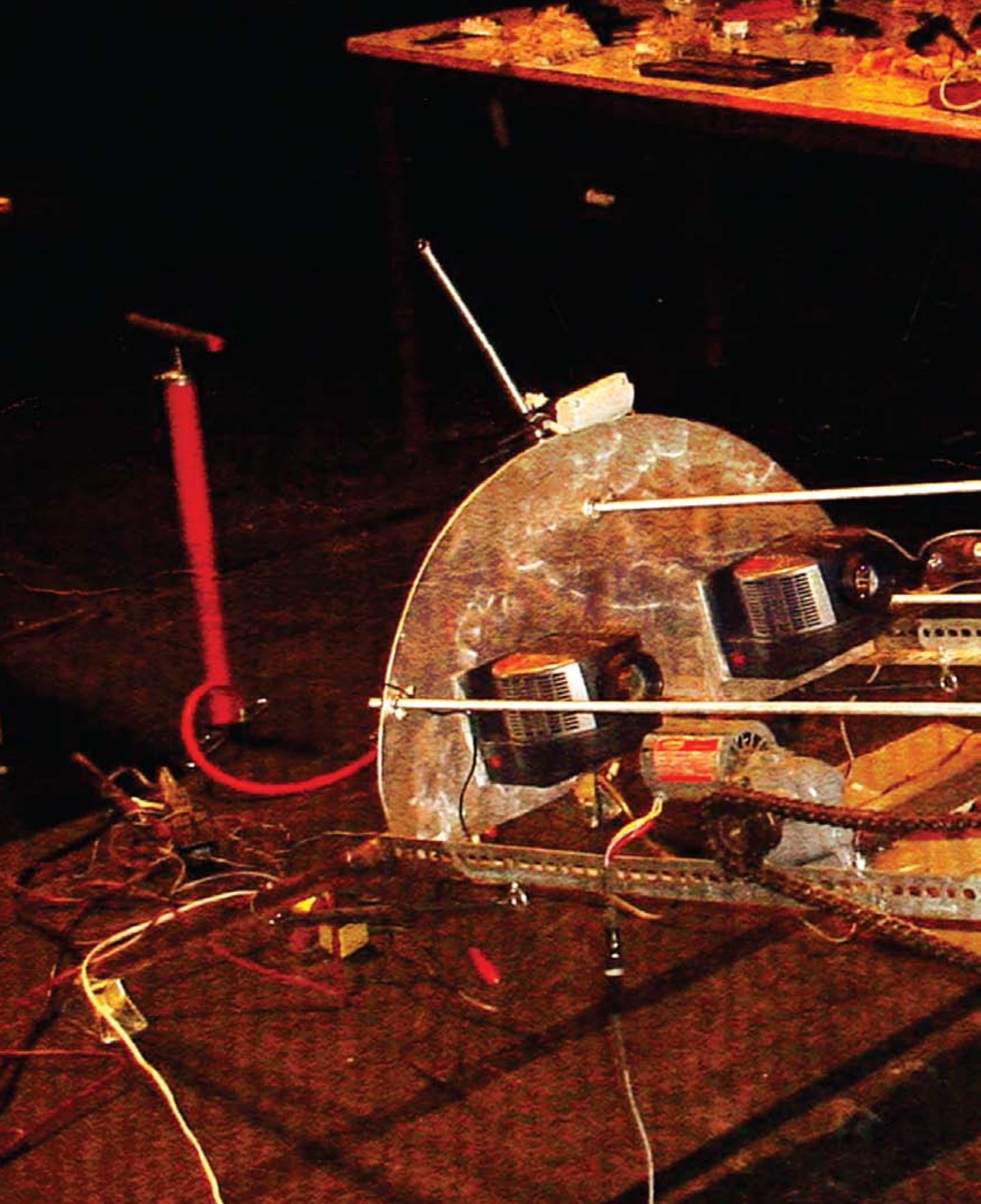
le diable
(véhicule + 12v.)

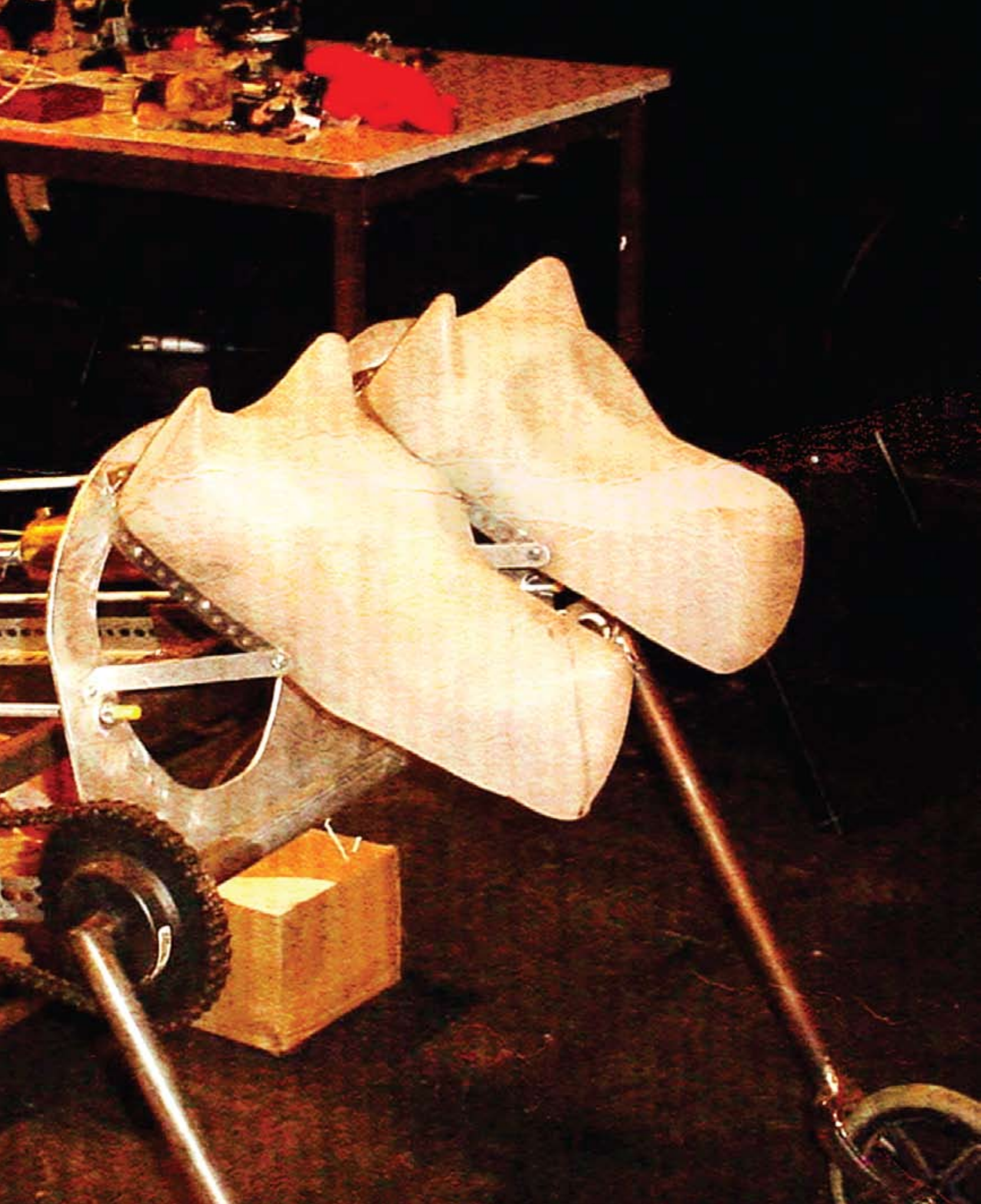
The rudimentary mechanism of the jaw endows this object with the eloquence of a *Kashira* and allows the discussion of artifices such as the metamorphosis of an electronic body composed of a receiver, an amplifier and two speakers, a sensor and a motor. These "organs" are connected to each other by positive and negative wires, in red and blue, similar to the real blood vessels of a dissected body. So the machine exposes its innards like an open automaton, to exaggerate the materiality of its significance.

NOTES

1. Cf. Eleonora Duse, quoted by Arthur Symons. *"Studies in Seven Arts"* (1906).
2. Hosokawa Hanzo. *Illustrated book of mechanics* (1796).
3. Spike Jonze, *"Being John Malkovitch"*, 1999, USA.

THE VEHICLE
Draft of the vehicle, rear of the machine and prototype
Rio de Janeiro (2002)






Cipión oigate hablar y sé que
te hablo y no puedo creerlo,


por parecerme que el hablar nosotros
pasa de los términos de naturaleza


y viene a ser mayor este milagro
en que no solamente hablamos,


sino en que hablamos con discurso,
como si fuéramos capaces de razón


¿Al murmurar llamas filosofar?


a la maldita plaga de la murmuración,
y dale el nombre que quisieres,


que ella dará a nosotros el de cínicos,
que quiere decir perros murmuradores


y por tu vida que calles ya
y sigas tu historia


Volverán en su forma verdadera


cuando vieren con presta diligencia


derribar los soberbios levantados,


y alzar a los humildes abatidos


La sabiduría en el perro está
ensombrecida;


que la necesidad y miseria son las
sombras y nubes que oscurecen


y si acaso se descubre, la juzgan
por tontería


y la tratan con menosprecio

El coloquio de los perros (2002 - 2008)

During a dialogue entitled *"El coloquio de los perros"* by Miguel de Cervantes in 1613, a dog called Berganza narrates its life to a friend, another dog called Cipión. *"Cipión, oigo te hablar y sé que te hablo, y no puedo creerlo, por pareceme que el hablar nosotros pasa de los términos de naturaleza."*[1]

This is an installation with a dual interface of filmed human faces which are projected onto dogs heads which have been sculpted and then thermo-formed. It is a dialogue between the heads of a two-headed animal. The actor is transformed into a hybrid being by means of cut and paste processes, division and multiplication to be recreated with new masks at the end. Transformed into a dog, he goes on to be a monster made up of a body with two heads. Since this monster is endowed with speech, a conversation between the two heads follows, as a kind of reincarnation of the actor within a monstrous, animal-like machine like a true electronic *deus ex machina*. This device is a type of baroque machine that serves as a prop for the conversation between the two animals and the human beings for the duration of the dialogue.

The dog consists mainly of mechanical and pneumatic movements. The front legs are moved by an electric motor operated by a switch, a pneumatic pump allows the rear legs to lift. These movements are mechanical and distinguished from the emotional reactions of the tail, which is also motorized and wags and is set in motion by an electronic sensor.

It seems that Dr. Moreau, the character from the novel by H.G. Wells, inspired French scientists to attempt the transplant of the guillotined heads of prisoners onto the bodies of large dogs. But the heads did not respond. After that, in 1908 the American physiologist and pharmacologist Charles C. Guthrie grafted the head of a small dog onto the neck of another, larger dog with its own head intact, creating a two-headed dog. In 1912, the Russian scientist Vladimir P. Demikhov began experimenting with an artificial vascular system, which in the 1950s resulted in a transplant of the rear part of the body of a dog onto a much larger neck from another dog. It was reported that the dog with two heads survived for 29 days after the operation.[2] In 1964 the Neurology Department at the Faculty of Medicine at the University of Tokyo experimented with transplanting dogs´ heads[3], whilst Dr. David Gilboa from the University of Wisconsin decapitated fifteen dogs in an attempt to keep their heads alive with mechanical pumps.

> According to observations recorded at the end of the nineteenth century on criminals and experiments with decapitated dogs heads, death does not seem to occur in the same way in all cases. With dogs, the cutting of the spinal cord and the irrigation of the central nerve zones could be less effective in causing death than consecutive haemorrhaging and asphyxia.

EL COLOQUIO DE LOS PERROS
(p. 40,41 e 42)
of Miguel de Cervantes
Metal and plastic
Retroprojected videos
Institut International de la Marionette, Charleville Mézières (2002)
and Centre d´Art et d´Essai France (2004)

> In humans, the resulting restraint from the emotional effect would be more rapidly fatal than the effects of slicing the blood vessels. It was for this reason that the illustrious scientist Loyle said that the pain caused by slicing the neck did not have the time to be felt by the human brain. It was also for this reason that he said that the facial expressions of decapitated humans and dogs were so different. The appearance of the former is more often depressed and impassive whilst the appearance of the animals expresses pain and anguish.[4]

Similarly, the reference to decapitation and the transplant of human heads starting with the first electronic marionette at this point reached the limits of the physical integrity of the actor and the theatricalisation of the monster. The two-headed dog is a scabrous mixture of dog heads, gears and pistons.

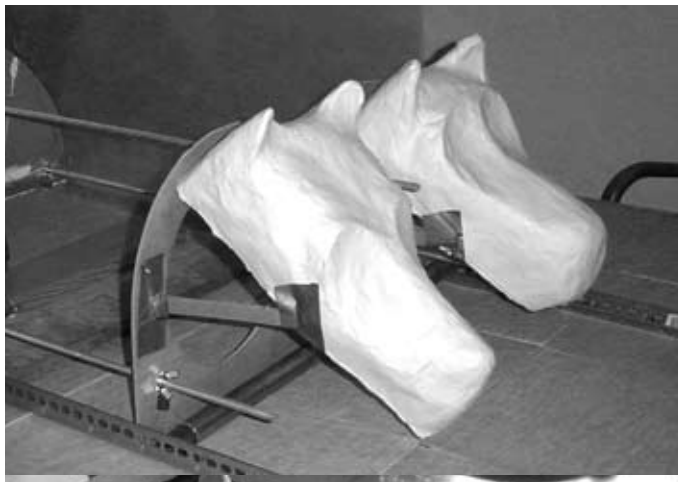
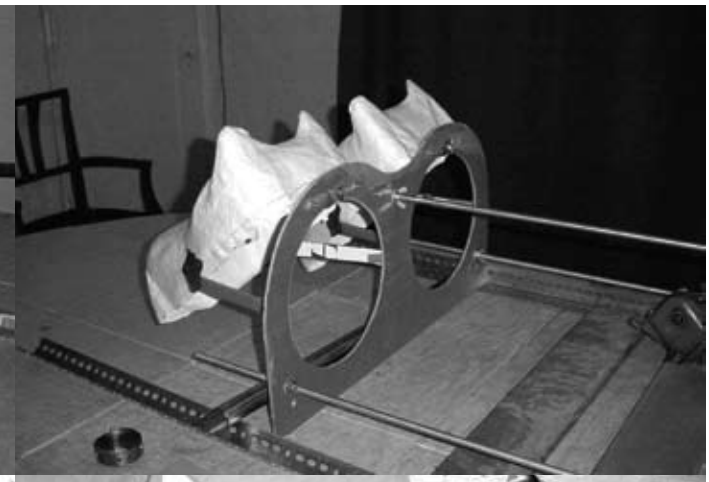
References to calamity are present everywhere: the plague, the theatre of Artaud or slander, in the form of rumours and gossip in the dialogue of Cervantes considered as a devastating curse, reveal a transformed, ill or animal-like body. It is Cervantes himself who says through the mouth of one of his dogs: *"Al murmurar llamas filosofar? [...] Canoniza, canoniza, Berganza, a la maldita plaga de la murmuración, y dale el nombre que quisieres, que ella dará a nosotros el de cínicos, que quiere decir perros murmuradores [...]."*

These machines finally pose again, in other terms, these same questions: What are we made from? Breaths? Mechanisms? Are we animals or are we monsters? Or are we just thinking and speaking heads which murmur words?

NOTES

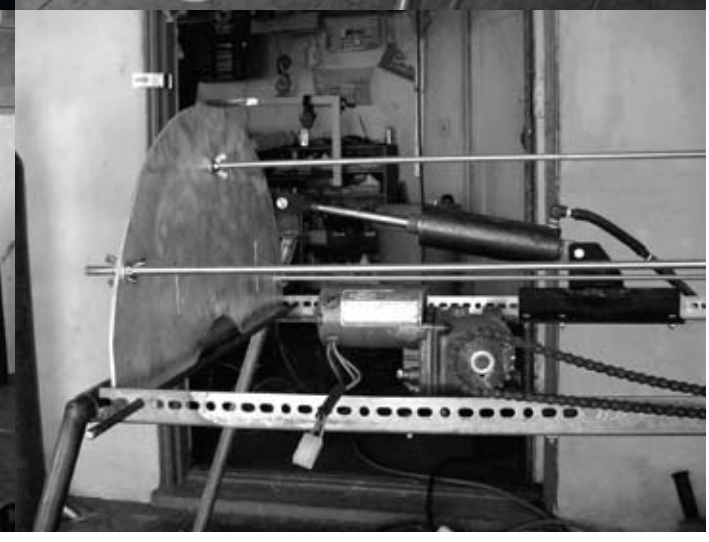
1. Published in *"Novelas exemplares"*, in 1613.
2. V. P. Demikhov. *Experimental Transplantation of Vital Organs*. New York, 1962.
3. Keiji Sano; Hideo Terao; Isao Hayakawa; Shuji Kamano; Isamu Saito. Neurosurgeon, Department of Neurosurgery, Faculty of Medicine, University of Tokyo, 1964, vol. 6, p. 35-38.
4. Marin Monestier. « *Entre chiens et Hommes* ». In : *Peines de mort- Histoire et techniques des exécutions capitales des origines à nos jours*. Paris: Le Cherche-midi, 1994, p. 201.

CONSTRUCTION OF THE ELECTRONIC PUPPET OF THE BICEPHALOUS DOG
***The Compound*, L.A., Califórnia (2001)**

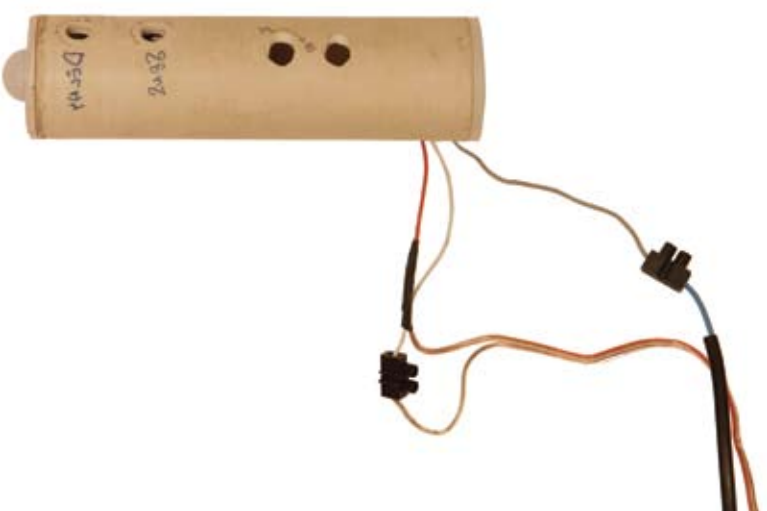






EQUIPMENT

Video control, helmet
with camera, projector, LCD,
sensor, tail with motor and
pump for performance
"*El Coloquio de Los Perros*"



Der Jasager (2002)

DER JASAGER
Retroprojected images
Rio de Janeiro (2003)

Der Jasager was originally a play by the *Noh* theatre repertory entitled *Takino*. It was its English translation, *The Casting into the Valley,* by Arthur Waley, that was translated into German by Elizabeth Hauptmann which inspired the libretto by Bertolt Brecht. He in turn re-translated this text into English under the title *He who says yes.*

This was the source of inspiration for this group of machines arranged in an installation: *Der Jasager* is the story of a child with a fragile constitution whose father died and whose mother became ill. The story aims to follow the journey of his teacher with a group of students, to ask the doctors living in a nearby city on the other side of the mountains for medicines. But his teacher was against the plan because it was a dangerous journey and according to tradition, whoever was unable to follow the trail must be thrown into the precipice. The child ended up tiring and fell ill. The group decided to follow the tradition. *Der Jasager* in turn resigns himself to this. The child is then thrown into the abyss and covered with earth, rocks and stones.

This electronic version was inspired by the music of Kurt Weill and was composed for six moulded heads of the same child including six projected images of this child without mouths. Together they form a choir of children. Their dreams are projected onto six small, white spheres which float in the air behind the six heads. This device consists of twelve sources of projection, six speakers, six fans and six spheres floating in the air within the columns of air created by these blowers. The choir in itself is a kind of phantasma-gorical organism.

THE PINEAL GLAND
Mecano, wood and glass
Retroprojected Image
Dimensions:
120 x 100 x 20 cm
Rio de Janeiro (2005)

The integrity of the bodies is replaced by these suspended heads. Therefore the actors here are children. The choir seems to be frozen in a polyphonic murmur and the spheres appear to float as if they were the visualisation of their thoughts. The heads of the characters are masks, lacking any expression of emotions and feelings and are also devoid of bodies.

So the choir is composed of six “closed” faces. Their murmurs seem to emerge from the mouths of the six masks. Even with the censorship of the mouth and

the repetition of the six immovable faces, this installation continues to have a power of expression and invokes sensations such as worry, anxiety or anguish. In this way, the choir of children forms part of the logic of terror, in affiliation with the works of Mary Shelley.

Through the experience of reproduction and the multiplication of the identities, the disembodiment of each singer in the choir that is made up of a group of organised displays, the sources of the sound and projection are multiplied since one device added to another becomes an even larger machine. This device is a virtual representation of the liberation from phantasmagorical subjection and the subjection of desire. Now there is no longer one single body, but a system of devices which reproduce each other, connected to machines.

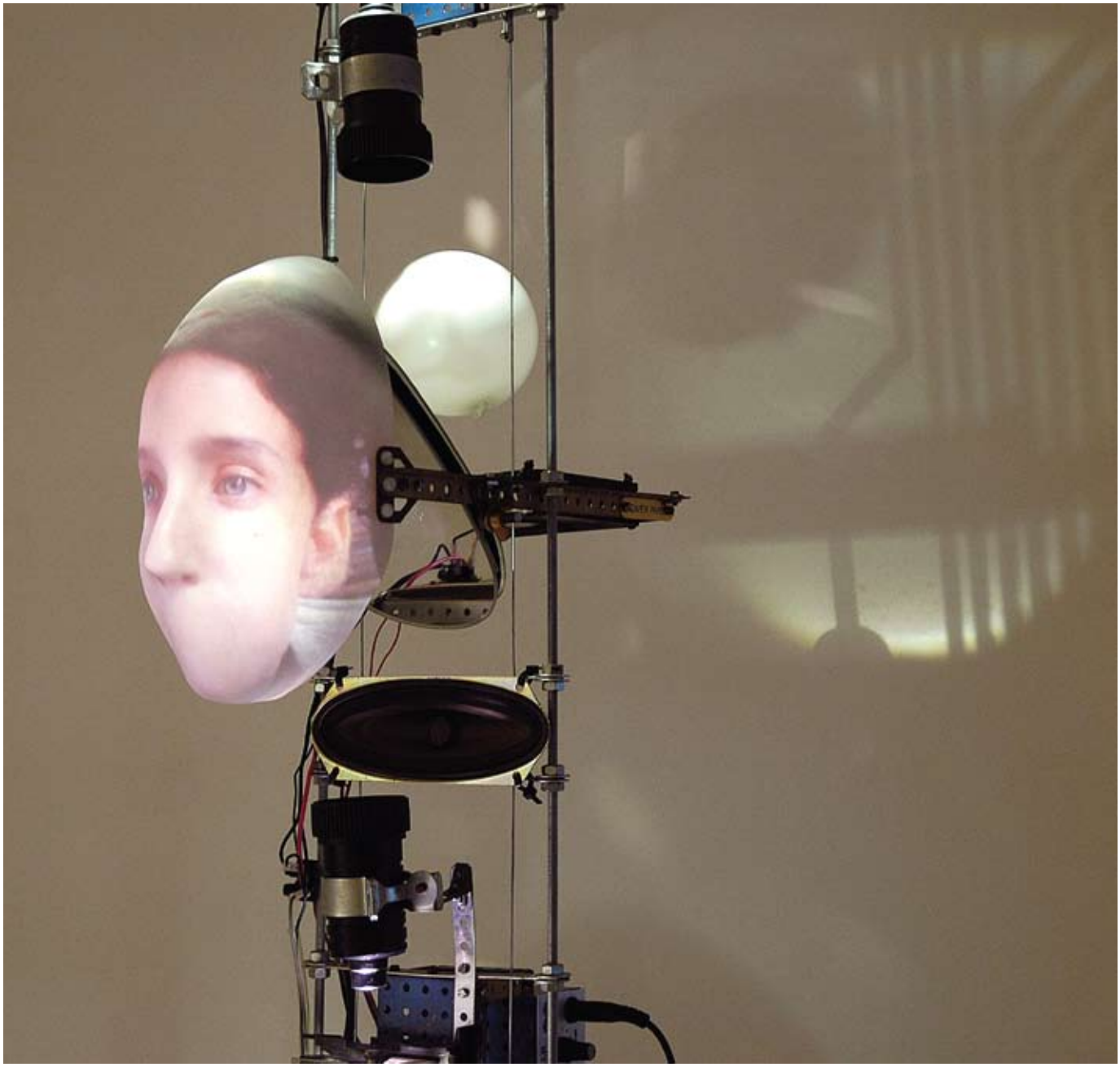
In *La mariée mise à nue par ses célibataires mêmes* [*The bride and the bachelors*][1], or *Grand Verre* [*The big glass*], by Marcel Duchamp, or *La fille née sans mère* [*The daughter born without a mother*][2], by Francis Picabia, it is the potential fathers or mothers who are to become celibate machines. The term "celibate machine" or "celibate device" was used by Marcel Duchamp to designate the lower part of his *Grand Verre*, which was dedicated to the bachelors and which incorporates mechanical elements. In Picabia, the celebate is the absence of origins, the nullification of the creator.

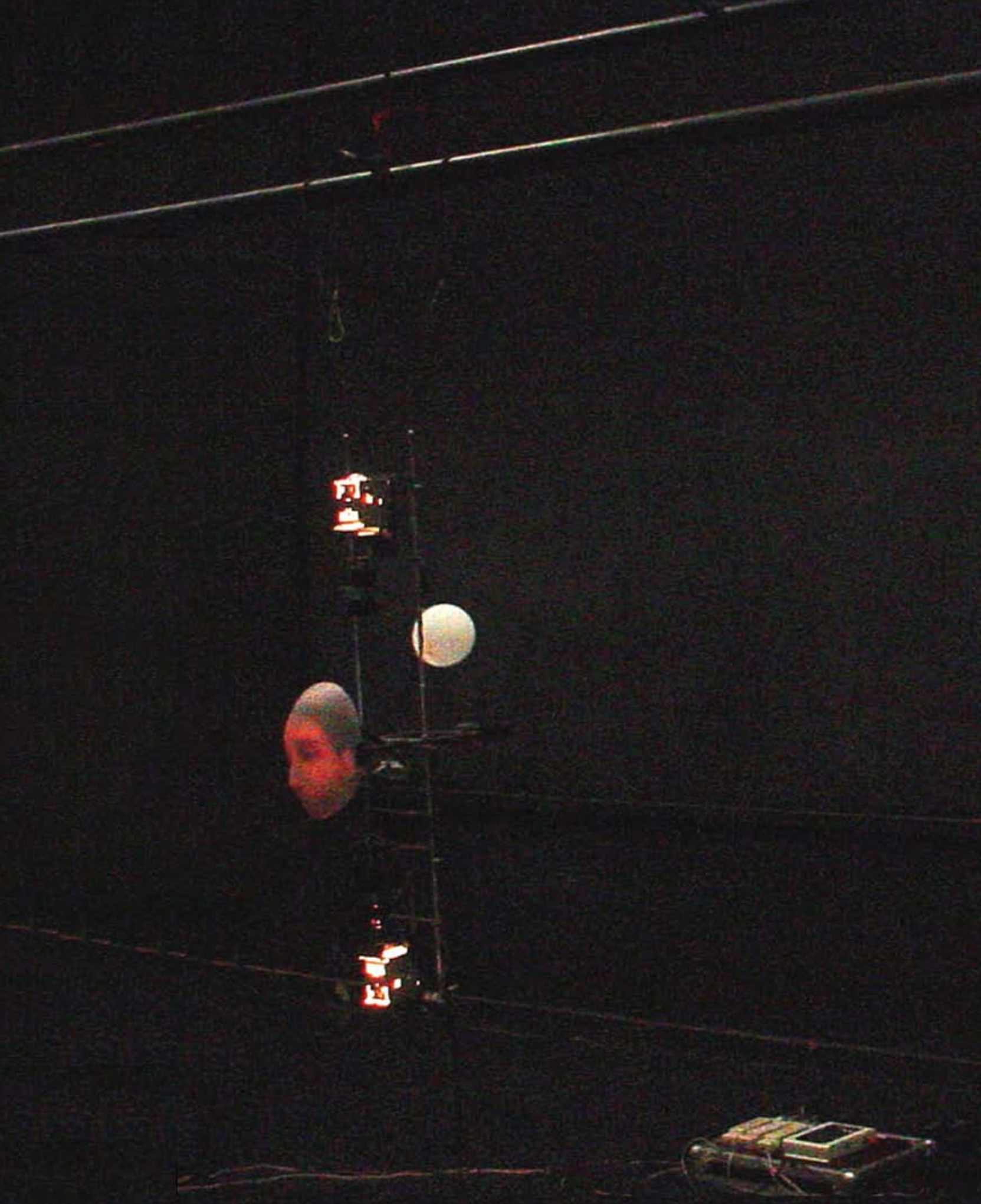
In this installation, it is *Der Jasager* who is left to his own destiny, by means of a type of suicidal impulse "he who says yes". The oedipal interpretation of this character here is set against the endless flow of the machines desiring death that form the choir like a group of disciplined assassins.

NOTES

1. 1912-1923, *Philadelphia Museum of Art*.
2. 1916, *Scottish National Gallery of Modern Art*, Edinburgh.

DER JASAGER
(p. 50, 51 e 53)
by Bertold Brecht e Kurt Weil
Metal, glass, plastic
Projected images on balloons
Dimensions: 100 x 20 x 50 cm
Centre d´arts et d´essai, Mont Saint Aignan, France (2004)






ELMO
SLIDE PROJECTOR CS-1
ELMO
SLIDE PROJECTOR CS-1

Quad (2008)

The installation which was given the name *Quad* forms part of an ensemble of technical devices which were constructed for the staging of the annotations for plays by Samuel Beckett for staging of the play *"Presque l'intégrale jusqu'à l'épuisement"* (*Maison Folie,* Mons, Belgium, 2008). The aim of the project was to cause each of the pieces used in the installation to wear out and disappear, depending on the duration of the batteries, principally those which supplied the light (distributed by small projectors, florescent lamps and pre-programmed panels of LEDs). These devices, which essentially revolve around an interpretation of the play *Quad*, were accompanied by video equipment, a pair of robotised systems on wooden structures controlled by arduino[1] and by a monitor used to represent the play *Not I*. A simple mechanism operated a rocking chair which was in turn used for the dramatisation of the play *Rockaby.*

In short, all of these devices were invented for this occasion, in an attempt to demonstrate that marionette art is not just an art of fragmentation, but that it can also place in practice the art of loss.

For Beckett, *"The best possible play could be without actors, just the text. He said, I am trying to find a way to write a play in this way."*[2] Loss does not signify, in this context, death, but perhaps a kind of erasure. *"The loss of the body is a triumph of the word"*[3], he went on to say in *Krapp's last tape*. In this play, Krapp appears armed with a mechanical device for recording and recalling his past, as can be read in the annotations:

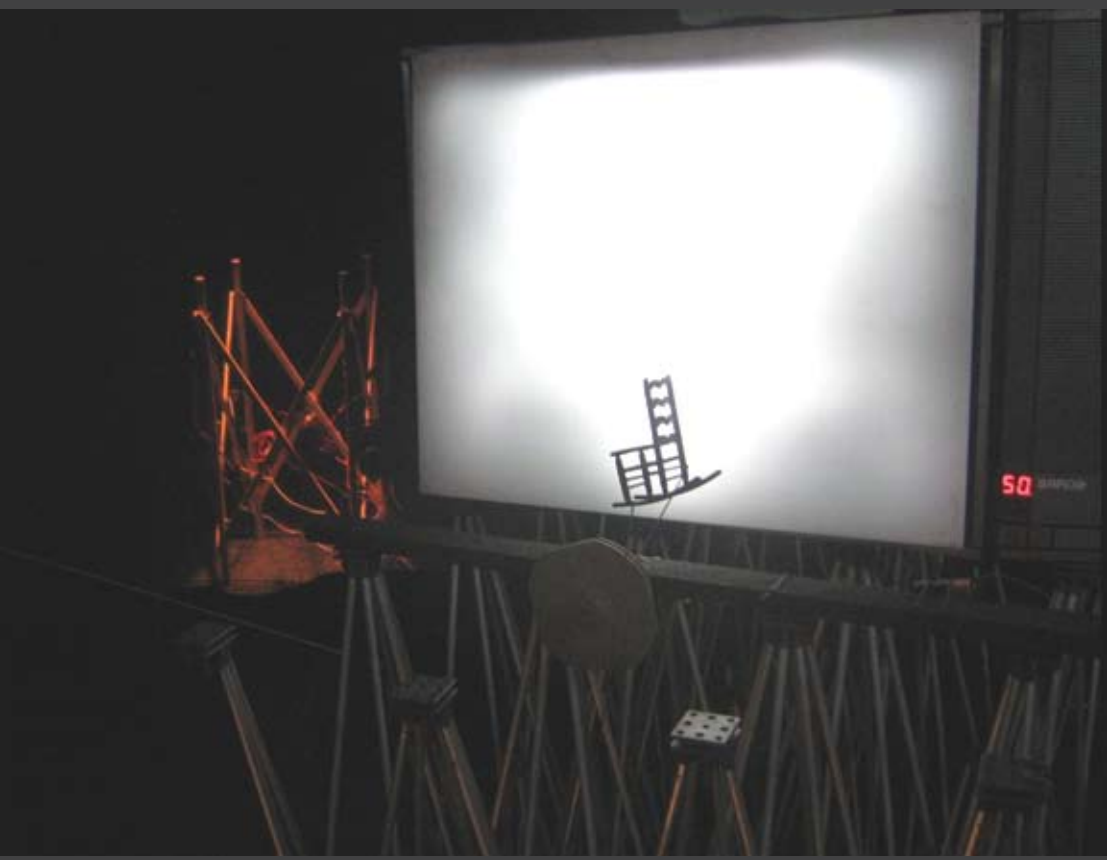
> He raises his head, broods, bends over machine, switches on and assumes listening posture, i.e. leaning foreward, elbows on table, hand cupping ear towards machine, face front [...] Krapp switches off, winds back tape a little, bends his ear closer to the machine, switches on again. [...] Krapp switches off, raises his head, stares blankly before him. His lips silently move mouthing syllables. [...] Krapp switches off impatiently, winds the tape forward, switches on again. [...] Krapp switches off, winds tape back, switches on again.[4]

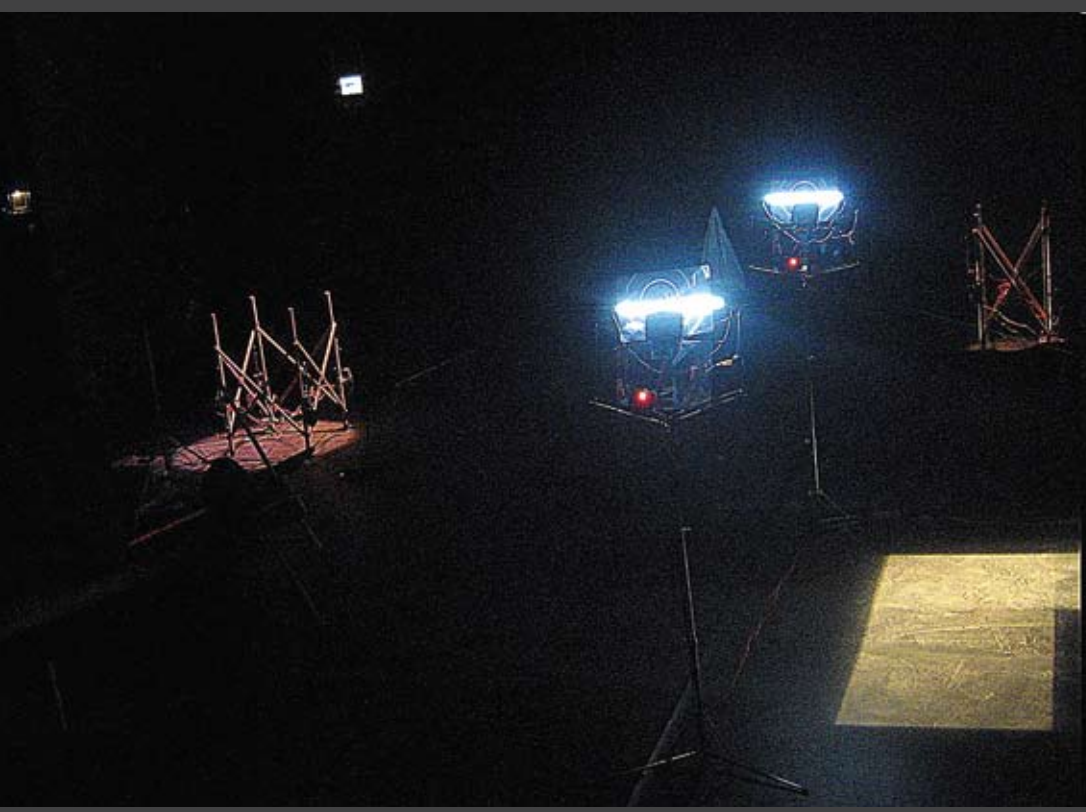
The tape recorder brings Krapp face to face with his different egos and concretely demonstrates his decline as loss, failure, disillusion and discontinuity in time. With this sequential use, Beckett manages to define time as the centre of gravity of the word. In this way he produces memory, as a state of consciousness, in the viewer. This is duplicated by the actor in becoming his own listener. In this sense, the actor is not solely a diffuse receiver, but also a contained transmitter.

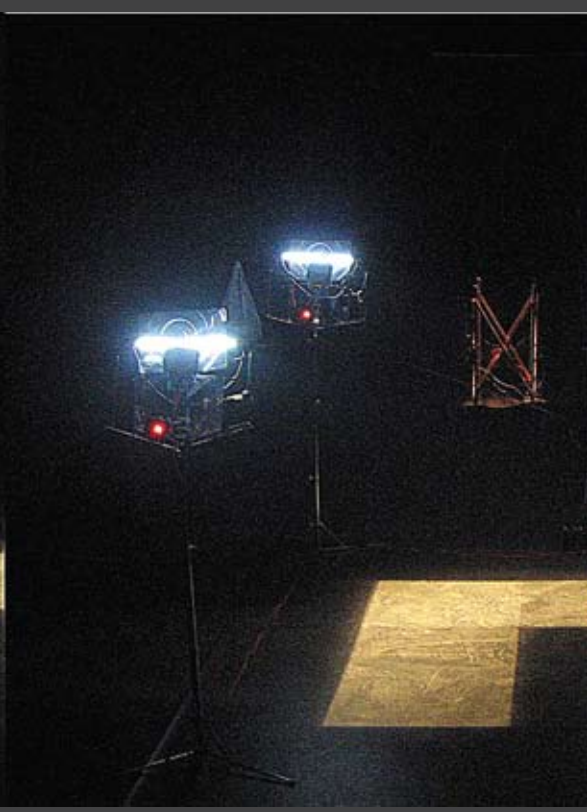
In the reading of *Krapp's last tape*, Krapp resembles Beckett. This other duplication questions the presence of the author on the stage, who no longer embodies his characters, as in early Greek theatre, but who has the function of

THE TWINS
(p. 54 e 55)
Projector, metal, plastic
Retroprojected images
Dimensions: 15 x 40 x 85 cm
Rio de Janeiro (2006)

QUAD
by Samuel Beckett
Wood supports, 4 car antennas and arduino
Dimensions: 150 x 50 x 50 cm
Rio de Janeiro (2007)







interspersing time, the time of the word.

But the theatre of Beckett, by constantly redefining the limits of life through the actor, cannot a priori be a marionette theatre: the body of the Beckettian actor seems to disappear, but rarely disintegrates. It is the metaphorical body of multiple weaknesses which forsakes power to the narrative.

The ensemble of machines presented in this "performance of objects" which was conceived around the plays of Beckett and is entitled *"Presque l'intégrale jusqu'à l'épuisement"* [*"The near entirety to exhaustion"*]. These machines were not inspired by the texts written for the actors, but as mentioned above, in the annotations written by author for the "creators" or rather the potential directors of his plays. So the proposal consisted of creating a visibility for the scenic spaces and for the devices proposed by Beckett by means of small devices, in such as way as to create a spatial transposition of a commentary of his plays and with this, to create islands of a fragmented set.

A manipulator, as in the theatre of objects, used to bring the devices to life and make them successively communicate with each other, in a dialogue with space by means of devices (accessories, tools and instruments). However, all of this happened practically without words in the texts of Beckett: they made themselves present like imaginary phantoms in these texts which we already know by heart. As for the machines, they were like pieces in a complex or rudimentary game, like summaries off set design, types of models for their own spaces in the repertory of the Beckettian theatre. Each one of these devices can be considered as a mere manipulation of the marionette artist, as a unification of uncomplicated optical or mechanical systems or even as a series of electrical and electronic connections.

At the beginning of 1990, on learning of the inventory of goods found in Beckett's apartment, after its subtle disappearance at the end of previous year, I realised how much it reflected the simple manner in which he had lived throughout his life. Surprisingly, Beckett only owned a bed, several sets of sheets, two blankets, a wardrobe containing a few clothes and some rolled-up prints by Bram Van Velde and a work bench with a drawer containing a few *Bic* pens. Other furniture found in the apartment included chairs and a Formica kitchen table with a draw containing some cutlery. There was nothing more to add. This was all found in a modest apartment in the 13th *arrondissement* of Paris, which looked out onto a courtyard of garages covered with corrugated sheet.

With this image of austerity, any notion of a work based on the works of Beckett has to begin with this idea of emptiness and silence, the idea of non-representation: he incessantly attempted to maintain his voice as murmur above the silence. So in the *mise en scène* that he created for *Not I*, from 1974, the annotations were articulated by a life-sized mouth, projected onto a small plasma screen that was suspended at the height of a real mouth. In the same way, in

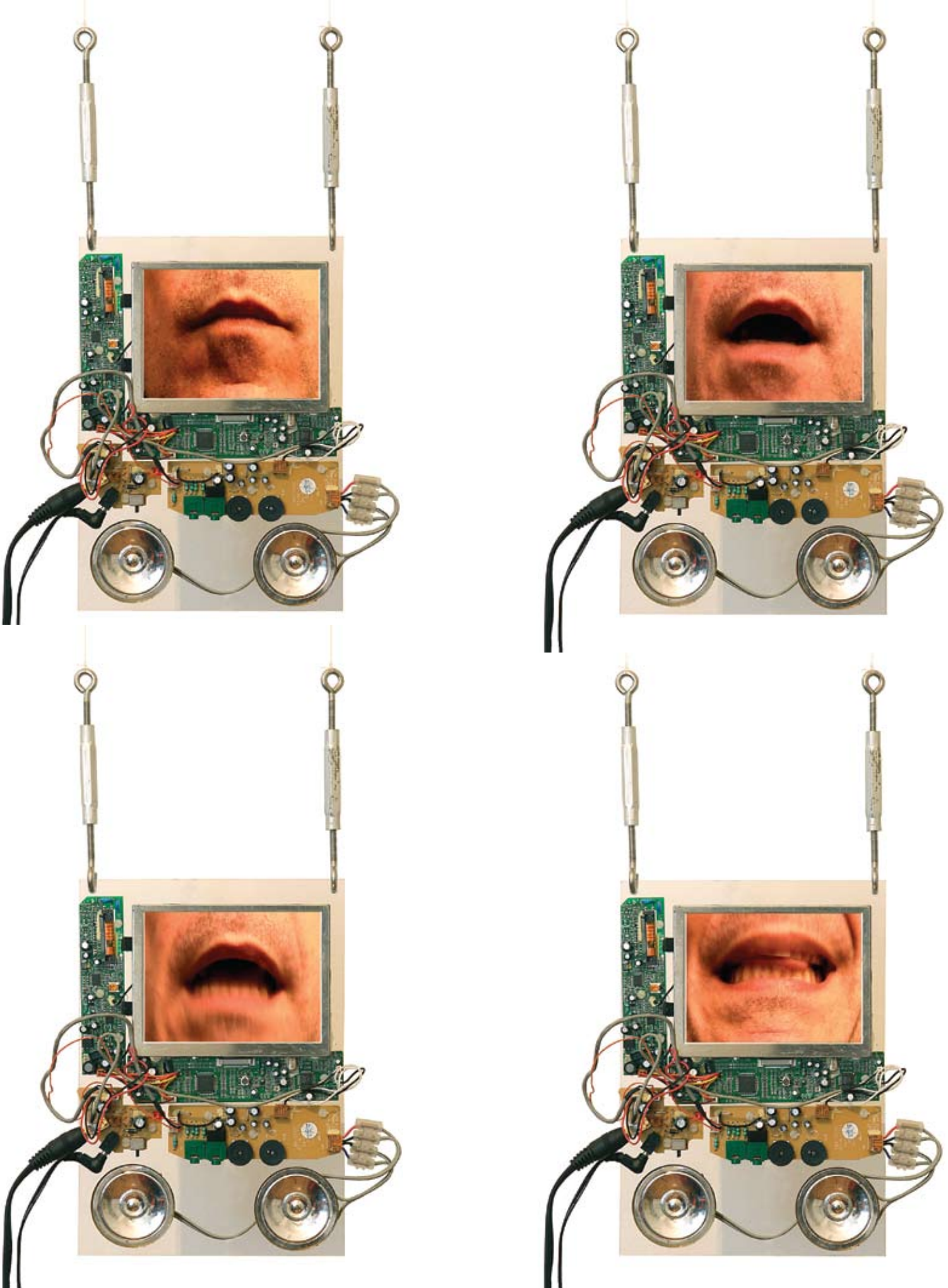
ROCKABY
(p. 58 e 59)
by Samuel Beckett
Small rocking chair with movements
Dimensions: 45 x 120 x 45 cm
Rio de Janeiro (2000)

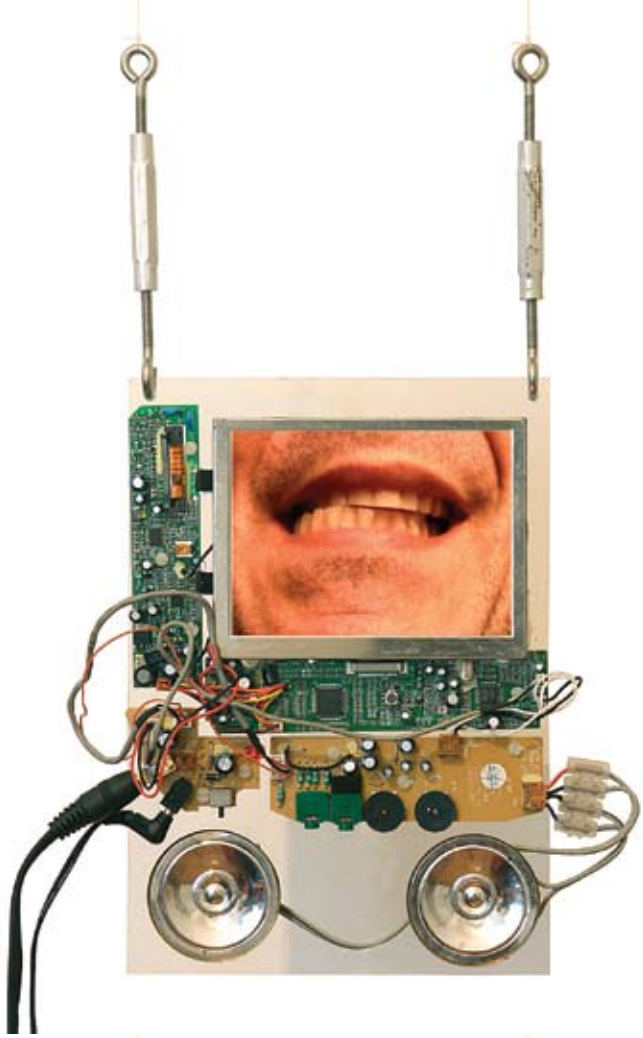
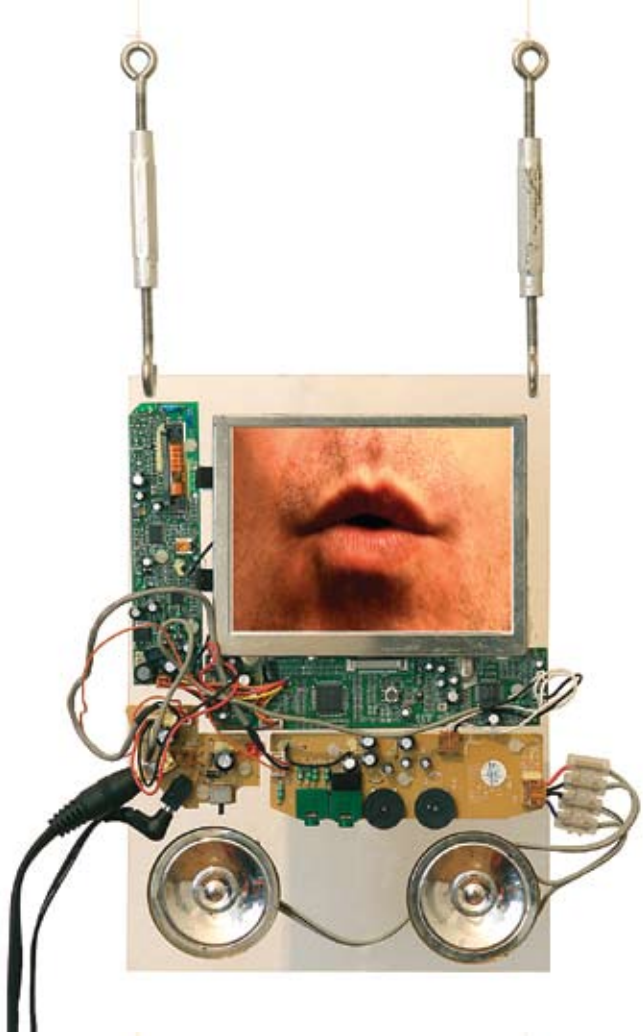
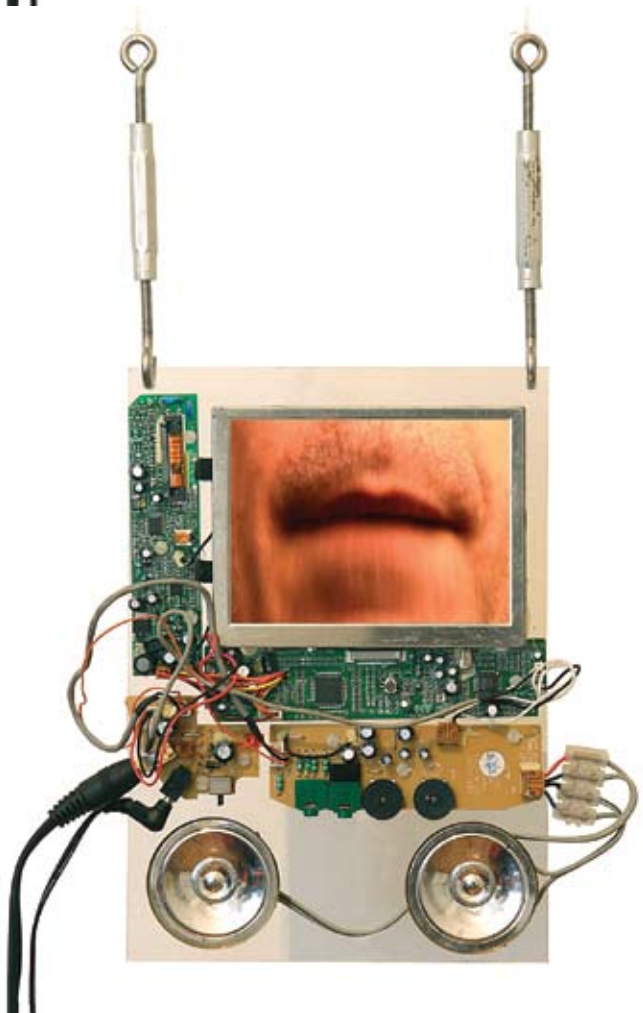
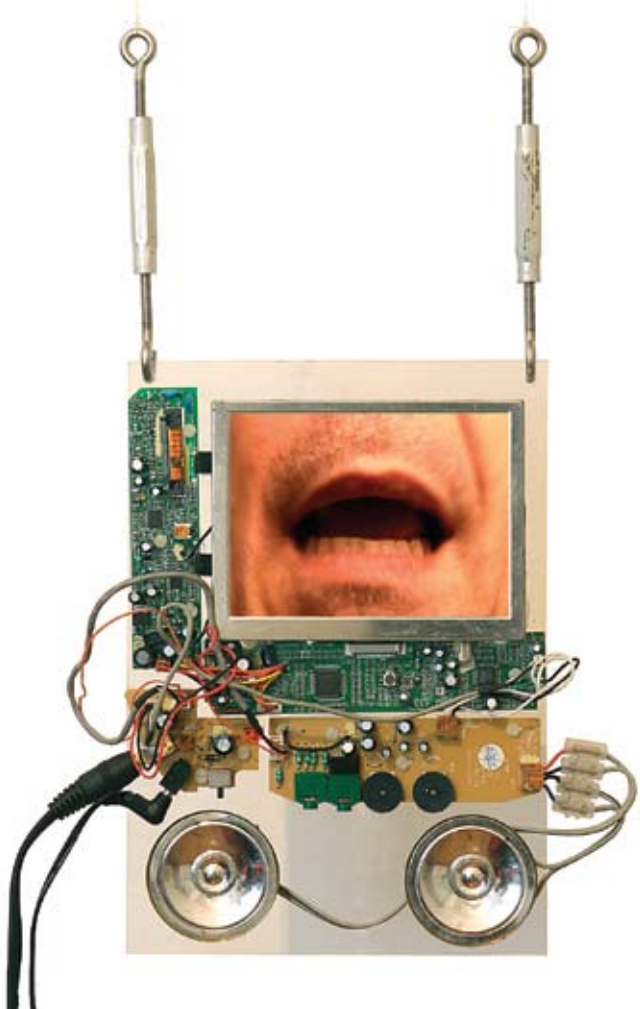
Rockaby from 1981, the scales were evoked by a ten centimetre high mechanised rocking chair, with its shadow projected onto a leaf.[5] Only the notes of Beckett were considered: *"lighting, F, eyes, clothing, posture, balance and voice."* This sequence of manipulations is based on the vulnerabilities of the devices which were operated by contact breakers, switches and cut-out switches, in other words by a combination of more or less rudimentary interfaces. In any case, as was mentioned above, each of these devices depended on batteries which would become depleted in the course of the staging.

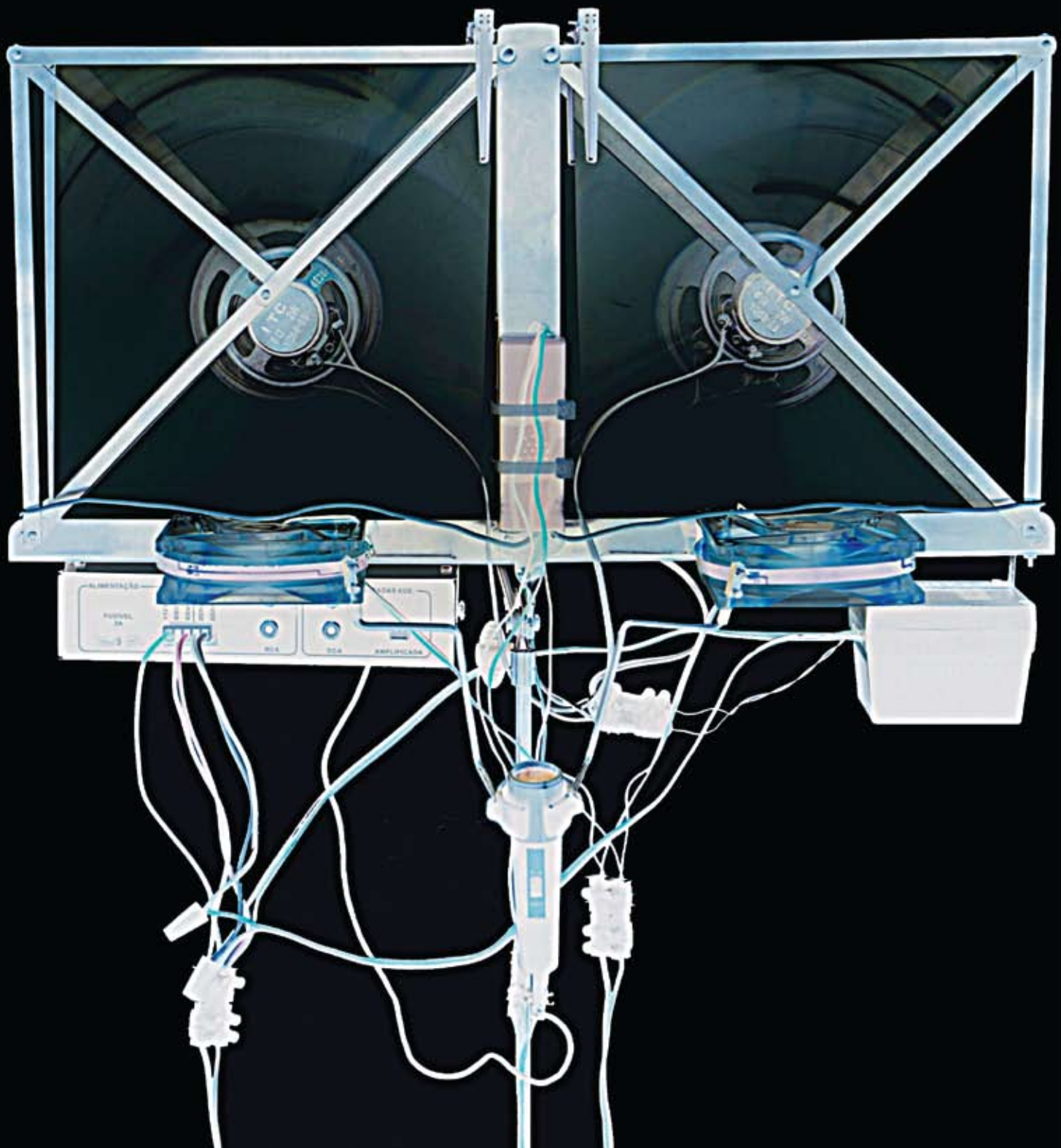
As we know, the history of theatre is intimately linked to technological developments and principally to the use of electricity. If the body of the actor in Beckettian theatre seems to continually escape into the clouds of Ireland and his voice loses itself in a final breath, the stage of the Beckettian theatre could be one of those places gradually abandoned by electricity, leaving little by little, a space for the silence of the darkness.

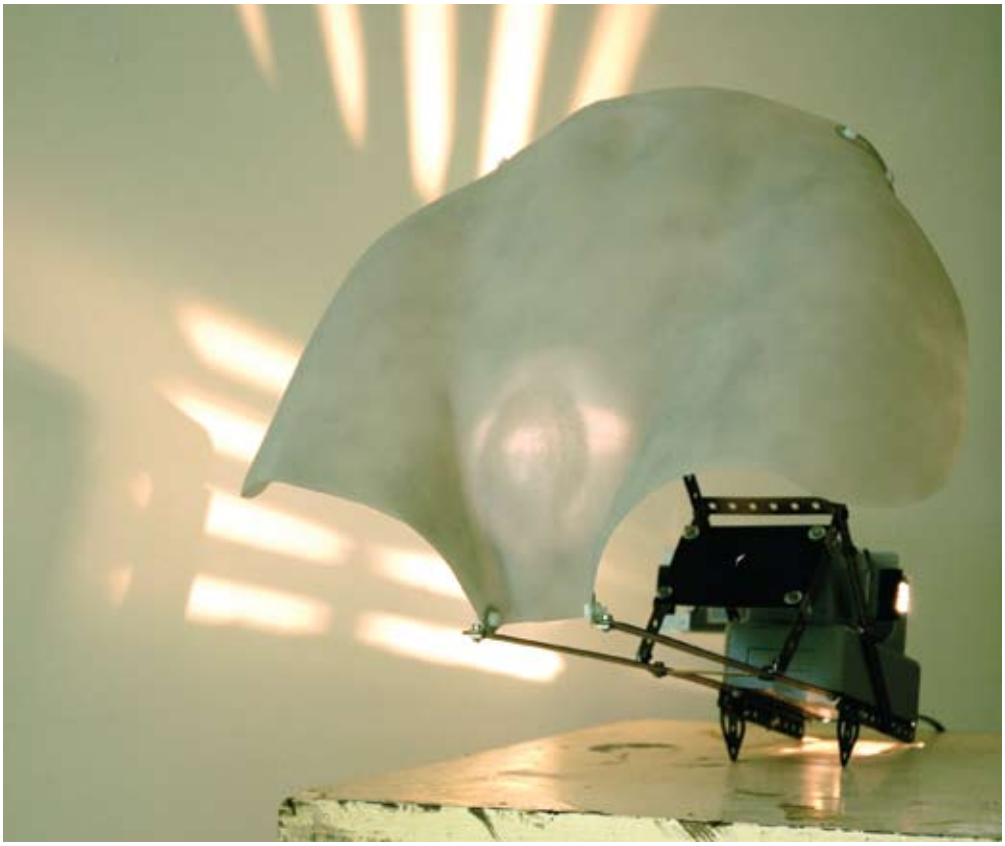
NOTES

1. *Arduino* is a platform based on a simple input/output interface and uses *Processing/Wiring* technology. It is used to construct independent interactive objects, or it can be connected to a computer to communicate with its programs: www.arduino.com
2. Quoted by Maurice Backman, *"Mise en forme d'une pièce de Beckett"*, in: *Cahiers Renaud-Barrault*, n.º 110, Paris: Gallimard, 1985.
3. Samuel Beckett, *Ludovic Janvier*. Paris: Seuil, 1969, p. 66.
4. Samuel Beckett. *La dernière bande*. Paris: Éditions de Minuit, 1959, p. 13, 19, 23 e 24.
5. The first version of this composition was presented in a performance at *Teatro Sérgio Porto*, in Rio de Janeiro in 2001.







***L'Origine du Monde* (2005)**

ACT WITHOUT WORDS II
(p. 62 e 63)
by Samuel Beckett
Mecano, fiberglass and lead
Dimensions: 10 x 50 x 100 cm
Rio de Janeiro (2008)

NOT ME
(p. 64 e 65)
by Samuel Beckett
Video
Dimensions: 17 x 36 cm
Mons, Bélgica (2008)

THE PRESIDENT SCHREBER
(p. 66 e 67)
Sound and light
Dimensions: 50 x 155 x 50 cm
Mons, Bélgica (2008)

THE ORIGIN OF THE WORLD
(p. 68 e 69)
Retroprojected images
Dimensions: 40 x 35 x 50 cm
Rio de Janeiro (2005)

L'Origine du Monde is first and foremost a painting by Courbet. This version of *L'Origine du Monde* is an object that basically comprises a projection, a light or projected image such as on the wall of a pre-historic cave or a cave from Plato myth.

Therefore it deals with the origins of representation: the image of an eye. *L'Origine du Monde* is an eye, the eye that pursues Cain, or simply an eye in the area of the female genitalia, an anatomical approximation created by Georges Bataille in his book *Histoire de l'oeil*, from 1935. The image of the eye in this way becomes the image of the genitalia of a woman that opens and closes, a projection manipulated by the projectionist by means of two slides projected onto a mould of a fragment of the lower part of a woman's body.

L'Origine du Monde here is ultimately, a machine: an electrical, optical and manual machine, a device to be manipulated. This machine is a device made up of a small slide projector, fixed onto the plastic thermo-formed mould of the female body. In affiliation with the work *Étant donnés*[1] by Marcel Duchamp, this machine continues the work of deconstructing the meaning and dismembering the body within the history of iconography and machines. However, it is no longer the cannibal's mouth that swallows and regurgitates the world but his eye. *L'Origine du Monde* is the sex of a cannibalistic woman.

The eye that opens in the area of the sex seems to awaken the figure, in the same way as the Golem created by the Rabbi Judah Loew is roused by the three engraved letters "אמת" on its clay head[2] . In turn, the eye that opens and closes in the genital area signals sleep like the letter erased from the head of the Golem: when the Aleph ("א") is erased, the word *"émet"* ("אמת", or rather, "truth") is transformed into *"met"* ("מת", or rather, *"death"*), for the clay Golem to turn into dust and return to nothing.

In this object, the eye opens and closes like the binary system of representation, consisting of the numbers 0 and 1, of the cybernetic Golem by Norbert

Wierner[3]: "*Everything can be reduced to these two basic signs or interpreted from these. Anything that cannot be expressed in this form cannot constitute information that can be transmitted to the Golem."*[4]

In this way, with the Aleph or by means of 0 and 1, the Golem is a paradigm of the robot. Two eyebrows or two lips, 0 or 1 are all that is required for the machine to pass from inertia to life. In this way, the object presents the metaphor of an alert cybernetic machine.

The passage that begins with the mere history of an eye, in the end becomes the history of a machine, that machine is inscribed in feminine genealogies: Eva and Galateia were made from bones; Olímpia, by Hoffman was made from wax; Vênus by l'Ille de Mérimée was made from Bronze; *l'Eve future* by Villiers de l'Isle-Adam was made from rubber and Electra by Von Harbor from steel.

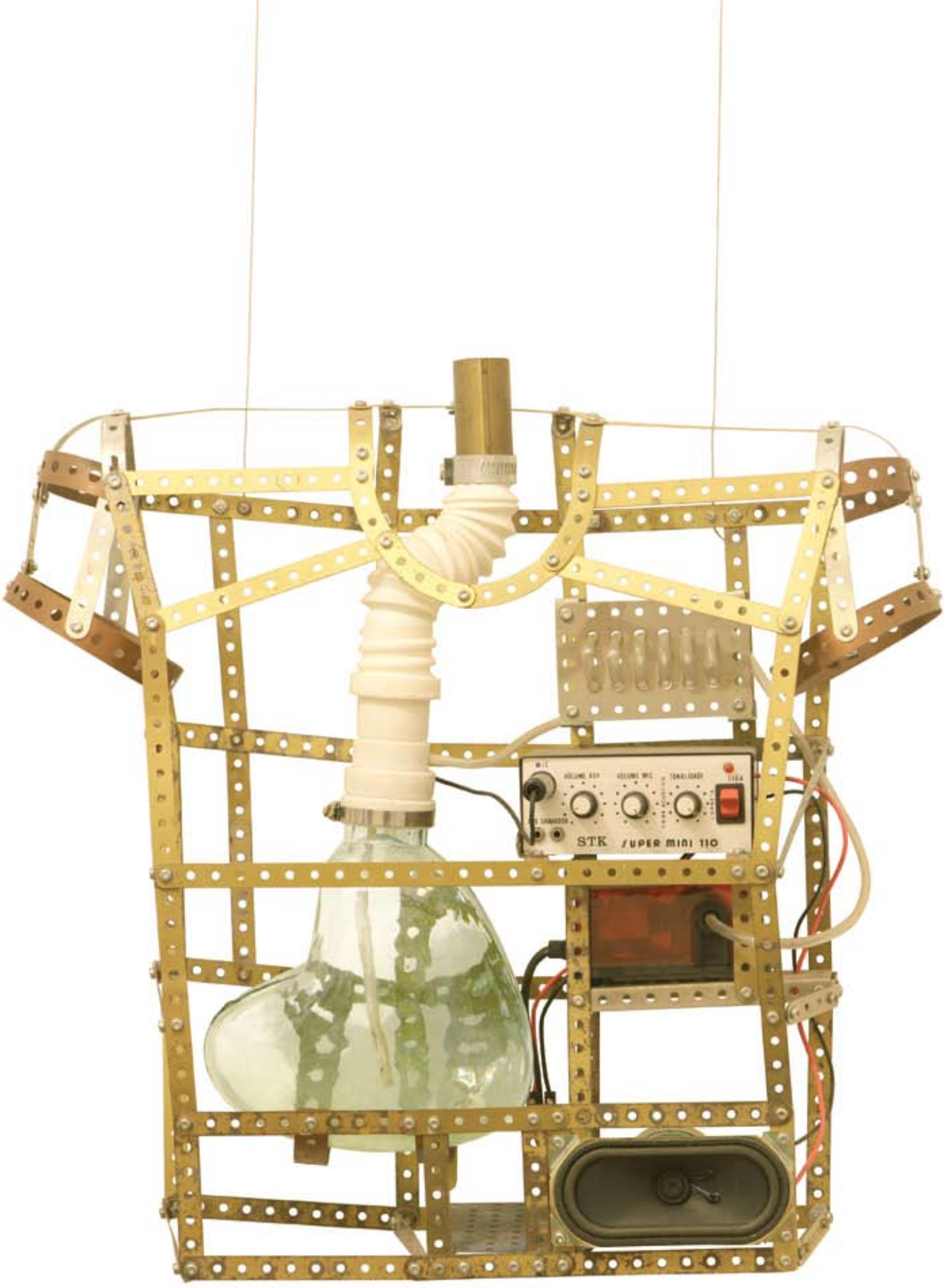
The anatomy of these *"andreides"* or mechanical creatures, in part mythical or literary models, makes one think of the machine used to simulate childbirths that was invented by Madam Du Coudray in 1778. The machine was designed at the time to provide practical training to midwives and expectant mothers. It was an educational tool, a mannequin representing the lower part of a woman's body with appendages which gave a detailed representation of the female anatomy (the womb and the seven month old foetus, or the womb with an imitation of natural births and risky births) as well as the anatomy of the foetus and the newborn baby. The unit was made from fabric and leather, in skin tones which originally were sewn with cotton. The only existing example, that is both unusual and disturbing, is kept at the Flaubert museum of the History of Medicine in Rouen and was a reference model which explains its good state of conservation. Under X-rays, the model reveals the presence of a real pelvis (with a sacrum, the hipbone and femurs) which were hinged to aid manipulation.

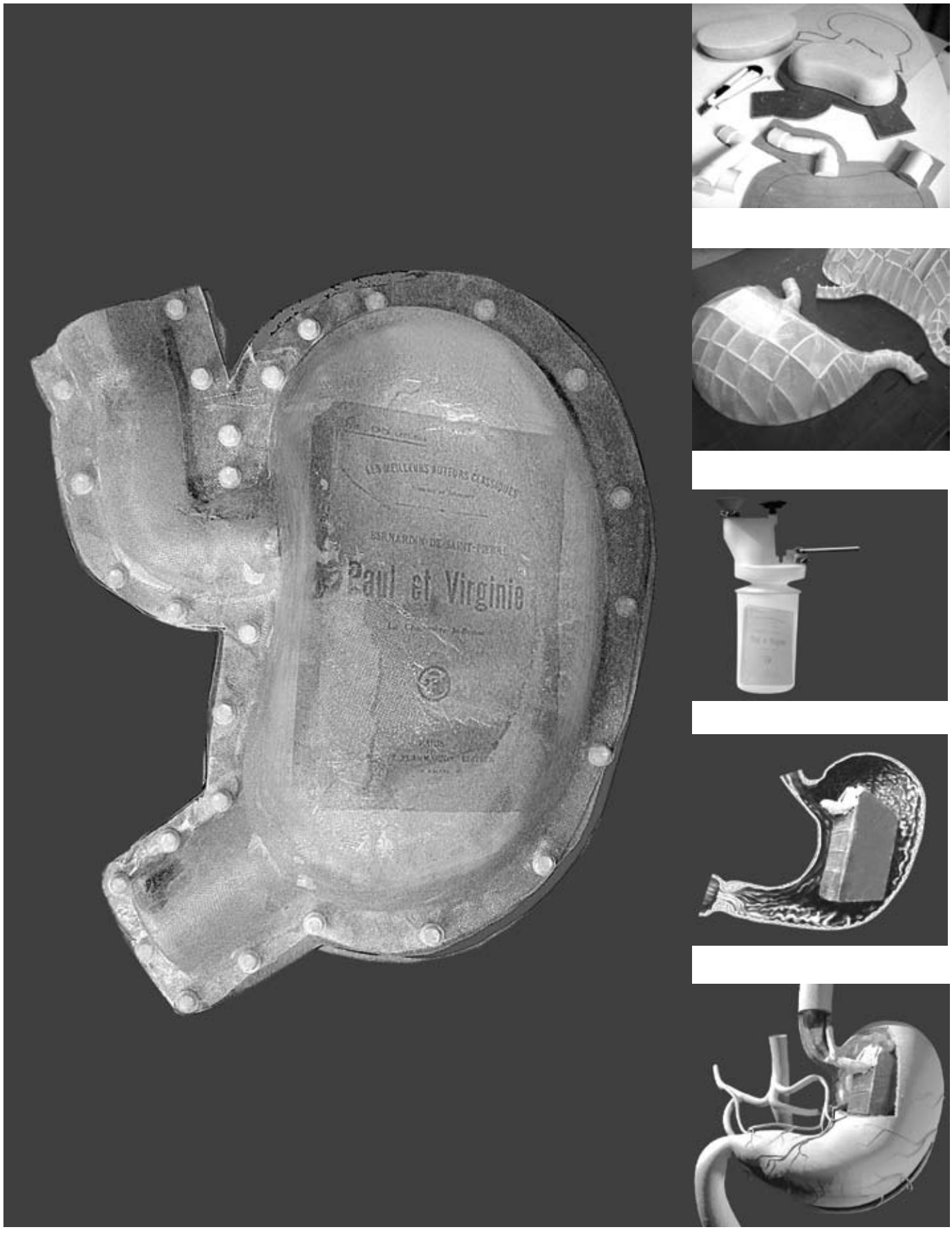
The dual similarity between these two objects reminds us that light also passes through the same orifice where life emerges.

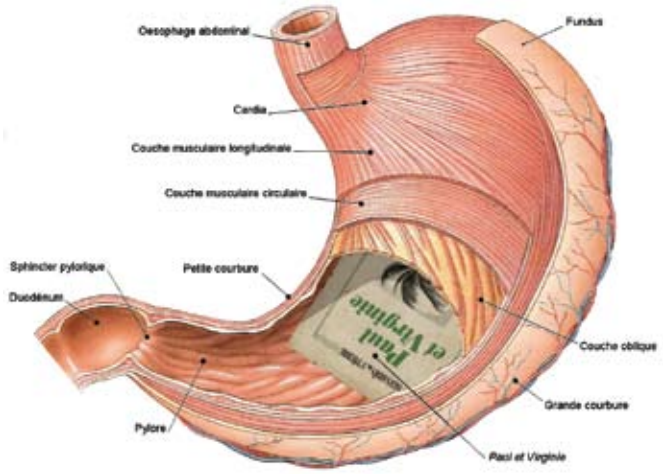
NOTES

1. 1944-1968, *Philadelphia Museum of Art*.
2. The Rabbi Judah Loew (1525-1609) inspired the best-known version of the Golem.
3. Norbert Wiener (1894-1964) is regarded as the "father of cybernetics".
4. Gershom Scholem, *Le Golem de Prague et le Golem de Rehovot, in Messianisme juif. Essays on judaic spirituality.* Paris: Calmann-Levy, 1974, pp. 471-478.

THE SPLEEN
Mecano, glass and plastic
Pomp and sound
Dimensions: 50 x 50 x 15 cm
Rio de Janeiro (2005)


STK SUPER MINI 110


Paul et Virginie



Emma's stomach (2009)

This machine is the stomach of Emma Bovary, the protagonist from the novel by Flaubert. It is a simple machine that depends only on its own mechanism, like a type of automaton.

Emma Bovary's stomach was created as a transparent object. As with all stomachs, it forms part of the digestive system that is in the shape of a bag and is located between the oesophagus and the duodenum. The upper opening is shaped by the cardiac around the entry cavity which allows the stomach to connect to the oesophagus. It also includes a lower oesophageal sphincter interior which prevents reflux. The part of the machine corresponding to the duodenum is sealed around the pyloric sphincter for demonstration purposes, or rather to allow the full functioning of the machine and avoid gastric chyme escaping through the duodenum.

The Emma Bovary's stomach contains the book *Paul and Virginie* by Bernadin de Saint Pierre. This is the main book that she read and is probably the book behind what we call "bovarism". Bovarism is a word inspired by the character in Flaubert's novel and denotes a state of dissatisfaction originating from a distortion that took place in the character of Madame Bovary between the illusions encountering in her reading and the reality outside of fiction.

We can imagine here that the book has been floating in Emma's gastric juices since she was twelve, a little before she arrived at the convent. According to the character's life history, she was probably born around 1814 and so it is possible that she had read a pocket edition before 1826.

THE EMMA´S STOMACH
Prototype
Dimensions: 120 x 50 x 50 cm
Paris (2009)

She have been read out the book during her youth. Based on these suppositions, being the first book that she read, Emma probably did not properly "digest" the book *Paul and Virginie*. The relationship with orality also explains

why this book would have entered through her mouth and passed through her oesophagus. Finally, the stomach would be the bag where the book may have remained blocked on its passage.

The stomach has the shape of a capital "J". It is 15 cm high and when empty has a capacity of 0.5 litres. When it is full, which occurred when this book was ingested, it can contain up to four litres and the size of the machine is in proportion to its content. The upper part forms a dome that receives the gases released by the chemical reaction with the gastric juices. The bulk of the organ is its middle part. There are two curves which can be seen. One small, right curve, vascularised by the arteries and veins of the stomach; and another large, right curve, vascularised by the arteries and gastrointestinal veins. Then the cavity straightens out to form the pylorus.

The stomach normally permits digestion by the mechanical function which promotes the mixing of gastric juices. But in the case of this machine, it is achieved through a decanting process. The function of the gastric juices (composed of water, hydrochloric acid and enzymes) is to dissolve the ink, creating a dark liquid that, once decanted forms a black deposit on the pyloric region of the stomach.

Note that after observing the relative state of conservation of the book in the stomach area, could lead one to think that this was a somewhat undigested read. Certainly the ideal conditions for the duration of this experiment which would allow the recreation of the precise circumstances of digestion would only be reached over a period of 20 years, which corresponds to the time between when Emma Bovary read *Paul and Virginie* and when she died from poisoning.

The intermediary function of Emma Bovary as a reader can be compared to the use of a guinea pig which is progressively injected with poisons. In this sense, the black bile that Emma vomits during her death can in reality be a black ink. As she read, the ink would have become a fundamental part of her being until it eventually killed her.

In Flaubert's novel, it is books which are harmful. The books sellers are described as her potential assassins without any suspicions being directed at the apothecaries. The wholesomeness of her reading is not brought into question until the verdict during the process of *Madame Bovary*. The process of the novels is already presents in the book itself. The mother of Charles Bovary referred to her daughter in-law, Emma's reading as follows: *"Ah! Always busy at what? Reading novels, bad books, works against religion, and in which they mock priests in speeches taken from Voltaire"*[1]. Mother Bovary does not need to take any precautions with son, who also reads and thinks that the harm has already been done to Emma. Therefore she did everything possible to eradicate this disease from her:

THE EMMA´S STOMACH
Draft
Rio de Janeiro (2008)

> So it was decided to stop Emma reading novels. The enterprise did not seem easy. The good lady undertook it. She was, when she passed through Rouen, to go herself to the lending-library and represent that Emma had discontinued her subscription. Would they not have a right to apply to the police if the librarian persisted all the same in his poisonous trade? [2]

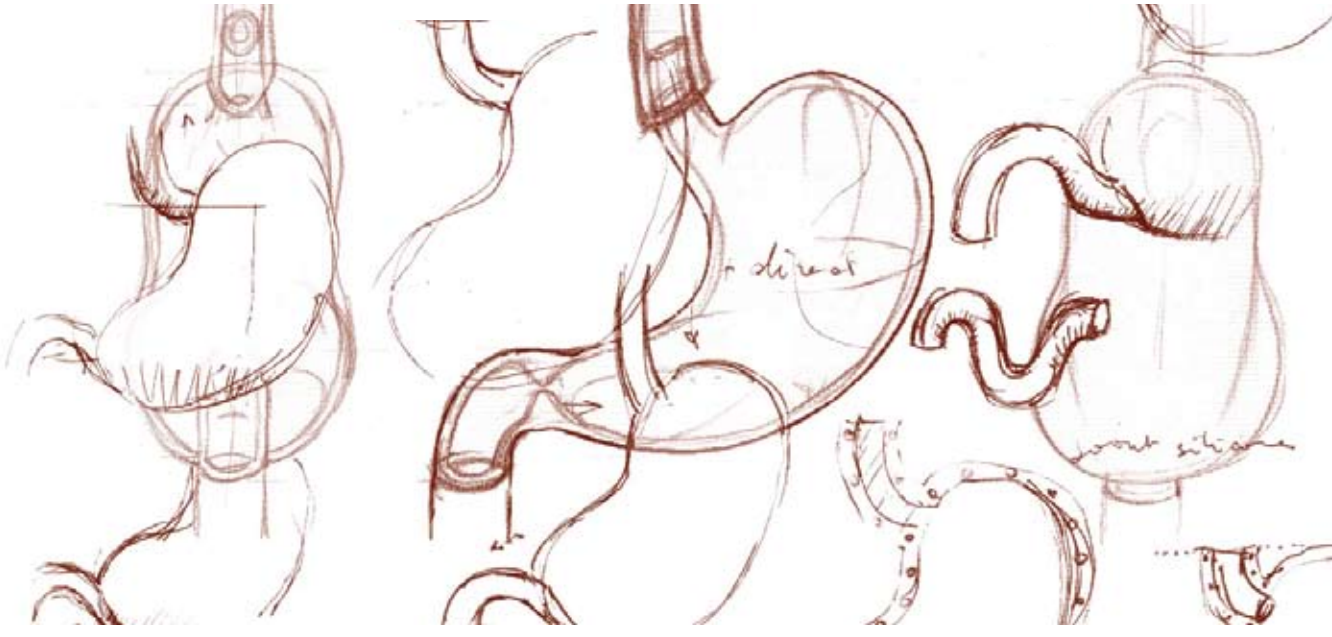
Emma Bovary's poisoning began very early in life, with a dark ink, the colour of the sea during the ship wrecking of Virginie, the heroine Bernadin de Saint Pierre's novel. Then the poisoning continued with the ink of the prayer books and her clandestine reading in the convent. Later and uninterrupted, poisoning occurred with the black ink in the novels of Walter Scott, Lamartine, Balzac, George Sand, Eugène Sue and also a little with the ink in her secret correspondence. The rejection of the black bile, on Emma's death bed, would be proof of this.

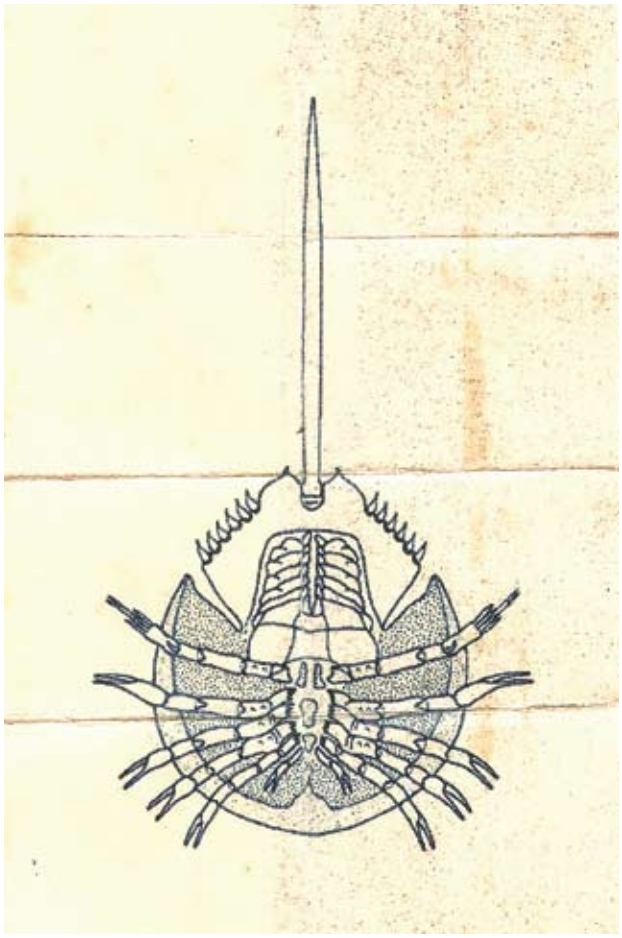
In this sense, the greedy swallowing and regurgitation are not insignificant to the history of the literary event. By using the metaphor that it is the reader who is ingesting ink, another relationship is created between reading and textuality.

On the basis of these observations, the attempt to recreate an organ corresponding to an essential part of the character of this novel, is like providing the public with another reading. By allowing us to not remain on the surface of the shadow of Emma Bovary, this object acts as the beginning of a statement inaugurated by her bowels.

NOTES

1. Gustave Flaubert, *Madame Bovary.* Paris: Gallimard, 2001, first part, chapter. VII, p. 190 [our translation throughout this text].
2. *Ibid.*, ch. VII, p. 190.



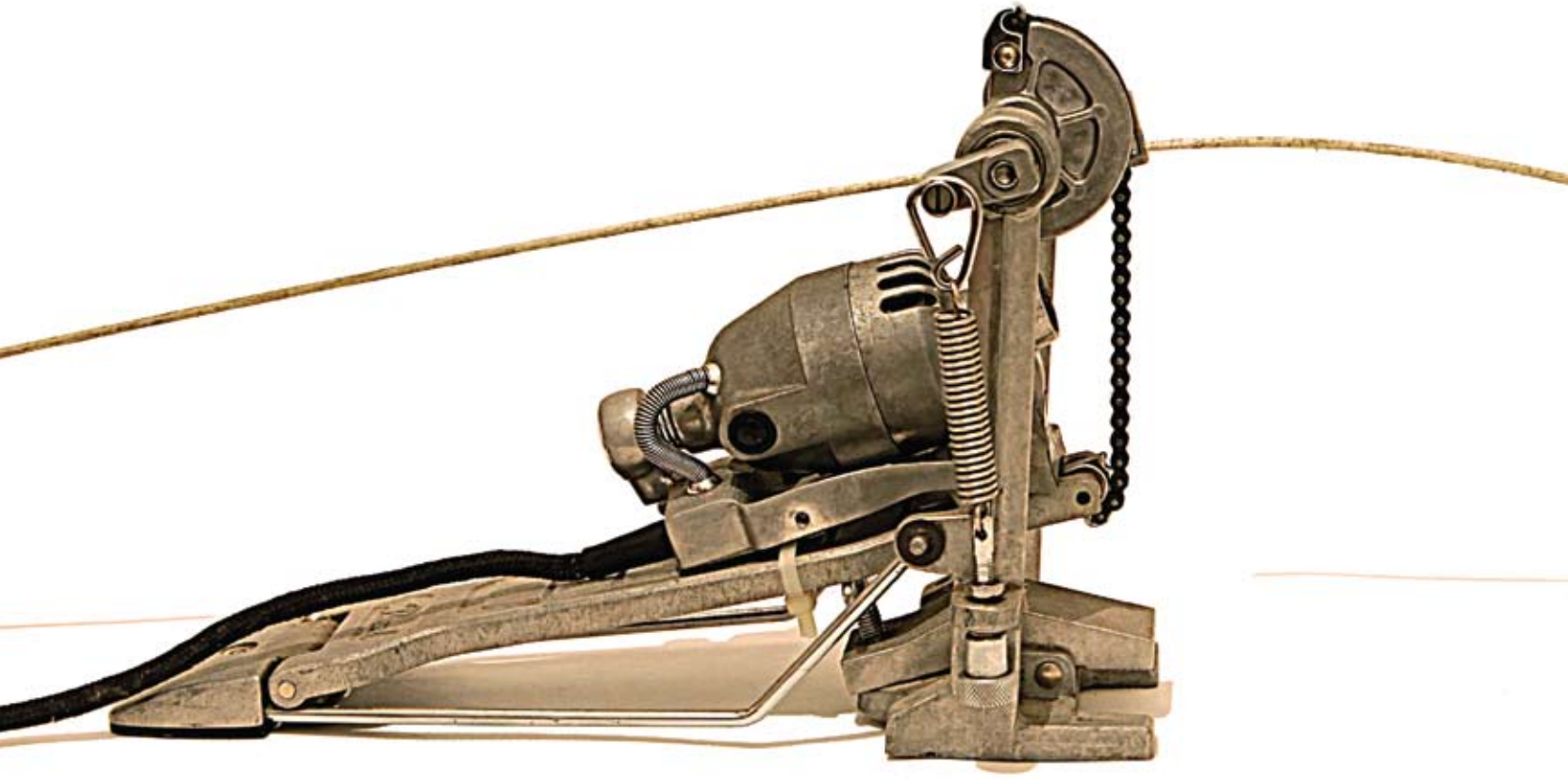


CROSS LEGS
(p. 76)
Mecano and plastic
Dimensions: 70 x 90 x 70 cm
Rio de Janeiro (2004)

THE LEG OF LAVAL
(p. 77)
Fiberglass, metal, wax, tubes and cables
Dimensions: 50 x 145 x 30 cm
Rio de janeiro (2004)

HORSESHOE CRAB
(p. 78)
Responds to signals from remote control
Dimensions: 15 x 8 x 30 cm
Rio de Janeiro (2007)

THE WADER
(p. 78)
Responds to signals from remote control
Size: 60 cm
Rio de Janeiro (2006)



LES MOULES MALIQUES
(p. 80 e 81)

Metal, magnet, wood
and paper

Size: 65 cm of diameter

Rio de Janeiro (2006)

ADJUSTABLE
INTERVAL TIMER
(p. 82)

Mecano and plastic

Dimensions: 40 x 90 x 40 cm

Rio de Janeiro (2005)

THE PROTOTYPE OF THE
LEFT HAND OF PADRE
ANTONIO VIEIRA
(p. 83)

Metal, wood and plastic

Dimensions: 70 x 145 x 70 cm

Rio de Janeiro (2007)

THE BACHELOR´S FOOT
(p. 84 e 85)

Metal, fiberglass and wood

Dimensions: 15 x 20 x 170 cm

Rio de Janeiro (2005)

In praise of the Ventriloquist's stomach

These days galleries and art are more than ever being invaded by installations replete with pretences and phantoms which are similar to the seemingly lifeless effects of magicians and illusionists. The practice of illusion and special effects, such as disappearing bodies, voices gestures and finally reality should in fact be considered a part of the genre of the illusions and tricks which has been practiced since the 19th century at attractions such as popular fairs.

In contrast to the morbidity of these games with masks and the puerility of these metaphors, using the simplicity of certain objects, such as dolls and robots, this work proposes several metamorphosis projects. In a certain way, at a time when artists seem to be ever more determined to use the possibilities offered by technology, it is interesting to see how a simple mechanical effigy can finally bring the human body back to the stage. And it is in this sense that the family of objects discerned in this project reveals technical issues, mirrored representations and questions the relationship with the viewer thanks to the parallels is establishes with robotics.

Paradoxically, of all of these machines, the object most like a robot in the sense of an "internal machine" is without doubt the least anthropomorphic object. This object, called *The ventriloquist's stomach*, was created and exhibited in various situations between 1999 and 2004. It went through a number of versions. The prototype was created in Los Angeles and as part of the scenery for the performance *Theatre of the Ears* and it was completed in 2003 for a temporary installation at the *Centre d´Art et d´Essai* in Mont Saint Aignan, France in 2004.

The idea was to create an organic form using an inflatable structure that also had sound and illumination as if it were suspended in the air and was operated by imperceptible vibrations. Noise was created by the combination of electricity, motors and air inflating a large plastic pouch. Its sounds were amplified and

X-RAY
Dimensions: 30 x 40 cm
Valencia, California (1999)

THE BLACK PLASTIC BAG
Dimensions: 4 x 6 x 3 m
***INSA*, Rouen, France (2004)**

the intention was to turn the device into a real organism that in turn would become an actor. The disincarnation of the ventriloquist was represented simply by the machine that symbolised his stomach and which functioned not solely as a metamorphosis but also as an allegory.

This installation was based on an instinct voiced in the *Theatre and the plague* by Artaud for a silent and temporarily incomprehensible tragedy. For Artaud, silence is not necessarily the absence of noise and the removal of the body does not necessarily mean its full disincarnation. In accordance with this presumption, the presence of a body in this project was maintained in the form of a large stomach, a bag, as the source of the sounds and noises of a tragedy. The ventriloquist is the person who can speak and whisper without moving his lips, but in a voice that appears to emanate from his stomach.

> Perhaps there are scientists who are attempting to deconstruct miracles for entertainment. In a tale by Jean Richepin, a slightly mad builder constructed a human larynx and an oral cavity in an enormous warehouse, which were driven by the bellows from a forge with huge pieces of leather imitating the tongue and cheeks. This combination should be capable of saying aloud "In the beginning was the word" […] The aim of cybernetics is to simulate the mechanisms of life not to laugh at them, to understand them and then to be able to adjust them. If the fans of cybernetics were to construct a larynx, they wouldn't do this in a warehouse. They would create it in all its marvellous miniscule details, the design would have fixtures for cables, an assembly plan and an inventory of every loose component. [1]

Just as in this object, the stomach of the ventriloquist substitutes the larynx, not as a laboratory machine, but as an entertainment machine, without being concerned about whether it works in a real or illusory manner. If we cannot deconstruct miracles for entertainment, or simulate the mechanisms of life to make us laugh, then why do we attempt to understand them?

> Wouldn't it be (foolishly?) tempting to want to marry the celibate machines to each other? To connect a machine by Raymond Roussel to a machine by Jarry? To extend the machine (for typing or torture) from the Penal Colony [Kafka's] with a drawing machine by Tinguely? 2

The temptation here concerning the ventriloquist's stomach is to draw up its assembly plan, attach fixtures for cables and create the inventory of its loose components, to design, in a formulaic manner a hypothetical tragi-comical and cybernetic machine.

The connections are concentrated on the surface of the stomach, where there are four fans and four loud speakers. The sound of its breathing is captured by a microphone by means of four small tubes. Then the sound is amplified and distributed across the surface of the stomach. The organ ma-

chine retains a direct connection with the source machine: it is a machine that breathes and growls.

This group of works acts contrary to studies of anatomy and the dissection of corpses. It is the result of an exercise in assembly and reassembly, piece by piece, of the simulacra of metaphorical mechanisms. For this reason these machines do not have decorative features, in order to preserve their technical and functional aspects. The device is simply revealed in a "raw" manner, at times almost coarsely and without stylisation. The approach of the group of these artistic projects aims to reinforce the idea of the marionette in its archaic sense as opposed to the fabrication of very sophisticated robots which are generally created from an self-referring perspective with respect to their own technological possibilities.

> There are machines everywhere and not just in a metaphorical sense: machines of machines with their links and connections. The organ machine is linked to a source machine: one emits a flow and the other joins to this. The breast is a machine that produces milk and the mouth is a machine that joins to the breast. The mouth of the anorexic oscillates between an eating machine, an anal machine, a speaking machine and a breathing machine (asthma attack). And so we all are handymen, each with our own little machines. An organ machine for an energy machine, always flowing and interrupting. President Schreber has rays from the sky in his backside. A solar anus. And you can be sure that it works. President Schreber feels something, produces something and can theorise about this. Something is produced: the effects of machines and not metaphors.[3]

In *The Ventriloquist's Stomach*, the interior and exterior are joined in a closed circuit. Motor and motor functions are perceived as being identical. When in operation, this machine is more than a metaphor, it is a representation of its own manner of existence in life.

As has already been asserted, robotics is a discipline that refers principally to itself, just as many other scientific disciplines. Marionettes help us to discover that it is not only in cybernetics or science fiction that we need to search for the origins of these machines, but also in literature or cinema, in the production of fictional beings in general. In this way, this group of works attempts to base itself on literature and theatre as fields of knowledge, to take the machine out of its isolation. In this sense, technology cannot function as a mirror without imagination and words.

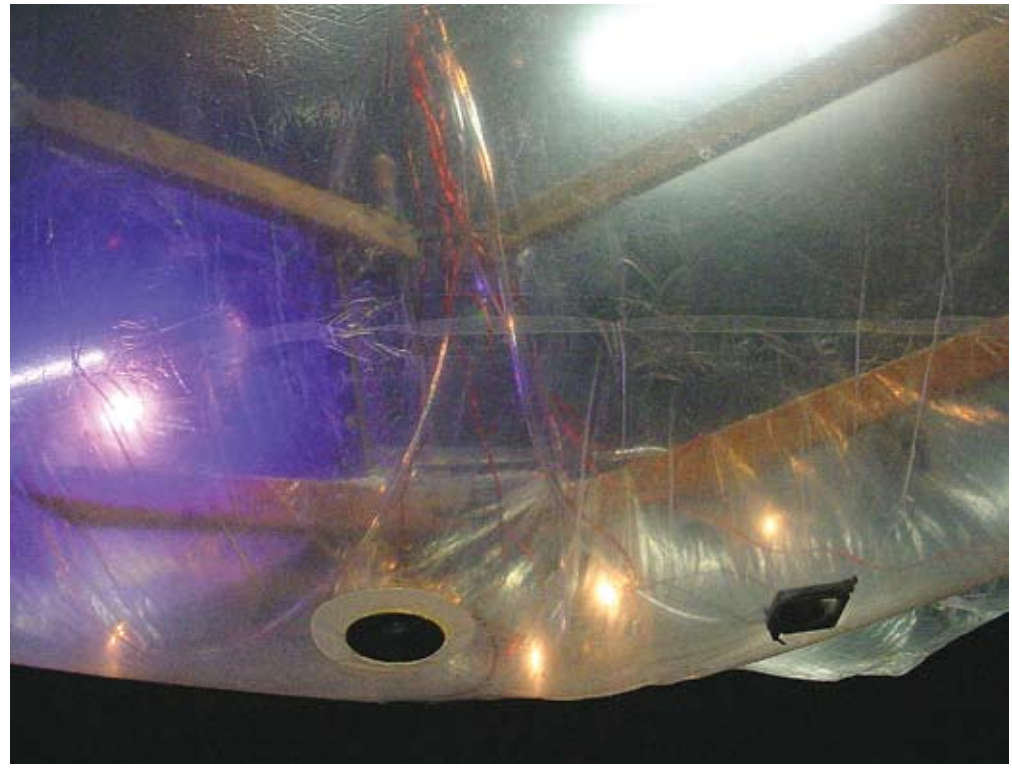
Marionettes, automatons or robots, through their contours and movements are machines which are suited to communication and entertainment. This endows them with an inalienable and spectacular quality. If there was still a long history of success ahead for entertainment in popular fairs and theme parks, we would eventually need to demystify these monsters within this continuity and learn how to appreciate these new creatures.

The technical make-up of the machines that I invented and constructed attempts to essentially pose the question of assembly and contrast the free-will of the artist with the determinism of his technical assumptions. This ambiguity derives from the illusion of a new form of free-will of the machines, through new paths, in the practices involved in new technologies.

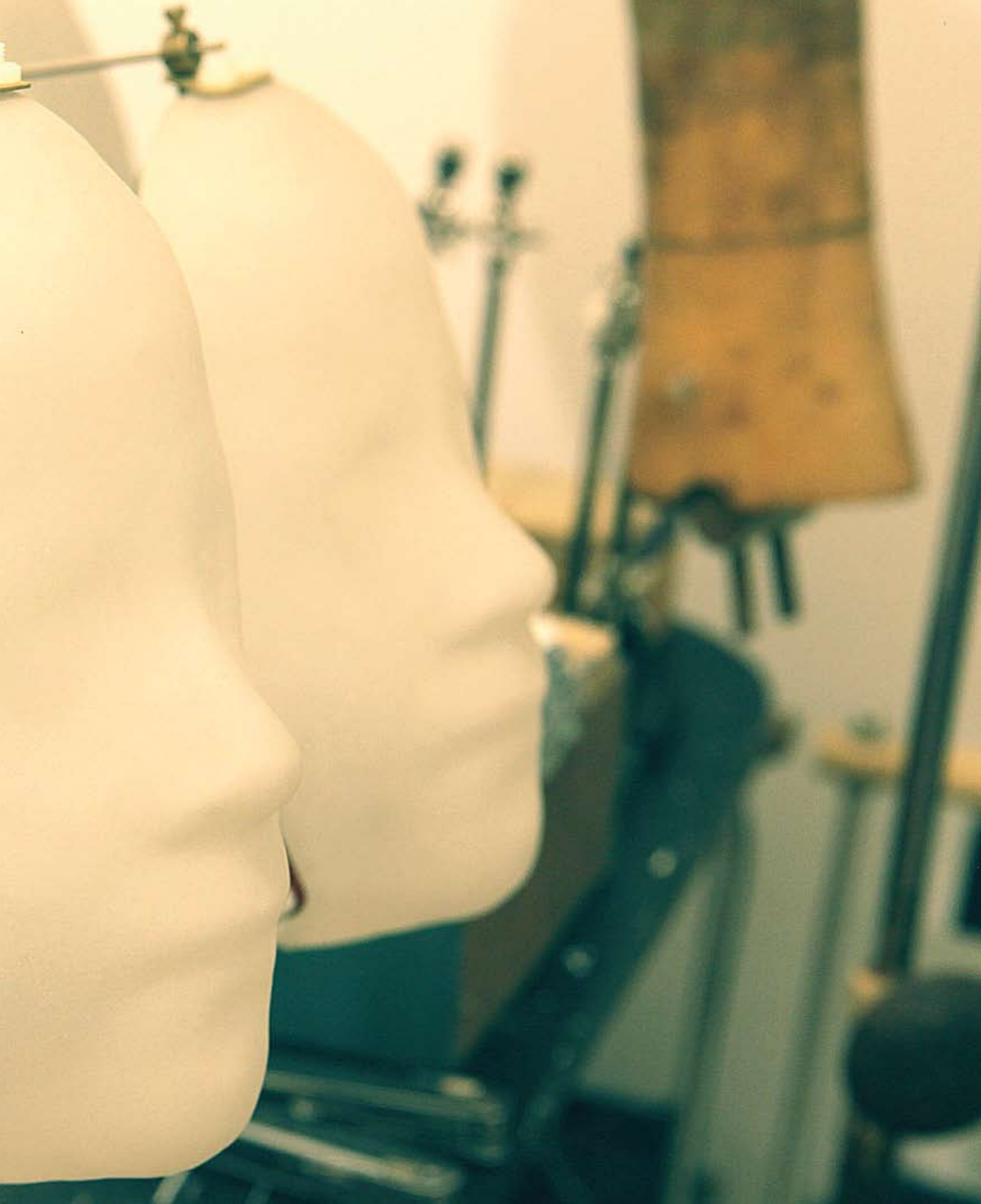
Zaven Paré

NOTES

1. David Aurel. *La cibernétique et l'humain*. Paris: Gallimard, 1965, p.92.
2. Gilbert Lascault. *« De prolonger les mécanismes / la baise / la non-baise / la peinture / les jeux de mots / etc...*
   Mariages? ». In: *Les machines célibataires*. Paris: Musée des Arts décoratifs, 1975, p. 119.
3. Deleuze, G. e Guattari, F. L'anti-Œdipe. *Capitalisme e schizophrénie*. Paris: Minuit, 1972, p. 7 [our translation].



THE VENTRILOQUIST`S STOMACH
Air, light and sound
Unlikely dimensions
Various locations (1999)



The text of the present catalog have been published in other versions, for the *Théâtre des Oreilles Program*, Charleville Mezières, France, June 2001; in the magazine *Alternatives théâtrales*, n°. 72, Brussels, Belgium, April 2002; in the catalog of the exhibition "Making of", at the *Centre d´Art et d´Essai* / *Scène Nationale,* Petit Quevilly, France, October 2004; in the journal *Manip, Le journal de la marionnette*, special issue 01, Paris, September 2006; and online for the University of Rouen: http://flaubert.univ-rouen.fr/derives/mb_pare.php,avril,2009.

About the installations

The Observer

"Theater of the Ears" Valère Novarina, 11st – 13rd of November 1999, Center for New Theater, CalArts, Valencia, California, 13rd – 24th of September 2000, La Mama ETC, The Henson International Festival of Puppet Theater, New York, *"Le théâtre des oreilles"*, 5th – 6th of June, *Institut International de la Marionnette,* Charleville Mézières, 9th – 10th of June, *Biennale Internationale de la Marionette, La Ferme du Buisson*, Noisiel; 6th – 28th of July 2001, *La caserne des pompiers*, Festival d'Avignon, "The electronic puppet", 5th -16th of June 2002, *Institut International de la Marionnette*, Charleville Mezieres, France; *"O ator biônico"*, 25th of October 2003, *Festival de Bom Boneco*, *Parque das Ruínas*, Rio de Janeiro, "Making of", 25th of October – 13rd of November 2004, *Centre d´Art et d´Essais* / *Scène Nationale*, Petit Quevilly, France; *"Marionnettes et robots"*, 15th -19th January, *CENC*, Mons, Belgium; *"The Electronic Marionette"*, 11st of May, *Maison de France*, Oxford; "*Fabrication de marionnettes robotisées"*, 17th – 18th November, *DESS marionnettes*, UQAM; LANTISS 14th of November, *Université de Laval*, *"Dans la salle des machines"*, 29th of November 2007, *CIAM*, UQAM, Quebec *"Art robotique"*, 8th of February, *Les Tricoteries*, Le Favril, France; "The Electronic Marionette", 18th of November, UNC, Chapel Hill, North Carolina; "Ghost Buster", 28th of November 2008, *Laboratoire Effets de Présence*, UQAM, Quebec; *"Madame Bovary est une machine"*, 19th of March 2009, Université de Metz, France.

The Vehicle

"Le vehicle Dominique Pinon", 24th of September 2003, F*estival Mondial de la Marionnette*, Charleville Mézières; *"La scène"* of Valère Novarina, *L'Equinoxe*, Chateauroux; *Théâtre de la Garonne*, Toulouse; *Le Forum*, Meyrin; *Maison des Arts*, Thonon les bains; *La ferme de Bel Ebat*, Gyancourt; *Théâtre de la colline*, Paris; *La Rose des Vents*, Villeneuve d'Ascq; *Maison de la Culture*, Amiens, France; *Théâtre de Vidy*, Lausanne, Switzerland; in 2004: *Théâtre d´Evreux*, Evreux; *La filature*, Mulhouse; *Le Parvis Saint Jean*, Dijon; *Centre Dramatique Régional*, Tours; *La coupe d´or*, Rochefort; *Théâtre National Populaire*, Villeurbane, France; "Making of", 25th of October – 13rd of November 2004, *Centre d´Art et d´Essai* / *Scène Nationale*, Petit Quevilly, France; 15th -19th of January 2007, *CENC*, Mons, Belgium.

El coloquio de los perros

"La marionnette électronique", 16th of July 2002, T*héâtre de l'Institut International de la Marionette*, Charleville Mézières; *"Le colloque des chiens"* by Cervantes, 24th of September 2003, *Festival Mondial de la Marionette* in Charleville Mézières; *"Le colloque des chiens"*, 15th of October 2003, Le Fresnoy, Tourcoing; *"Le colloque des chiens"*, 25th of October – 13rd of November 2004, *Centre d´Art et d´Essai / Scène Nationale*, Petit Quevilly, France; 15th -19th of January, *CECN*, Mons, Belgium; *"Acteur/ Marionnette/ Robot"*, 23rd of January 2007, INAH, Paris; 8th of February, *Les Tricoteries*, Le Favril, France; 1st of August 2008, *AAL*, Mexico City.

Der Jasager

"Celui qui dit oui" by Kurt Weill and Bertolt Brecht, 25th of October – 13rd of November 2004, *Centre d´Art et d´Essai / Scène Nationale*, Petit Quevilly; "Work in Progress", 26th of June – 10th of September 2006, *Parque das Ruínas*, Rio de Janeiro.

The Legs of São Sebastião

"Making of", 25th of October – 13rd of November 2004, *Centre d´Art et d´Essai/ Scène Nationale*, Petit Quevilly, France.

The Origin of the World and The Pineal Gland

"Work in Progress", 26th of June – 10th of September 2006, *Parque das Ruínas*, Rio de Janeiro; *"Homunkuli"*, 16th of September – 22nd of October 2005, *Kunst Theodor Lindner Art*, Rio de Janeiro.

The Wader

De Souza Lindner Art Project, Rheinberg, Germany.

The Spleen and Adjustable Interval Timer

"Work in Progress", 26th of June – 10th of September 2006, *Parque das Ruínas*, Rio de Janeiro.

Not Me, Words without acts II and the President Schreber

"Presque l´intégrale jusqu´à l´épuisement des piles" by Samuel Beckett, 13rd of March 2008, *VIA Festival*, Mons, Belgium.

Quad

"Fabrication de marionnettes robotisées", 17th -18th of November, *DESS - marionnettes*, UQAM, 14th of November, LANTISS, *Université de Laval*, *"Dans la salle des machines"*, 29th of November 2007, *CIAM,* UQAM, Quebec, *"Presque l´intégrale jusqu´à l´épuisement des piles"* by Samuel Beckett, 13rd of March 2008, *VIA Festival*, Mons, Belgium.

Credits

The Observer

Face: Valère Novarina
Technical direction: Bill Ballou e Michael Casseli
Technical consultation: Cécile Bouchier
Programming consultation: Astra Price
Technical coordination of the project: Joseph Shannon
Assistant technical direction: Justin Jenkins

The Vehicle

Face: Dominique Pinon
Technical consultation: Achille Zaoner

El Coloquio de los perros

Face and voice: Diego Jáuregui
Filming direction: Annabel Castro
Video Editing: Jorge Hauss e Sylvio Arnault
Sound Editing: Lalo Meléndez e Damien Seth
Technical direction: Bill Ballou e Michael Casseli
Technical consultation: Cécile Bouchier
Electronic consultation: Geoff Hicks

Der Jasager

Face and voice: Laura Paré
Sound Editing: Damien Seth
Technical consultation: Marina Kosovski
Assistant technical direction: Achille Zaoner

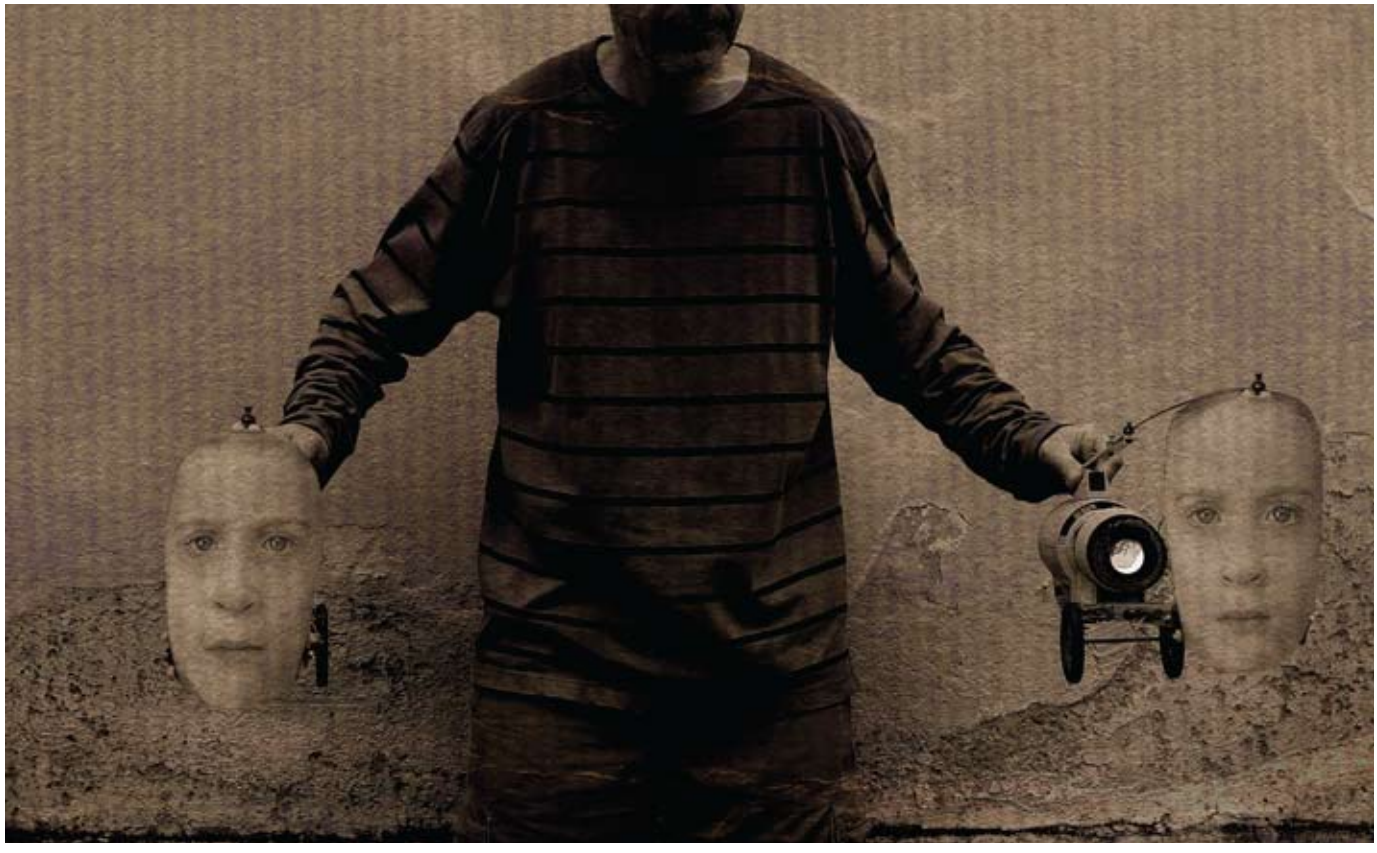
The Origin of the World

Eye: Tatiana Bond

Not me and *Quad*

Programming consultation: Yoann Saura e Julio Lucio
Programming consultation: Nicolas Guichard

"The Observer" and *"El Coloquio de los Perros"* were co-produced by the Cotsen Center for Puppetry, CalArts in 1999 and 2001, "The Vehicle" and *"El Coloquio de los Perros"* were co-produced by the I*nstitut International de la Marionnette* in Charleville Mezieres in 2002 and 2003; "*Der Jasager"* was co-produced by *RioArte* and the *Centre d´Art et d´Essai* de Mont Saint Aignan in 2004, and *Quad* and Not me, were co - produced by the *Manège* (*CENC* / *Maison Folie*) Mons. All of these productions were co-produced by *Locus Solus Produções Artísticas* since 2001.



Biography

Over the past ten years, Zaven Paré has presented his work in various Art Centers and Universities:

- The Californian Institute of the Arts (CalArts) in the Department of Performing Arts and the Cotsen Center for Puppetry in Los Angeles and the University of North Carolina at Chapel Hill in the Department of Arts, USA;

- The University of Quebec in Montreal (UQAM) in the Department of Design, the Department of Theater and the Puppet Master, for the *Effets de Présence Laboratory*, the *Center Inter Universitaire des Arts Médiatiques (CIAM)* in Montreal; the University of Laval in of the *Nouvelles Technologies de l'Image, du Son et de la Scène Laboratory (LANTISS)* in Quebec City, Canada;

- The *Casa Vecina* and the *Arte Alameda Laboratory (LAA)* in Mexico City;

- The Pontifical Catholic University in the Engineering Department and the Department of Industrial Design; the Candido Mendes University in post graduation of Photography and the post graduation of Art and Culture; and for the *Universidade da Cidade* University for post graduation in Dance in Rio de Janeiro;

- The *Centre d'Écriture Contemporaines Numériques (CECN*) in Mons, Belgium;

- The International Institute of Puppetry in Charleville Mezières; for the *École Régionale Supérieure d'Expression Plastique (ERSEP)* and for the School of Le Fresnoy in Tourcoing; for the University of Valenciennes for the Master in Digital Set Design and at the *Institut National de Sciences Appliquées (INSA)* of Rouen;

- The Museum of Decorative Arts; for the *Sorbonne-Paris III* in the Department of Theater, at the University of *Paris X-Nanterre* for *ARTMAP* Laboratory and the *Institut National d´Art et d´Histoire (INAH)*, Paris;

- *Maison de France* in Oxford.

Zaven Paré was a student of the *École Nationale Supérieure des Beaux Arts* in Paris, he received education in Fine Arts and got a Masters Degree from the University of *Paris VIII-Vincennes*, and holds a PhD from the University Paul Verlaine of Metz.

He get twice the grant *"Étant Donné"* from the French American Fund of Performing Arts, the grant of *RioArte* from the city of Rio de Janeiro, in the category Art and Technology, and the grant of the *Villa Kujoyama* in Kyoto in Japan.

THE CATHODIC PUPPET
Televisions and cables
Dimensions: 50 x 25 x 25 cm
Mons, Belgium (2007)