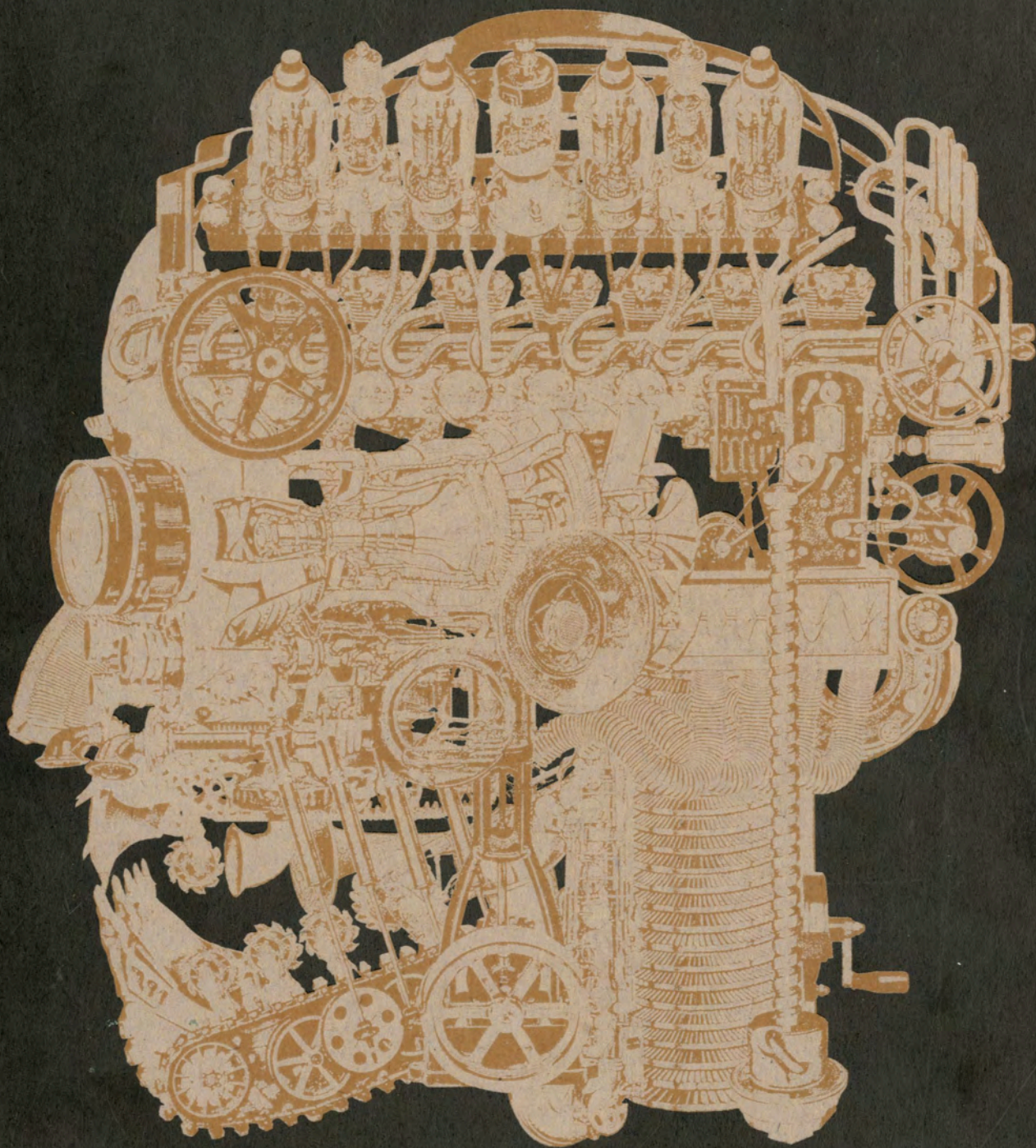
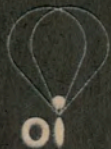


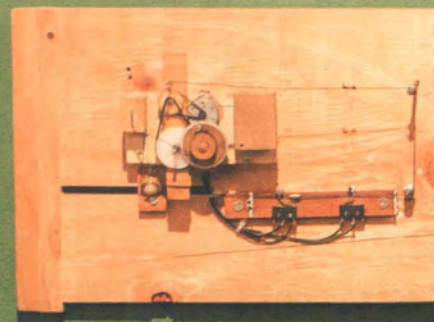
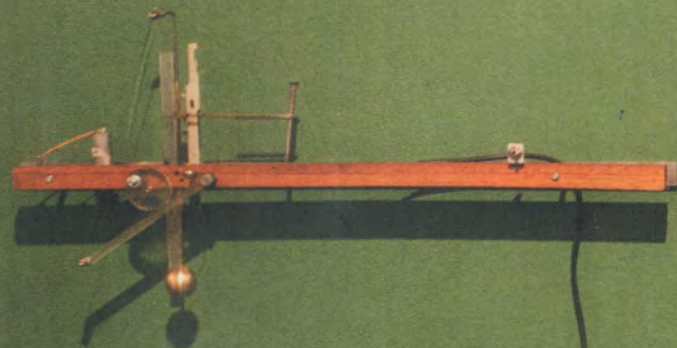
GAMBIÓLOGOS 2.0





FUTURO





JOSEPH MORRIS

MERE THINGS (MERAS COISAS)

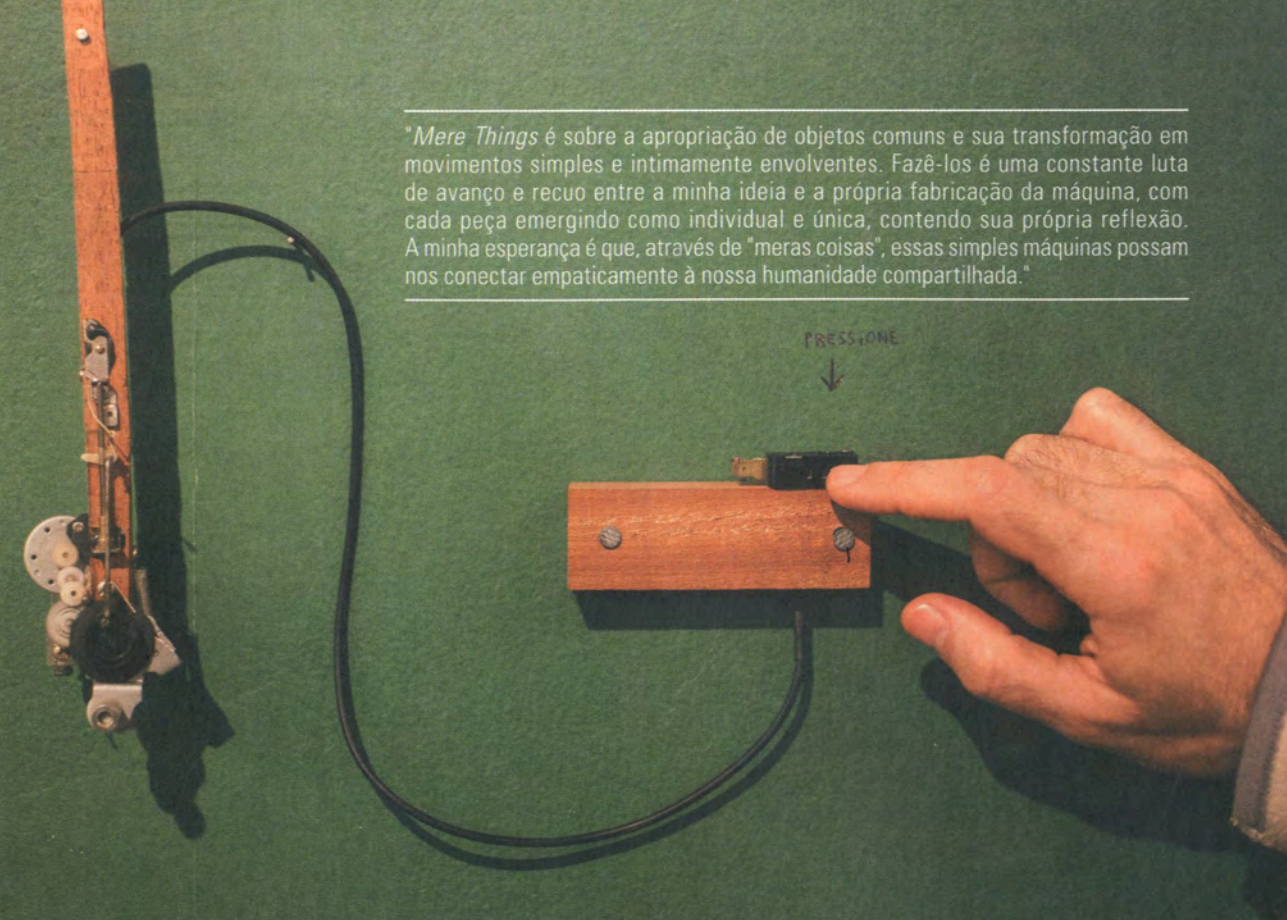
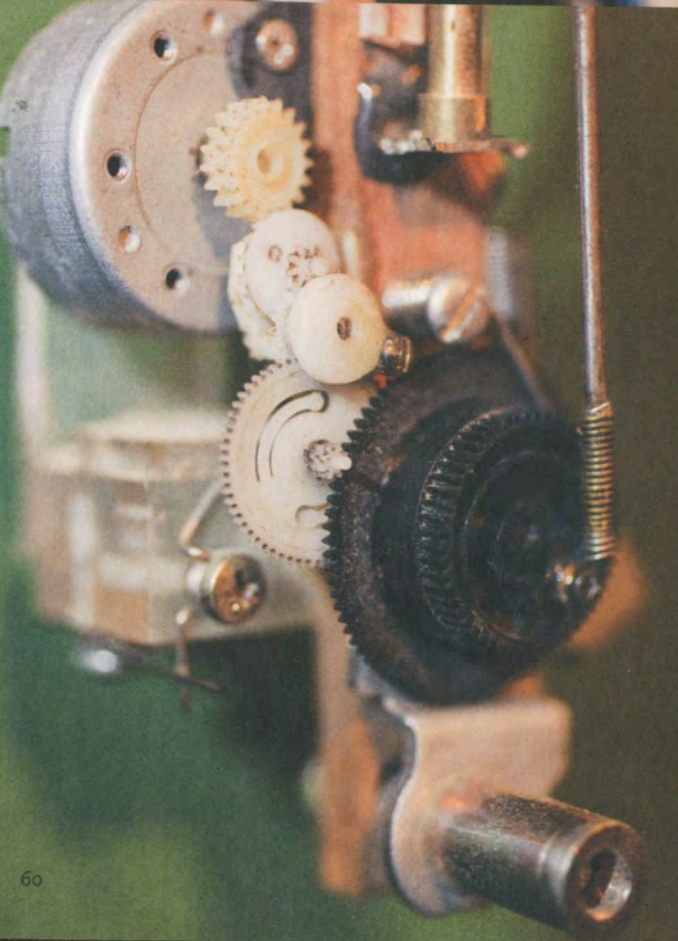
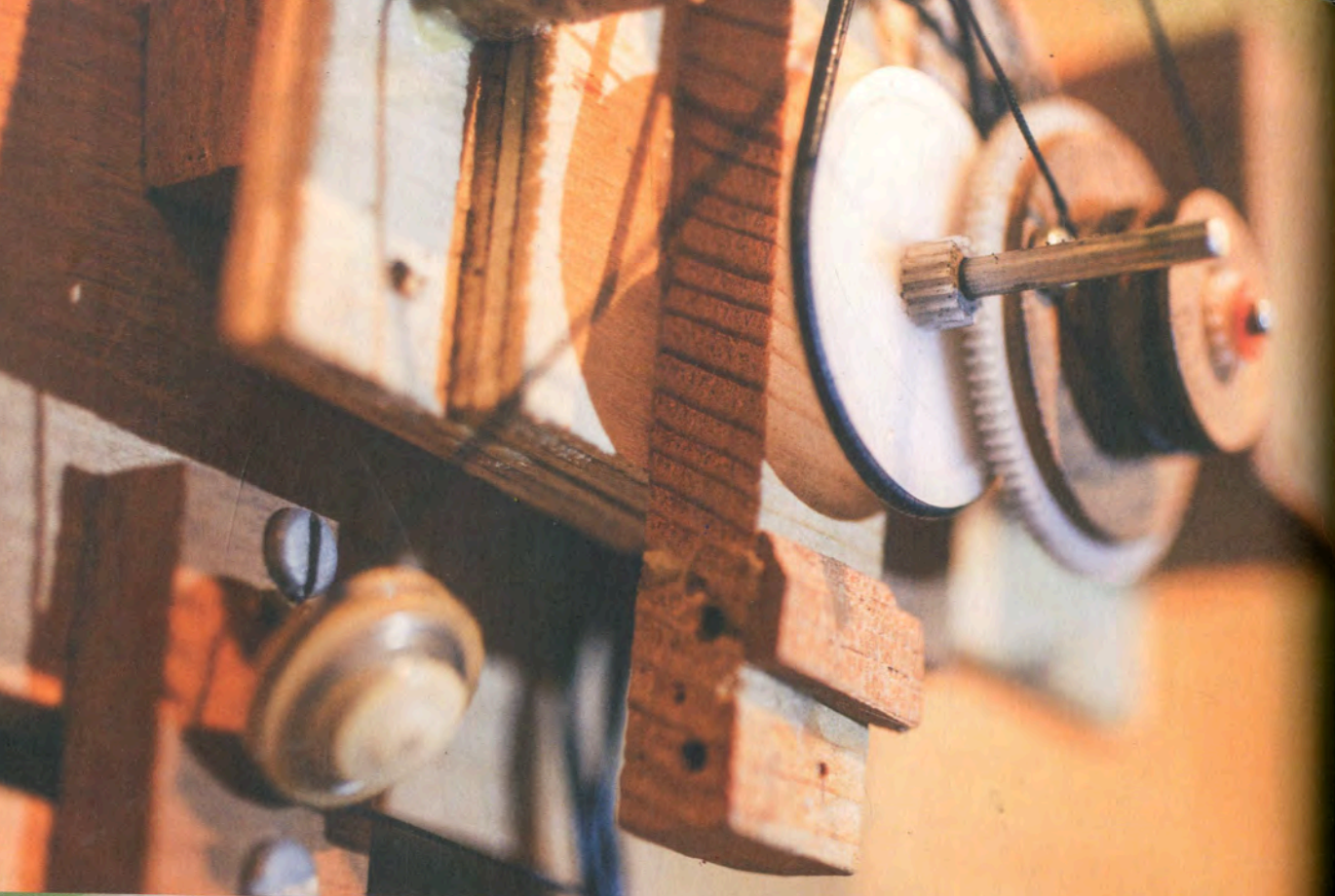
MADEIRA, PEÇAS ELETRÔNICAS E ENCONTRADAS
DIMENSÕES VARIADAS · 2008/2009

FALLING NAIL

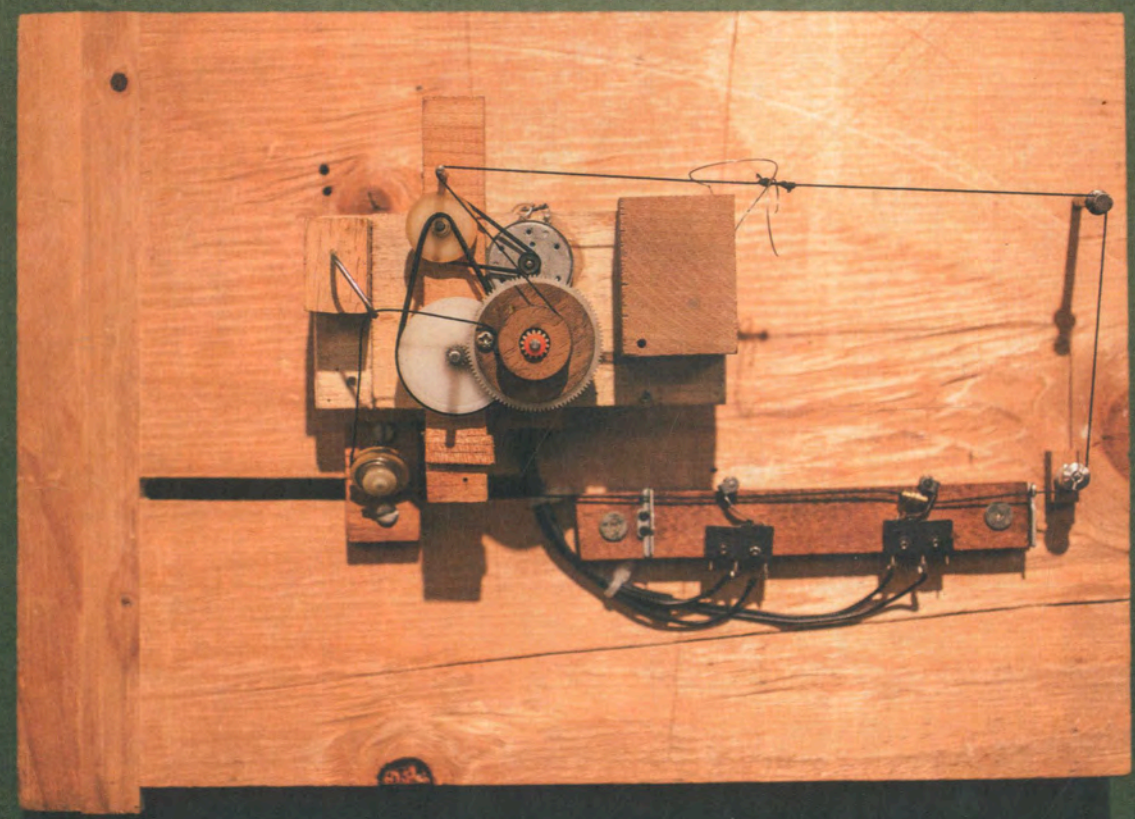
EXCUSE ME

SPRING CATCH

SMALL STRING



"Mere Things é sobre a apropriação de objetos comuns e sua transformação em movimentos simples e intimamente envolventes. Fazê-los é uma constante luta de avanço e recuo entre a minha ideia e a própria fabricação da máquina, com cada peça emergindo como individual e única, contendo sua própria reflexão. A minha esperança é que, através de "meras coisas", essas simples máquinas possam nos conectar empaticamente à nossa humanidade compartilhada."



GAMBIÓLOGOS 2.0

A GAMBIARRA NOS TEMPOS DO DIGITAL

GAM BIOLOGISTS 2.0: MAKE SHIFTS IN A DIGITAL ERA

CURADORIA: FRED PAULINO

GALERIA OI FUTURO BH

10 DE JUNHO A 17 DE AGOSTO 2014



Up to 2015 Oi Futuro Belo Horizonte had assumed an important role in disseminating creations that cross art, science and technology in the contemporary production of Minas Gerais, Brazil, and the world. The curatorship of this cultural space has valued, year after year, the convergence of media and supports, promoting artists who invest in experimentation. Always seeking new languages, what has not yet been named.

Therefore, there is nothing more in line with the vocation of this cultural center than "Gambiologos 2.0 - makeshifts in a digital era", a collective of Brazilian and international artists who investigate the intersection between crafts and electronics, making low and high technologies alive in their works. The exhibition, which occupied Oi Futuro between June 10th and August 22th of 2014, brought together an important collection, resulting from the diversity of creators from various backgrounds and different paths, causing an impression for its creativity in transforming rudimentary materials in unusual technological mechanisms.

Among the names of the artists of our time there were two great deceased Brazilians who, according to Fred Paulino, the exhibition's curator, were sources of inspiration for the science of makeshifts: Bispo do Rosário and Farnese de Andrade. Two masters in the metamorphose of everyday life, always in an impactful way.

For its daring, its empathic force and the high ludic way of its exhibited pieces, "Gambiologos 2.0" had much pleased the different audiences that visited us. Records in images and texts of this successful "adventure" are in this book, which integrates the Oi Futuro Art and Technology Collection.

Enjoy!

ROBERTO GUIMARÃES
Culture Manager - Oi Futuro

Gambilogia arises in 2008 as an idea embodied in a mutant platform: initially a campaign, it has established itself as a collective and today it had evolved into an open platform for creative and conceptual research, being the proponent of initiatives such as the exhibition "Gambilogos 2.0" (*Gambilogists 2.0*).

The neologism *gambilogia*¹ refers to a contamination between art and the Brazilian tradition of *gambiarra*², in its relationship with a precariousness originated from the scarcity of resources, permeated by a critical approach on technologies. These pillars are considered broadly: we speak of an art not necessarily linked to the commercial circuit of galleries and biennials, often strongly related to crafts and design; of the gesture to improvise beyond the immediacy of the *gambiarra*s, being understood as a skill that emerges from the action of man over the world to solve urgent basic needs or even to ensure one own's survival; and of technology as a fluid, intuitive knowledge, much more linked to human creative strategies in the material universe than to the overwhelming technology industry, in its eternal imperative for "innovation." *Gambilogia* is the adoption of makeshifts as an aesthetic choice and a *modus operandi* of creation and, why not?, a way of thinking about existence.

From 2009 on, I have recognized in the work of several artists, originated from different areas and nationalities, affinities with this framework, which led to the first edition of the "Gambilogos" exhibition in the following year. The curatorial proposal of the exhibition was direct: "makeshifts in a digital era." It presented pieces that intentionally incorporated *gambiarra* as an aesthetic and (in)formal source, in dialogue with the technologies of different levels - analog, electronic and/or digital.

The exhibition resulted in a provocative thematic and visual collage. The rustic scenery, established on the mezzanine of an old cloth factory, and the essence of the works presented - in which the relevance of the technical, an almost always central factor when it comes to electronic art, was less relevant than a kind of "collective momentum of solution"-, added to a vibrant assembly process, full of mutual contamination between the participants and constant adjustments to the projects, making "Gambilogos" a show with a surprising cohesion, given its almost cathartic process.

In tones of precariousness, improvisation, low and high tech noise, reuse of materials, exposed circuits, stickers, functional imperfections and different languages, in that encounter, quite spontaneously, a suggestion of unity and continuation manifested itself. About this, the researcher and articulator Felipe Fonseca pertinently noted in the exhibition catalog: "a hypothetical collaborative exercise of reconstruction - where all works were taken apart and artists would convene to make others with the same materials - would certainly result in interesting and instigating works."³ From that encounter emerged an irreverent and peculiar scene.

Finally, "Gambilogos" anticipated how the now multi-commented (and gourmetized) maker culture could be incorporated into the artistic field, in the context of a nation that didn't manufacture, and still doesn't, high technology - which implies, since always, the need to "find a way", being it with the import of equipment by alternative means, running from high custom taxes, or simply adapting, making use of what is available. Perhaps, from that, it also drew attention at the show a scope of possible peculiarities of the Brazilian electronic art scene.

With the advent of "Facta, the gambiologia magazine" in 2011 (now in its 4th edition), the discussions and provocations about the "technological *gambiarra*" have gained, simultaneously, both sophistication and subtlety. This publication has allowed a boost in the project with respect to its original framework. While *gambiarra* ceased to be the main focus - being the magazine a proposal for an almanac on various contemporary topics, from a critical and creative view - the content became more profuse, being *gambiologia* the starting point for the proposal of relationships between many areas of knowledge. "Facta" improved the whole's conceptual maturity, and allowed for the meeting of even more *gambilogists*, who in one way or another recognized themselves spontaneously as part of a set that was no longer necessarily limited to a group or solely related to art and design. Many who collaborate with the magazine are journalists, architects, urban designers, illustrators, musicians, photographers, scientists, fashionists, psychologists, creative idlers transiting...

The desire for a second edition of "Gambilogos" was the inevitable consequence of the amplification of this network of partners and the perception of maturity of the *Gambiologia* project. Thus, the choice of nearly 40 works presented here by 28 artists and collectives enhances the curatorial proposal of the first edition and is guided by three axes, which I present below.

First. The adoption by many electronic artists of a despoiled aesthetic - a celebration of precariousness - with a purposeful incorporation of low technology in the works and a minimum concern to conceal operating structures.

This aesthetic option could be only a formal matter, but I suppose it is also a result of other variables, which may not be decisive, but certainly influence the whole set of works: the first one, already mentioned, would be the difficulty in accessing sophisticated technological resources (budget limitation), especially by artists from southern countries. The second reason is, perhaps even unconsciously, the search for a kind of sensuousness that seems to be lacking in electronic art, often focused only in technical demonstrations and levels of interactivity, many times not being accessible to the "uninitiated". Because of this sensory approach, there is the adoption of craft processes, easily

recognizable by "laic" (after all, the famous "ah, that even I can do!" should not be relentlessly negative).

In the exhibition, dispossession regarding technology is latent in many works, such as in the appliances and in the analog controller of Ujino's large installation - interestingly an artist born in Japan, a country that is reference in technological innovation -, in the hour-glass built with TV tubes exposed by Leandro Aragão, in the minimum gadgetry of Joseph Morris, in the assumed uselessness of Aruan and Flavia's machines, in Fernando Rabelo's analogical-electronic frame, which composition is so open and transparent that there is no possible background, and even in the pile of cardboard cameras by Dirceu Maués, which brings us back to the very beginnings of the photographic image. The extreme of this set is displayed at the entrance of the gallery: A "Computer" by Farnese de Andrade, assembled many years before any draft of the science of *gambiarra*, completely analogical, coming from the sea, sealed in a translucent resin block: confirmation and absolute denial of computers' "black boxes".

Second. The idea of collecting by accumulating, or: how are artists using the excess of waste in the contemporary world as a significant expressive feature, in addition to common sense on recycling.

Reuse and functional displacement (hacking) of everyday materials or discarded objects in the Arts are definitely not a new issue. The origins of these practices refer to the readymade and becomes more evident from the middle of the last century on, in the production of assemblages by artists such as Joseph Cornell, Robert Rauschenberg and Jean Tinguely, the latter being literally a pioneer *gambilogist* with his creation of found-objects, kinetic assemblages full of bulbs, industrial waste and rusted metal. What are the differences, then, of the artistic production who uses waste nearly a century later? It is that what was only an aesthetic and conceptual experimentation, become now, with a rampant production and proportional generation of waste of all kinds, an emergency. The artist who reuses materials in this historical moment suggests a political attitude towards the excesses of our time, an almost heroic saying given the overused discourse of "sustainability" repeated by corporate marketing departments.

Marepe transfigures automotive parts collected from junkyards in an unusual child figure; Mendoza and Goh conceive a bird, from dismantled cell parts, which seems fated to live in a futuristic and apocalyptic zoo; Bambozzi features a large machine-body, with mechanical gears referring to the beginnings of industrialization, who swallows mobiles, because we no longer know where else to discard them; Zaven Paré transforms an ordinary collection of *meccanos* in beautiful indigenous jewelry; Sara Ramo, an artist who "investigates the moment at which the objects stop making sense in people's lives in order to create situations

bereft of calm and order"⁴, discusses in her two pieces our bond with what is affective and what is disposable; and finally Bispo do Rosário provides us with "tackle panels" that contain not only collected matter, but also the weight of a lifetime.

The *gambiological* artist collects objects for aesthetic appreciation to all epochs and creates works by answering the question: "What can I do with it?". Useless things, when moved from their places of origin, earn multiple meanings and value.

Third. The acceptance (or not) of the influence of popular culture and of crafts in the field of Fine Arts.

Art history shows us an ambiguous relationship with popular knowledge. On the one hand, the origins of the terms "art" and "artisan" - from the Latin *ars* - are common and refer to the "precepts to execute anything" or to the processes related to a "manual labor"⁵. More than that, the knowledge of primitive cultures, since always, has been nourishment for artists from different generations and backgrounds. Handmade works upgrade the status of a unique piece, while contributing to valuing it. But on the other hand, the presentation of folk art is often limited to targeted events, not integrated into the so-called "contemporary", having even specific labels, such as *naïve* and being often confused with kitsch.

I suppose the *gambiological* creative processes tense this relationship, because they are articulated with essentially popular strategies in an unprecedented context, in which electronic languages and digital technology are increasingly accessible. *Gambiological* works are integrated into contemporary practices, but they outline freshness and spontaneity, often more evident in anonymous creations than in the most recognized artistic circles.⁶ The participation of artisans-artists Mauro Alvim and Lucio Bittencourt, steel sculptors who present extremely expressive non-figurative pieces, is, thus, very important for the whole of the show.

The exhibited works, however, suggest similarities and differences between these three axes in an almost chaotic way. The installation in progress of the *Gambiologia* Collective, displayed in a gallery attached to the exhibition, perhaps is what best summarizes such contaminations and, not by chance, closes this publication. In Jean Baptiste Gambièrre's chaotic workshop, installation that will never be ready, there are traces of everything that has been covered so far, and more.

Unlike the first edition, the assembly of "Gambiólogos 2.0" took place in a more traditional exhibition space, the Oi Futuro BH gallery, smartly remodeled by architect-artist Carlos M. Teixeira in a modular and industrial scenic proposal, rigid, but also fluid. It was laborious to "domesticate" *gambiologia* in an institutional space that, on the one hand, facilitated by offering a diffe-

rentiated structure, but on the other brought new challenges, such as the need to occupy two galleries, dividing the show, and the long operation period (a sensitive issue for electronic artworks, which often require maintenance).

To honor us with articles that complete this catalog, I have invited three women with significant contributions to the field of art and technology in Brazil and who have, for a few years already, been following the *Gambiologia* initiatives. I very much thank: Giselle Beiguelman, artist, researcher, curator, and a crucial reference in my career and certainly in the career of many *gambiólogos*; Juliana Portojoy, researcher and curator, author of "Technological Dystopias", a fundamental essay on contemporary Brazilian artists who appropriates technologies critically; and Raquel Rennó, artist, researcher and citizen of the world, collaborator of past and future projects, restless mind that, in every interaction, surprises me with her perspicacity and generosity.

At a time when activism grows and horizontalizes at the same proportion as its contradictions, in which the illusion of prosperity is questioned and the discomfort about human situation on the planet is increasingly latent, we have, in this collective exhibition, a beautiful sample of how the use of technology and waste can be more than a way of creative expression, but rather a political move. And more: the enormous diversity of approaches to improvisation and technique that is evident in this selection of works, created by artists from different origins and ages, makes us believe that *gambiarra* is, indeed, a science.

FRED PAULINO
Founder and curator

¹ "The science of *gambiarra*".

² *Gambiarra* is a Brazilian - but not only - cultural practice which refers to "solving problems in alternative ways" or "giving unusual functions to objects". It is a "makeshift", a "life hack", a "jury rig", or "a workaround, a quick-and-dirty solution, (...) a clumsy or inelegant, yet effective, solution to a problem, typically using parts that are cobbled together" (Wikipedia).

³ FONSECA, Felipe. *Gambiólogos: a gambiarra nos tempos do digital*. Belo Horizonte, Brazil. Exhibition Catalogue. 2010: 19 nov - 15 dez.

⁴ FORTES VILLAÇA GALLERY. Artists: Sara Ramo. Available in: <<http://www.fortesvilaca.com.br/artistas/sara-ramo>>. Access in Aug., 21, 2016.

⁵ CUNHA, Antônio Geraldo da. *Dicionário etimológico da língua portuguesa*. Rio de Janeiro: 4. ed. Lexikon, 2010.

⁶ It is curious to observe that in the English Language the word "ingenuity", which in Brazilian Portuguese denotes "naivety", also denotes "invent" - MICHAELIS: *Dicionário Escolar Inglês*. São Paulo: Editora Melhoramentos. Available in: <<http://michaelis.uol.com.br/>>. Access in: ago. 21. 2016.

MAKESHIFT SCIENTISTS, POETS OF IMPERFECTION

RAQUEL RENNÓ

Pinto do Monteiro, a repentist poet from the state of Paraíba in northeast Brazil, defines poetry as "the art of taking from where you don't have and placing it where it doesn't not fit." A walk among the works selected for "Gambilogos 2.0" allows us to understand the poetic narrative that is constructed by artists from different countries and moments who are exhibiting in the show. Poet, author and maker are synonymous with the Greek term *poete*¹. The gambiological artists create from waste, this being a despised group, symbolically excluded but a surplus in its material sense. They act as poets because they resignify things that have lost its sense in a system of signs and have gained the generalized meaning of garbage, disposal. In the exhibition, Sara Ramo in "On the move" introduces this universe by showing the excess of objects we possess and that identify us. Accumulation is our fate. The objects we have and that we transport with us are meaningful to us. Often, that's all that differentiates them from trash.

The prominent presence of Bispo do Rosário in the exhibition highlights poetic writing as part of his work. Bispo writes with objects. His "tackle panels" consist of phrases that are layed out in four columns. The artist structures chaos as a poet structures verses, highlighting elements in a composition of rhymes of different sounds. Poetic construction, according to Bakhtin, has this characteristic of constant reinterpretation of everyday life, of the recognition of objects that, paradoxically, given their banality and massive presence in the world, tend to invisibility:

[...] all concrete speech (articulation) meets the object for which it is facing already, so to speak, discredited, contested, evaluated, surrounded by a dark mist or, on the contrary, illuminated by the speeches of others who have already spoken about it. The object is bound and penetrated by general ideas, by views, by assessments of others and intonations (BAKHTIN, 1935: 100).

Bakhtin (1990: 1-2) notes that only individual praxis allows us to connect the three domains of human culture - science, art and life. In the absence of this continuous practice there is what the author calls "mechanical" actions, a set whose elements are united in space and time in an external mode, without being imbued with an internal unit of meaning; parts of the whole are contiguous, but remain far apart. The only way to overcome mechanical actions would be

by "preventing the inspiration that avoids life and is ignored by it." Without the everyday, finally, there is no artistic production.

The *gambiological* artist is also a collector who has a watchful eye on the picking and selection of what will be used and the endless combinations that can be proposed. In *gambiological* works the process defines. It is from what is found, from what is available that the result appears. It's the amount, the excess that defines poetry.

Gambiological processes are old acquaintances of people from different cultures, whether there is a specific name for these practices or not. The *gambiological* impulse is natural born; hence the need for constant control of waste by public authorities, which in some cases punishes anyone who pick up waste, justifying it as maintainance of hygiene and safety².

The focus of *gambiarra* is not the product, it is the process. The non-planning of informal constructions comes to couplings, juxtapositions that occur gradually. It is more Tetris and Lego than architecture. These solutions, therefore, become useless and extremely critical machines. The *gambiarra* is therefore also a contestatory act - a constant disobedience to clean design that hides its constituent processes and imposes just one use of the objects, previously determined from top to bottom. Hence the mistake of accepting the art of *gambiarra* as daily production but not in the Arts, in its exclusive spaces, being it charged with accusations of "cosmetics of the precarious" (OBICI, 2014: 69).

Gambiarra refers to processes that occur in a more evident way in limited economic contexts, but it transcends them. It is only when the "do it yourself" is succumbed

¹ Early 14c., "a poet, a singer" (c.1200 as a surname), from Old French *poete* (12c., Modern French *poète*) and directly from Latin *poeta* "a po-et", from Greek *poetes* "maker, author, poet", variant of *poietes*, from *poiein* "to make, create, compose", from PIE "kwoiwo - "making", from root "kwei - "to pile up, build, make" (cognates: Sanskrit *cinoti* "heaping up, piling up", Old Church Slavonic *činu* "act, deed, order"). Available at: <http://www.etymonline.com/index.php?term=poet>. Accessed in: February 26, 2015.

² About this theme: *Os respigadores e a respigadora*, de Agnes Vardá (2000), is a core film essay.

by mass industrial structure (through the force of marketing actions and public administration itself), when the artistic space is taken up in a "aesthetic distance", as defined by Bourdieu (2007: 35), so that the power of a speech can be silenced in pure indifference. Thus, the critical forces of power, especially those industrial and technological forces, appear in different but consistent ways in works of the exhibition.

The exhibition brings the urban space into the gallery – not as frozen representation, but especially showing the processes and flows that occur in the city. Soja (1993: 9) said that architects and planners were still tied to perceived and represented space, but they have difficulty in participating in the experienced space. In this respect, the artworks exhibited allow a turning point in understanding the makeshifts in galleries, positioning it as something that goes beyond residual aesthetization, although the residual has an aesthetic, and this is quite clear in the exhibition. As Denise Scott Brown (1969: 185) puts it, "even after the artistic fashions change, we will still be here because this is a pop city, this one, the one we have." In this sense, *gambiarra* is a call and an invitation to participate.

The gambiological artwork never realizes itself as an end, only as a range. If we agree to Perec (2001: 47) that space is a doubt and is never given to us, we have to believe, too, that the temporary designation processes that gambiological works show turns it into the science of streets, of nomadism, of movement in thought. A kind of art/science that assumes that it can spot but not isolate, that must present together the tangle of where it originates. It is a science that continually shows the role of procedural requirements in relation to the finished work.

By combining artists' trajectories and different contexts, "Gambilogos 2.0" also discusses the obsolescence cycle of brands and the rigid concepts the art market imposes. What could serve as a hallmark therefore becomes a common thread, permeable to young artists working with electronics, robotics, popular and contemporary artists who use little or nothing of digital technologies. Thus, *gambiarra* connects the production of popular culture to art. It is not an institutionalization of an exclusive street practice, but rather the evidence that popular artists and erudite artists have similar processes, revealing a transgressive possibility that goes beyond the works and brings critical reflections on the art scene itself.

³ <http://failblog.cheezburger.com/thereifixedit>.

Joseph Morris, with the "Mere things" series, brings the banality of the objects and the simplicity of machinical structure, that proposes a way to reconnect with the objects we share. He takes up the writings of Bakhtin on the importance of human presence on the connection between art, science and life. Cao Guimarães, with his "Gambiaras", shows the repertoire of the streets and blogs such as *There, I fixed it*³, in addition to thousands of posts with life hacks of various types, shared on social networks daily, which gives a new meaning to the works and contributes to erase the rigid boundaries between the exhibition space and what happens out of it.

I must endorse also the very layout of the works on display, making it clear that we are not in the traditional white cube galleries, or the black cube of digital art exhibitions. The metal structures that divide (and not isolate) the room propose a space that refers to the workshops, which we can call gray cubes.

It is no coincidence that the Gambilogos (Fred, Lucas and Ganso), among many activities, have never overlooked the workshops, which, incidentally, are part of the "Gambilogos 2.0" exhibition. **The activities cover the process of understanding the science of *gambiarra* as something collectively and continuously built. The act of making is a fundamental part of the gambiological science.** Sennet (2009: 45) notes that the separation created between the actions of the hand and mind are not only intellectual, but rather social. To include the handmade in this dynamic is subversive in that it replaces distance for familiarity and participation, without necessarily falling into traps of so-called interactive technologies, which largely only reproduce pre-programmed and predictable interactions of commercial interfaces. Ujino mentions that he hopes "that in the future people can connect and rearrange technologies from what they themselves want." It is the same with Jorge Crowe, a sound artist who attended the show with a performance. Jorge is an artist but also long-time workshop coordinator. In their workshops, he organizes what lies at the heart of his work. His "Toylab" is a proposal to rebuild cheap tech toys (made in China) with distinct functions or features. It is a method for recognizing objects, especially toys, which are produced in mass and sold worldwide.

From its original meaning⁴ to current usages in language, *gambiarra* is about connections. And if there is something typical in hacks, this is something that connections are constantly made visible. While commercial technological arrangements conceal the processes where

results and presence are almost magical to consumers, the *gambiarra* exposes its connections. As Obici notes (2014: 43), "(...) a hack establishes, even temporarily, the reversal of embedded designs in technology, revealing the reverse of the order that it establishes". We can see how the parts are combined, as the structure is organized. What we see in the exhibition is not only an aesthetic connection between artists' pieces, but a very important operating mechanism.

Gambilogia is thus the science of *gambiarra*. The scientist-expert is evident in the figure of Jean-Baptiste Gambiërre, who mocks the scientist that have knowledge but rejects the mundane, as well as the rigid official structures of validation of what is considered science or not. However, if we look beyond the common sense of what is considered science, we notice that there is a lot of hacking in the scientific process. The act of collecting, selecting and reordering, withdrawing from an existing set what is considered interesting and structure it in new combinations, "uniting two things that belong to different worlds ... this is the beginning of the scientific and creative leap" (SENNET, 2009: 211).

In the scientific method, hypotheses are confirmed or refuted, and scientists learn with experimentation. At this point, the hacker and the scientist operate in the same manner:

if you try an experiment and you require the outcome to be what you expect, this is not good science. In fact this isn't even science, it's bad science maybe, but it's not science. Good science requires that you are open to the outcome whether it's what you're expecting or not. (...) Science, like hacking, requires lots of failures. Before coming out with useful theories you've got to try things again and again and come out with the unexpected almost all the time. This is how we learn, this is how science progresses (ALTMAN, 2014).

The subversion of science practices relates to creative processes in the art that appropriates science and technology and overcomes dichotomies between amateur and professional, digital and analog, or even between traditional and scientific knowledge. These practices dialogue with the proposals for open science and knowledge sharing we see today in hackerspaces and DIY science labs. *Gambilogia* also proposes a science of the collective, of "do it yourself", but also the science that has to do with more traditional scientific processes, research, analysis and proposition of results that can be made more generic or broad. Likewise, there is a

correlation between the accumulation in both the scientist and the *gambilogist*. **More than a subversion of art and science, *Gambilogia* is an allegory that belongs to art and science.**

While machines work in the production of perfection, the *gambilogists* boil imperfection down to the arrangement of objects to compose the works. It is not a mere appropriation of ordinary, everyday objects into formal arrangements that sustain the gap between the public and the work art; the *gambiarra* appears as a way to discuss the communicative processes in complex systems such as those that connect human language to the artificial, as does Zaven Paré, which deals with robotics from language. As a good expert of language, he knows it must be incomplete. This is the paradox of the robot: if it appears "perfect", it is locked in a cycle in itself. And it stops communicating. Only opening, difference and incompleteness produce information. Within this perspective, we can also mention the work of Mark Porter, "Translator", which shows a kinetic sculpture that gradually alters the space where it operates. The *mechanical-drawings-turned-sculptures* "portray the irregularity of human actions." Instead of even language, required for communication between machines, Porter brings the machine as a generator of irregular languages.

Mariana Manhães in "Thisthose", in turn, shows her studio as if was alive with, objects that "sigh". Paulo Waisberg extends this sense of anguish of objects and machines with the works "Lung" and "Slaughterhouse". Again, the anthropomorphic (mainly in "Slaughterhouse") is shown as incomplete, open, imperfect, but necessary for us to connect with the machines we discard.

Anderson says that maker culture announces the third industrial revolution, with the possibility of customized design and individualized production. Even with all the known social, economic and ecological problems that industrial production has generated, we still live under the spell of the possibility of building things. Within this constant worship of the object, makeshift becomes relevant as an alternative and critical view, as shown

⁴ According to Giuliano Obici's thesis, Houaiss points the emergence of the term *gambiarra* in 1881, period synchronous to industrialization and urbanization that occur in the late nineteenth century to the twentieth. The *gambiarra* appears with disorderly growth and development of cities and the emergence of slums, consisting of substandard housing (shacks), lack of infrastructure (*gambiarra*) or lack of regulation that opens a field for the exercise of illegal practices.

by Anthony Goh and Neil Mendoza with "Escape II," a "bird" made of cellphone components in a cage, which invites us to observe and, at the same time, to realize the gadget that observes and controls us continually, built with discarded cellphone scraps. On the one hand, it still endures the association of "do it yourself" and *gambiarra* as a practice of contexts in which "there is no alternative". On the other, *gambiological* artists show us that there is much more in these practices than it may seem. There is a cognitive structure, a *modus operandi* that faces the excess and chaos, and pick up a way of knowledge from it.

Questioning "the perfect machines" also implies questioning the concepts of speed and efficiency that are inherent in tech industry. This is evident in the series of Aruan Mattos and Flavia Regaldo, "Useless machines". The artists present machines that subvert the speed of digital technology ones. By imposing another temporality, propose contemplation and waiting. And do not answer the complex processing demands or functions that seek the effectiveness of the machines. Guto Lacaz, in turn, is a master of useless machines. His couplings between objects and distinct functions refer to the transience of buildings in the *favela* (slum). Mauro Alvim, with "Father! I want to queer the cannon" builds a bull-cannon with scrap iron. The sculpture is part of a series on the historical Canudos War in Brazil and brings the utopia of a possible world to be driven horizontally, outside exclusive hierarchies. It is also interesting to think that Canudos brings us to the origin of the term *favela*⁵, the urban setting that is the most associated to *gambiarra* practices in Brazil, including from dictionaries, which make reference to clandestine light connections.

The *gambilogia* also questions the idea of technology as something global, abstract and clean. Technology, being it high or low tech, is dirty and concrete. The difference is that some objects allow us to observe these features and others hide them under the cloak of pure abstraction. Mackenzie (2006: 3) criticizes the error of a limited understanding of technology and

software as virtuality. For him, it is necessary to see code as practice and matter, even to understand how the discursive construction gave rise to the idea of invisibility and hence all social and political implications of this phenomenon. So we remove technology from purely technical environments and it is possible to understand it from its entanglements with cultural practices. Coding expresses abstract relations and formal operations between different groups. The concrete, social, economic, intellectual and even physical context where these groups are has a direct impact on code building.

By reframing trash, waste, the selected artists question the cycle of planned obsolescence, the constant imposition of the practice of using and throwing away. Likewise, the materiality of technologies is clearly presented. Lucas Bambozzi, with the installation "Of broken things", brings a machine that destroys cell-phones, highlighting saturation and reducing objects of massive presence which are, at the same time, objects of status but are in scrap condition. The piece of Fernando Rabelo, "Venda-\$\$" is a set of circuit that are flawed, decadent and full of errors. It's the technology in its actual operation, exposed circuits found in garbage piles against hidden circuits within new machines.

The exhibition, therefore, deals with a contemporary theme, a picture of what we live in. If we are drown in garbage, if the anthropocene is on the agenda of philosophical, ecological and technological discussions, if, in a not so distant future, our sea will be a *Great Pacific Garbage Patch*⁶, the *gambilogia* reveals the most concrete of our existence: the search for perfection and for the formula of life in the sciences on one hand, and an increasingly destroyed and trashed world, on the other. The artworks dialogue with this paradoxical context. The *gambilogos* are the artists of the anthropocene. A piece that may sum it up is "We came from the sea," by Farnese de Andrade, which shows a set of maritime pieces mixed with everyday objects that give us the idea that we are looking at our own guts. What is indeed true: the trash is our open guts, our main production, with which we cover the world.

As poets of the excess, the *gambilogos* bring back the words of poet Arthur Cravan⁷, "I have twenty countries in my memory and trail in my soul the colors of one hundred cities". If our current life context reveals the failure of humans as demiurges, it lies in the strength of imperfect creation the poetic making that takes from where you don't have and places it where it doesn't fit. Or, as well said by Nam June Paik: "When too perfect, lieber Gott böse"⁸.

⁵ The word *favela* referred to common plants in the hills where Canudos was built

⁶ http://en.wikipedia.org/wiki/Great_Pacific_garbage_patch.

⁷ Arthur Cravan drowned in the Pacific in 1918; the same ocean where we have the largest area of waste worldwide, the aforementioned Great Pacific Garbage Patch.

⁸ "God becomes evil"

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ARTISTS & ARTWORKS

ANTHONY GOH & NEIL MENDOZA

Anthony is a UK-based interdisciplinary artist who works with sculpture and movement. His work is informed by a deep meditative study into the nature of human consciousness, and is focused on how our relationship with the natural world can fundamentally change our ideas of what we really are. As well as making artwork and performance, he teaches workshops in movement, meditation and deepening our connection with nature.

Neil is an artist and creative technologist exploring ways of breathing life into objects and spaces through the use of digital and mechanical technology. He is a founding member of the collective is this good?. His work has been exhibited by The AND Festival, The Barbican, BBC Big Screens, ISEA, Kinetic, The Museum of London, The Nottingham Playhouse, Oi Futuro, PICNIC Festival, The Science Museum, The V&A and Watermans, among others.

ESCAPE II

SCULPTURE · MOBILE PHONES, BIRD CAGE, ELECTRONICS · APPROX. 40 x 150 x 40 CM / 2012

Mobile phones are ubiquitous in today's society but often their use has unintended consequences, intruding into and changing social situations, distancing people in real life by dragging them into the digital world. They are also a massive source of electronic waste. This installation takes cast off devices and suggests an alternate reality in which these unwanted phones and noises become something beautiful, giving them a new life by creating an experience that people can share together in person.

PG. 124 - 127

ARTHUR BISPO DO ROSÁRIO

Born in Japarutuba at Sergipe state in Brazil in 1909. He had a reclusive life in a psychiatric hospital for half a century. Transiting between reality and delirium, he believed to be in charge of a divine mission and used dispensed materials at the hospital to produce his pieces, which mapped his reality. Making use of the word as a pulsing element, he manipulated signs and played with the construction and deconstruction of discourse to create his embroideries, assemblages, banners and objects that would later be consecrated as reference works of contemporary Brazilian art. He passed away in 1989 in Rio de Janeiro, being granted immediate posthumous recognition. In 1995 he represented Brazil at the 46th Venice Biennale. In 2012 he was honored at the 30th São Paulo Biennial.

TACKLE PANELS (LAMP / DENTURES)

ASSEMBLAGES · WOOD, IRON, GLASS, CARDBOARD, FABRIC, OBJECTS · 179 x 67 CM / 109 x 64 CM · N. D.

Sculptural panels, collages of objects, precarious displays. Visual intuition and sense displacement. Reordering the world through the clutter of everyday experience. These works were developed from discarded objects found at the Juliano Moreira psychiatric institution in Rio de Janeiro where the artist spent much of his life and produced most of his work.

PG. 24 - 27

ARUAN MATTOS & FLÁVIA REGALDO

They are born in Belo Horizonte and work together since 2009. They have participated in several exhibitions, scholarships and residences as: Aesthetic Interactions - Funarte (2009); JA.CA Center (Minas Gerais, Brazil - 2010); Funarte Visual Arts (2011 and 2013); São Paulo Cultural Center - CCSP (2011); La Ene (Argentina) and Ateliê Aberto (São Paulo, Brazil in 2014).

USELESS MACHINES:

ABSORPTION MACHINE

SCULPTURE · PARAJU, MUIRACATIARA, CERAMICS, WATER, GLASS, RESISTANCE, THERMOSTAT · 230 x 50 x 50 CM · 2013

A wood structure supports a glass container that, in approximately every 50 seconds, releases a drop of water. The drop touches the ceramic and is slowly absorbed. A resistance that is in contact with the ceramic releases heat by the thermostat control, preventing it to become saturated.

USELESS MACHINES:

SUSPENSION MACHINE

SCULPTURE · PARAJU, MUIRACATIARA, IRON ORE, NEODYMIUM MAGNET, GLASS, METAL, 1 RPM MOTOR, FAN · 140 x 45 x 40 CM · 2013

A small motor performs the cyclical descent and ascent movement of a magnet. In turn, the magnet approaches ore grains deposited in a glass structure, which are drawn to suspension. With the removal of the magnet, the grains fall again.

PG. 96 - 101

CAO GUIMARÃES

Born in 1965 in Belo Horizonte, Minas Gerais, Brazil, where he lives and works. His works are photographs and expanded audiovisual pieces, often situated on the border between film and visual arts. His films have been shown in festivals such as Locarno Film Festival, Sundance Film Festival, Cannes Film Festival, Rotterdam International Film Festival, among others. His feature "Otto" (2012) was granted three awards at the Brasília Film Festival (2012). He participated in the São Paulo Biennial, Brazil; Mercosul Biennial in Porto Alegre,

Brazil; the Biennial of Montreal, Canada, and the Biennale of Architecture and Urbanism in Shenzhen, China. His work is internationally featured in museums and private collections, including the Fondation Cartier Pour L'Art Contemporain, Paris, France; Tate Modern, London, England; Guggenheim Museum, New York, USA; Museum of Modern Art of São Paulo, São Paulo, Brazil; MoMA, New York, USA; Instituto Inhotim, Brumadinho, Brazil; among others.

GAMBIARRA SERIES (#59, #103, #105, #106)

DIGITAL PHOTOGRAPHY - 45 x 60 CM / 66 x 100 CM - 2000-2014 (IN PROGRESS)

The four photos are part of an "in-progress" series, in which, with formal simplicity and great plasticity, makeshifts in various locations worldwide are recorded. In this set of images, the artist's ability to improvise gives rise to moments of weirdness that are able to reinvent our common view of ordinary objects and situations.

PG. 28 - 31

CARLOS M. TEIXEIRA

He has a BA at UFMG (1992, Belo Horizonte, Brazil) and a Master's Degree at the Architectural Association School of Architecture (1994, London). Frequently focusing the contradictions between "voids" and "fulnesses", construction and destruction, his projects range from private houses to researches in urban scale. He published the books: "Under Constructon: History of the Void in BH", "Collateral Spaces" (Cidades Criativas, 2008) and "Entre: Architecture from the Performing Arts". He has shown his work at IV Bienal de Arquitetura de São Paulo; Pavillion de l'Arsenal, Paris; IX Venice Biennale; Royal Institute of British Architects (RIBA), London; the Victoria & Albert Museum (London); 29th Sao Paulo International Art Biennial, among others.

GAMBIÓLOGOS 2.0 EXPOGRAPHY

The expographic project seeks not to compartmentalize the exhibition rooms. Avoiding the idea of separating the works in tight environments - a common solution in exhibitions of many pieces and little space - this show has its objects juxtaposed in a continuous space. The metal screens that support the works don't separate them by rooms, thus creating a visual overlay of frames and works that confirms the concept of accumulation and bonding of this show.

The inevitable white walls usually create static rooms and remove the spaciousness of galleries, transforming them into amorphous, clinical and domesticated spaces. The common expography treats spatial continuity as a problem and can't see possibilities in the idea of visual permeability. That's why to design an exhibition is almost always synonymous of creating "environments" and, unfortunately, that's why the glass trestles that Lina Bo Bardi designed for MASP were filed for two decades.

Such refusal of the more conservative cultural agents to accept non static expographic proposals was far from our experience in "Gambiólogos 2.0". The exhibition has its curatorial proposal articulated on improvisation, collecting, accumulation and acceptance (or not) of popular culture in Fine Arts. And its expography seeks to reflect and blend in with these themes, endorsing the mundane materiality of its works and trying to be an element capable of enhancing the strength of the exhibited objects.

PG. 128 - 130

CHELPA FERRO

It's a group formed by Luiz Zerbini, Barrão and Sergio Mekler. Since 1995 they develop a work that blends experimenting with electronic music, sculptures and technological facilities in live performances and exhibitions. They have presented work in several formats: objects, installations, video, performance and recorded albums. The trio makes unconventional use of musical instruments besides incorporating invented instruments from appliances and everyday objects in the performances, exploring the boundaries between noise and music. Chelipa Ferro has presented works in museums and art galleries in Brazil, Europe and the United States and biennials such as the Venice, Sao Paulo and Havana. The group members live and work in Rio de Janeiro, where they also perform their solo artistic trajectories.

HOLE

SCULPTURE - SPEAKER, AMPLIFIER, MICROPHONE, STAND, HOWLING - 70 x 40 x 30 CM - 2009

Precarious audiophonic assembly, in which the frequency generated by the amplifier shakes the speaker and generates a howling which, picked up by the microphone, returns to the device and generates an endless loop of noise.

PG. 52 - 55

DIRCEU MAUÉS

Bachelor and Master in Fine Arts from UnB (2012). He worked as a Photographer in the major newspapers of Belém-PA from 1997 to 2008. In 2003 he began his original work in the fields of photography, film and video, performing research with the construction of handmade cameras and using precarious equipment. He was a resident artist sponsored by the Itaú Cultural Rumos program in Künstlerhaus Bethanien/Berlin. He received the Funarte award for artistic creation and a residence award in WBK - Vrije Academy (The Hague, Netherlands) from the International Contemporary Art Festival SESC-Videobrasil (São Paulo). His works are part of collections such as: Pirelli-Masp Photography, Fnac, International Contemporary Art Festival SESC-Videobrasil, MAC-PR (Museum of Contemporary Art - Paraná, Brazil) and MEP (Pará State Museum, Brazil), among others.

REVERSE LANDSCAPE

INSTALLATION · CARDBOARD BOXES, MAGNIFIERS, PAPER, CHAIR · 200 x 220 CM · 2014

This piece consists of a small wall, built from the stacking of simple and precarious cardboard boxes, which serve as dark cameras and point to the same place: a small illuminated chair. The chair's image and everything around it is projected onto the paper inside the boxes, revealing an upside down world.

Several boxes: many worlds in mosaic. Ephemeral real-time images that transport us to a reverse horizon: to the time of all Photography precursors which, together, "burned in desires," to use Daguerre's expression, for the magical image projected inside the black box. Here, the experience of image makes a way back towards immateriality, towards the desire that preceded the photographic image as we know it - or as we knew it a few years ago. Inverted landscape... A world within a box: the world upside down. Desires burn in images. Desires to fix desires in inverted desires, in parallel worlds: ephemeral image.

PG. 49 - 51

FARNESE DE ANDRADE

Born in 1926 in Araguari, Minas Gerais, Brazil. He began his career as a drawer and engraver and from 1964 on he worked on producing assemblages, mainly using polyester, wood, antiques and found objects. He lived in Rome and Barcelona. In life, he won numerous awards and held dozens of solo exhibitions, participating in important exhibitions in Brazil and abroad, such as the Venice Biennale, Sao Paulo Biennial, Pan-American Biennial, National Salon of Modern Art and International Sculpture Biennale. He died in 1996 in Rio de Janeiro. His works remain being presented in many art events worldwide.

WE CAME FROM THE SEA (COMPUTER)

SCULPTURE COATED WITH RESIN (POLYESTER) · 21.5 x 35.5 x 27.5 CM · 1978

"We came from the sea" series is composed of assemblages created from debris and marine forms collected on the beach, such as shells, starfishes and sea urchins. To them, pieces of dolls, marbles, pieces of wood and other objects collected by the artist are aggregated.

The futuristic look of the "Computer" wrapped in polyester and its composition similar to a computer cabinet contrast with the piece's organic aesthetics which is entirely analogic.

PG. 20 - 23

FERNANDO RABELO

He was born in Belo Horizonte, Brazil. He is currently the coordinator of Visual Arts course at UFRB (Bahia, Brazil). He participated in international and national exhibitions, and have won the Sergio Motta Award for Art and Technology in 2009/2010. His works are

based on critically, reflective and purposeful reconfigured technological possibilities, in which live animation, illustration, educational projects and installations where interactive domestic hacks or sophisticated digital projection systems coexist. He has recently created "Reconvexo - Video Mapping and Interactivity Festival.

VENDA-\$\$

ELECTRONIC OBJECT · APPROX. 90 x 60 CM · 2014

It was originated from the reuse of various materials that would otherwise be discarded by the author, as well as others collected in the streets during the months prior to the exhibition. Among them are packaging leftovers, auto parts, cables and semi-damaged mobile phone chargers, window frame, microprojector, monitor, screws, etc., all connected to a Raspberry PI microcontroller.

The title suggests an act of a constant process of selling oneself (\$) to the industrial technology needs of consumption, what replaces, in a way, the thinking/acting in a local, social and environmental technology.

"Venda-\$\$" also deals with the sale of art objects, and of artists, increasingly built for the art galleries market. Business is more relevant than the creative act on itself.

PG. 114 - 117

FRED PAULINO

(GAMBIOLOGIA COLLECTIVE)

Born in Belo Horizonte, Brazil (1977) where he lives and works. Computer Scientist from UFMG, holds a graduate degree in Contemporary Art from UEMG. He performs since the 1990's as an artist, designer, curator and researcher, focusing on the relationship between art, technology, politics and popular culture. His pieces are in diverse media: electronics, programming, graphic experimentation, object collages, street art and video. He was creative director at Osso Design and one of the founders of Mosquito Studio. Since 2008 he coordinates the Gambiologia Collective. He curated the exhibitions "Gambiólogos - Makeshifts in a digital era" (2010 and 2014). He is the editor of "Facta - the gambiologia magazine".

PG. 138 - 153

GAMBIOLOGIA COLLECTIVE

Formed in 2009 by artists-designers Fred Paulino, Lucas Mafra and Paulo Henrique Pessoa ("The Goose"). The group adopts the culture of makeshifts as inspiration for works on art and technology. Their creations unfold in multiple initiatives, such as: development of creative electronics, installations, sculptures and decorative objects; workshops on electronic art and reusing; proposal of collaborative projects such as "Gambiólogos" exhibitions and "Facta - the gambiologia

magazine"). They participated in several events in Brazil and abroad, among them: Zero1 Biennial (San Jose, USA); ISEA - International Symposium on Electronic Art (Albuquerque, USA); Tecnofagias (São Paulo, Brazil, CREAM - International Festival for Arts and Media (Yokohama, Japan); and Arte.mov Festival (Brazil). The collective received an honorable mention at the Prix Ars Electronica in Austria.

THE WORKSHOP OF JEAN BAPTISTE GAMBRIÈRE AND HIS DISCIPLES

OCCUPATION · GAMBRIARRAS, HACKS, MIXED ELECTRONIC TECHNIQUES, PSYCHEDELIC COLLECTIONISM · VARIOUS SIZES · 2014

Large in-process installation simulating the studio of Gambriologia's fictional patron. This is a temporary and permanently in change occupation that happens during the exhibition, which refers to the workshops of the collective members and any gambriologist.

In this installation, Gambriologia presented the most part of its pieces created from 2008 to 2014, as well as original pieces produced for this show. Objects of collection and pieces that include: assemblages, sculptures, lamps, projections, stickertherapy, the Gambriocycle (a multimedia-concept-tricycle) and many other electronics.

New works had been incorporated during the event and workshops for the visitors were held, in a way that this piece was considered done only on the last day of the exhibition.

PG. 138 - 153

GUTO LACAZ

Born in São Paulo, Brazil (1948). He is a multimedia artist, illustrator, designer, inventor and set designer. His production transits between graphic design, pieces made by ordinary objects, the exploration of technological possibilities in the arts and the world of media and consumption. As a graphic designer, he produces logos, books and magazines, posters, illustration, exhibitions and special projects. He was featured in many events and public spaces such as: São Paulo Gallery, SESC Belenzinho, SESC Pinheiros, Funarte-SP, São Paulo Biennial, CCSP and Ibirapuera Park. He has received awards such as the Guggenheim Scholarship, APCA Graphic Work, Abril Journalism Award and Graphic Excellence Award, among others. He published the books "Desculpe a letra", "Gráfica", "omemhobjeto" and "80 desenhos". He is a member of AGI - Alliance Graphic Internationale.

MORSE MOUSE

COLLAGE · LAPTOP, TELEGRAPHIC MANIPULATOR · APPROX. 40 x 30 x 30 CM · 2014

"The telegraphic manipulator, apparatus for generating the dots and lines necessary to the Morse code, may have been the precursor of the mouse. A tiny object, slightly smaller than a hand, where there are wires connecting it to another device that receives and transmits

the signal of this object. I thought that by replacing the mouse with the manipulator I would be creating an interesting technological and aesthetic contrast."

PG. 66 - 67

JORGE CROWE

Born in Mendoza, Argentina (1976). He has a BA in Visual Arts and a postgraduate in Electronics applied to Arts. His works with hardware hacking, circuit bending, DIY and open source electronics applied to theatre, media arts and education. He runs the "Toy Lab" in Argentina. He is also a teacher at the Master's degree in Electronic Arts (UNTREF - Buenos Aires). He has exhibited his toys and objects in different galleries, festivals and events in Argentina, Uruguay and Brazil such as FILE'09 São Paulo, FILE Prix Lux, Dorkbot Montevideo, amongst others.

LUDOTECNIA (BETA TESTING VERSION)

NOISELECTRONICS, VIDEO CAMERAS, PROJECTORS · LIVE · APPROXIMATE TIME: 35 MINUTES

It's an audiovisual performance based on the use of toys, hardware hacking and obsolete technology. Electromechanical toys, lamps and other devices are sequenced and controlled, while being part of the sound and visual setup. Security cameras capture actions on the table, allowing the public to participate in what is happening in the "stage". Mutant reptiles, robots, toy soldiers and dinosaurs are the characters in this story where film genres collide and mingle. Ludotecnia is a tribute to the VHS generation and its TV shows on Saturday afternoons, full of stop motion creatures, mad scientists, superpowers and alien invasions.

PG. 14 - 17

JOSEPH MORRIS

He is a contemporary sculptor born in New York City (1984), where he lives and works. He is currently Visiting Professor and Technician in Pratt Institute's department of Industrial Design. He has a MFA in Art and Technology Studies at The School of the Art Institute of Chicago, and a BFA in Sculpture from State University of New York at Purchase College. He has exhibited in the US and abroad in shows such as: Gibney Dance in Lower Manhattan, Common People Gallery in Brooklyn, NY, ACRE Projects, and The Glass Curtain Gallery in Chicago, IL, and Warehouse 508 in Albuquerque, NM during ISEA - International Symposium of Electronic Arts. In 2013, he was awarded a residency at ACRE Projects in Steuben, WI, and a residency fellowship in 2010 at The Contemporary Artists Center in Troy, NY.

MERE THINGS SERIES:

FALLING NAIL, SPRING CATCH, EXCUSE ME & SMALL STRING
ELECTRONIC SCULPTURES · WOOD, FOUND AND ELECTRONIC PARTS · VARIOUS DIMENSIONS · 2008-2009

"It is about taking ordinary objects, and turning them into simple movements that are intimately engaging. Making them is a constant back and forth struggle between my idea and the making of the machine, with each piece emerging as individual and unique, containing their own reflection. It is my hope that through *Mere Things*, these simple machines can empathetically connect us to our shared humanity."

PG. 58 - 61

LEANDRO ARAGÃO

Born in Belo Horizonte, Brazil (1983). He is a bachelor in Fine Arts at UFMG. He lived in Boston and Los Angeles, where he began his studies in Photography and Video at the New England School of Photography. He develops audiovisual works and exhibitions with his partners Eder Santos, André Hallak and Barão Fonseca in the "Trem Chic" production company. He creates objects using "makeshift video" which are presented in public spaces. He also works as set designer and art director. He participated in exhibitions such as *Arte.mov Festival - Art in Mobile Media* and *Gambiólogos 2010*, among others.

TIMECODE

VIDEO OBJECT · CRT IMAGE TUBES, BULB, HARDWARE, RASPBERRY, AUDIOVISUAL ELECTRONICS SYSTEM · 01'16", NO AUDIO, LOOP, 640 × 480 PIXELS, COLOR · 35 × 30 × 100 CM · 2014

Digital hourglass mounted with cathode ray tubes.

If an hourglass is a clock of sand grains that fall, "Timecode" is a clock of videoframes of sand grains that don't fall, but give us the impression of falling. Each frame depicts a moment of this game of gravity and sand grains. The piece emulates the functioning of the former invention, but also subvert it. In the hourglass the driving force comes from nature, whether in this piece it is an invention of its creator, who edits time in his own way, as well as reedit our own time, thus integrating both the tube and the hourglass into it. In *Time* is part of the work, it can't prescind it. In this sense, this device seems to protect itself from the idea of a scheduling, approaching the notion of time to something more connected to a sense of occasion.

"Timecode" doesn't exist for gaining time, but rather for proposing an agreement; to win back from time what is ours, this continuous invention.

PG. 88 - 91

LUCAS BAMBOZZI

Multimedia artist and new media researcher. He dedicates himself to the critical exploration of new media formats. He produces videos, installations, audiovisual performances and interactive projects. His works were exhibited in more than 40 countries. He was a curator and coordinator of events such as *Sónar SP*, *Nokia Trends*, *Motomix*, *Red Bull House of Art* and *Dissonant Place*. He was an artist in residence at CAiA-STAR Centre / i-DAT (Planetary Collegium) and has completed his MPhil at the University of Plymouth, England. In 2010 he received the *Prix Ars Electronica*. In 2011 he had a retrospective

at *Arte Alameda*, in Mexico City. He has participated in dozens of exhibitions such as: *Tecnofagias* (Sao Paulo, Brazil), *Zero1 Biennial* (San Jose, USA), *Bienal de Artes Mediales* (Chile) and *Singularidades* (Itaú Cultural, Sao Paulo, Brazil). He was the creator and coordinator of *Arte.mov Festival - Art in Mobile Media*, *Labmovel* and *Multitude Exhibition* at the *SESC Pompeia* (Sao Paulo, Brazil).

OF BROKEN THINGS

OBSOLESCENCE CONSOLIDATION MACHINE FROM ELECTROMAGNETIC FIELDS · APPROX. 200 × 150 × 200 CM · 2012

Installation-machine that draws from the electromagnetic flows existing in the space where it is installed in order to swallow obsolete mobile devices. The more intense the signals are, the faster and more effective the operation of the piece becomes. Several modules are integrated, showing the precarious precision of movements: the mechanism that pushes and dispenses cell phones, the gears and chains driven by the motor that drives the hydraulic vise, a niche of flow of the torn material. Its operation is slow, precise, and it complies with dynamic patterns.

The piece deals with the flow of communication around us and its potential transformation into waste. We are users of a system in continuous testing, which will never be ready. We use dysfunctional hardware and let ourselves be regulated by networks that are increasingly encroaching on our lives. The ubiquity of communication increases and we become agents, operators and hostages of this flow. "Of broken things" operates between networks and the real world, where autonomy eventually expires, principles become obsolete, and we realize that we are in the internet age of broken things.

Concept: Lucas Bambozzi / **Tech Development:** Radames Ajna / **Assembly and Mechanics:** Leonardo Ceolin / **Tech Support:** Guima San / **Assistance and Production:** Luciana Tognon / **Commissioned by** 3M Digital Art Show

PG. 84 - 87

LUCAS MAFRA

(GAMBILOGIA COLLECTIVE)

Born in Belo Horizonte, Brazil, where he lives and works. He is a bachelor in Product Design at Fumec University. He is a hobbyist and self-taught artist in electronics for over 15 years. He designs, draws and builds electronics and lamps from reused materials, with extensive experience in the use of LEDs and circuit bending. He was curator and designer in "LEDesign" show in Belo Horizonte (2008). He integrates the *Gambilogia* collective since 2008.

PG. 138 - 153

LÚCIO BITTENCOURT

Born in 1953 in Mogi das Cruzes, Brazil, he began his artistic career in 1979. He has produced more than 12 thousand pieces, among them

200 monuments that are installed in public spaces of several cities. He has been granted with awards such as the Art Saloon Taubaté (Brazil, 1979). He had solo shows and has participated in many collective exhibitions in Brazil and abroad. His works are shown in Lisbon, Lyon, Puerto Rico and Paris.

DEMOGRAPHIC EXPLOSION

SCULPTURE · SCRAP AND SOLDER · APPROX. 100 × 70 × 100 CM · 2014

PULSATION

SCULPTURE · SCRAP AND SOLDER · APPROX. 200 × 150 × 80 CM · 2014

Large dimensions metal sculptures made from scrap. The pieces oscillate between abstract and figurative, problematizing the utilitarianism of contemporary technological industry. The fluidity of movement suggested by the pieces contrast with its weight, while the decay of a humanity that produces waste in an uncontrolled pace is evident, through a singular transformation of these residues. The sculptures, thus, collide different times: of dead matter and of living human creation.

PG. 40 - 43

MAREPE

Born in 1970 in Santo Antonio de Jesus (Bahia, Brazil), where he lives and works. Since 1990 he's presented about 20 solo exhibitions in museums and galleries such as Anton Kern Gallery (New York, USA), São Paulo Museum of Modern Art (Brazil), Pampulha Art Museum (Belo Horizonte, Brazil) and Tate Modern (London, England). He participated in major events and art centers in several countries, as the 3rd Biennial of Bahia (Salvador), Itaú Cultural (São Paulo), MoMA PS1 (Long Island, USA), Museum of Modern Art Rio de Janeiro (Brazil), MOT Museum of Contemporary Art (Tokyo, Japan), Centre Pompidou (Paris, France), Mercosul Biennial (Porto Alegre, Brazil), Biennale di Venezia (Italy) and Istanbul Biennial (Turkey). His work integrates important collections such as Ellipse Foundation (Alcoitão, Portugal), Inhotim Contemporary Art Center (Brumadinho, Belo Horizonte, Brazil), MAM - São Paulo Museum of Modern Art, The Museum of Modern Art (New York, USA) and Tate Collection (London; UK).

MUTATION

SCULPTURE · PIECES OF DOLLS AND AUTO PARTS · APPROX. 100 × 160 × 100 CM · 2008

"This is a futuristic sculpture, which refers to science fiction, to chaos. At the same time that the figure of a child suggests a pessimistic future message, the movement of the piece brings us some hope, since its own base is a hand reaching towards the visitor, suggesting a relationship with the one who arrives.

The parts used in this work were collected in a surplus automotive

shop, which is a very special and fascinating universe: on the wall, objects of various types, shapes and textures are hanged - poor materials, obsolete, dead-end, which practically would be discarded as junk, but when they are re-appropriated and transformed into a piece, they get new life.

What interests me the most in this work is a pictorial issue, of plasticity, a combination of forms suggesting another form. The materials seem noble, high-tech, but they are totally poor. They have a sophisticated look and would be difficult to be modeled, but the result of the sculpture is a very simple form that almost resembles a readymade.

In the end, I think it also brings the issue of capitalism, of a disposable culture that affects not only objects, but also people."

PG. 52 - 65

MARIANA MANHÃES

Born in Niterói, Brazil (1977). She works in different media: drawing, video, photography and "organic machines." Since 2000 she's participated in exhibitions at museums and galleries in Brazil and abroad, such as: Vancouver Biennial (Canada), Shanghai Gallery (China), The Mattress Factory (USA), CCBB (Rio de Janeiro, Brazil), Martin-Gropius-Bau (Berlin), Itaú Cultural (Sao Paulo, Brazil), Tomie Ohtake Institute (Sao Paulo, Brazil), Museum of Modern Art (Rio de Janeiro, Brazil), among others. She presented solo shows at the Imperial Palace (Rio de Janeiro, Brazil, 2013), CCBB (Rio de Janeiro, Brazil, 2010) and the Museum of Contemporary Art (Niterói, Brazil, 2007). She received relevant awards and in 2012 she got her Master's degree in Communications and Culture from UFRJ (Rio de Janeiro, Brazil).

THISTHOSE (WINDOW)

ANIMATION · LCD/DVD PLAYER, ELECTRONIC CIRCUITS, MOTORS, PVC TUBES, FANS, PLASTIC BAGS · APPROX. 50 × 160 × 150 CM · 2012

The animation of a window that speaks and breathes is displayed on a video monitor. Light sensors capture the screen's bright and makes the piece react, inflating and deflating plastic bags installed at it, in a movement reminiscent of breathing.

PG. 92 - 95

MARK PORTER

He is a sculptor born 60 miles south of Chicago, Illinois (USA). He has served as Exhibition Coordinator and Curator at Columbia College Chicago since 2005. He completed BA and MA degrees in sculpture at Eastern Illinois University and an MFA in sculpture at the University of Michigan in Ann Arbor, USA. He curated the exhibitions "Active/Inactive" (2006) and "Machinations: Kinetic Sculptures in the Age of the Open-source" (2012), both focused on kinetic, interactive sculptures and site-specific works. He has exhibited his work in various solo and

group exhibitions including *Autohemorrhaging Actuator*, *Territorial Markers*, *Recent Drawing Machines* by Mark Porter, *Nurture/Alter*, *Counterparts*, *Rube Goldberg's Ghost*, *Bauhaus Now*, *Stop, Start, Repeat* and *Olfaction*.

TRANSLATOR

SCULPTURE - STEEL, ALUMINUM, AIR PUMP, GLASS, INK, CAMERA, VIDEO PROJECTOR
· 170 x 150 x 120 CM · 2014

"The piece was inspired by the invitation to participate at this exhibition. This work is an exchange with a part of the world that is foreign to me. It is a metaphor for cultural exchange, interpretation/noise and swap of perspective. The sculpture creates a drawing on the wall by dispensing a fluid made of soap and pigment. A video camera feeds live the process of drawing for the video projector, which translates the video signal and projects it on an adjacent wall.

PRELIMINARY FOR AUTOHEMORRHAGING ACTUATOR

WINTERGREEN OIL TRANSFER, GRAPHITE, PENCIL, OIL STICK AND PLASTER ON PAPER
· VARIOUS DIMENSIONS · 2012

"In 2012 I presented this site-specific, interactive and kinetic installation. It was a collaborative effort between sculpture and public. Activated by a motion sensor, the presence of the viewer caused each form to make red markings upon the wall surface. The more interaction between sculpture and public, the more elaborate the drawing on the wall became. A series of preliminary drawings were then created through the installation.

PG. 110 - 113

MAURO ALVIM

Born in Chiador, Minas Gerais, Brazil (1966). Since the 2000s he dedicates himself entirely to creating sculptures from scrap and relics. He divides his creations between motorcycle sculptures, pieces inspired by the universal and regional literature and works denouncing attacks on the environment. He has held several exhibitions in Juiz de Fora, Brazil, where he currently lives and in other states of Brazil and Uruguay, where he attended the International Sculptors Meeting.

PAJEU, THE GREAT WARRIOR

SCULPTURE - SCRAPS, TOOLS AND WELDING - APPROX. 40 x 30 x 20 CM · 2012

FATHER! I WANT TO QUEER THE CANNON

SCULPTURE - SCRAPS, TOOLS AND WELDING - APPROX. 60 x 40 x 40 CM · 2012

Two pieces that compose the series "Sertões", inspired by Euclides da Cunha classic book. The sculptures in oxidized iron use sharp and pointed tools, suggesting firearms in its final form. The use of the

rusty metal and everyday use utensils establish a contrast-paradox between manual combat tools (sharp) and distance attack tools (explosives). These weapons-scraps point at the same time to the past and to the future, contradicting the civilizatory advance, using the backwoods barbarism of Canudos as a metaphor for a critique of the real destruction practiced by men called "modern".

PG. 36 - 39

O GRIVO

"They began their research in the field of "new music" in the 1990s. They present installations and concerts that explore new acoustic and electronic music sources, the construction of "sound machines and mechanisms" and the unconventional use of traditional musical instruments. Their pieces propose intersections between visual and audio information in a dialogue with film, video, theater and dance. They propose a state of curiosity and contemplative disposition to listening and discussing the relations of sound with space.

56'04 "

MOTOR, WOOD, METAL PULLEYS, BELT, WIRE / 2014

Rythm is everywhere.
Quantifiable entity, numerable...
In absorbed progress, in suspended air,
in silence,
in its recidivist division of time, space.
Measurement unit to be filled
void that is the true substance of the world.
Rythm,
what flows,
what owns motion...

In every 56 seconds and 4 frames a sound is produced by the machine/tool. The slowness of the mechanism and the costly process by which the sound is produced values it. It is created a preparation, an expectation, a time suspension that is solved with the acoustic mechanical sound event. A great preparation for a rather small, soft and simple sound.

PG. 54 - 57

PAULO HENRIQUE PESSOA "THE GOOSE"

(GAMBIOLÓGIA COLLECTIVE)

He was born in Martinópolis, Brazil (1955) and is based in Belo Horizonte since the 1960s. He graduated in Industrial Design from FUMA (currently UEMG). As a graphic artist, he directed the Gorilla Studio, performing projects in fashion, set design, visual communication and illustration. He served as art director, set designer and costume designer in commercials, television shows, plays such as "An imaginary Molière" (Grupo Galpão), and feature films like "Something

in the Air", by Helvécio Ratton. Since the 1970s he has participated in art and design exhibitions, such as the National Exhibition of Fine Arts (Funarte, 1985). His work with light design using antiques and reused materials is well recognized. He has conceived and produced the space-concept "Bar do Ganso" (The Goose's Bar) on permanent display at the Inhotim Institute. He was the theme of the film "Encomenda ao Ganso" (Ordering from The Goose) and he is a master consultant of the Gambiologia Collective.

PG. 138 - 153

PAULO NENFLÍDIO

Sound artist, graduated in Fine Arts from USP and in Electronics by ETE Lauro Gomes. His works are sculptures, installations, objects, instruments and sketches containing: sound, electronics, motion, construction, invention, randomness, physics, control, automation and "gambiarra". In 2003, he participated at the residency Bolsa Pampulha in Belo Horizonte. In 2005 he received the Sergio Motta Art and Technology award. In 2009, he held artistic residence at ASU Art Museum in Arizona, producing a solo exhibition. He participated in the 7th Biennial of Visual Arts of Mercosur and in the show "Parallel" (2010). In 2011 he received the CNI SESI Marcantonio Vilaça Fine Arts award.

THUNDER MACHINE

CONSTRUCTION IN VARIOUS WOODS, ELECTRONIC CIRCUIT, SOLENOID, COPPER PLATE, STEEL ROPE, PRINTER RAIL - 15x 50x 30 CM - 2014

It is a work that produces a sonic and visual composition inspired by the moment just before the rain. All sound produced is of acoustic and mechanical origin. Among the sound elements there is a copper plate which, when vibrating in low frequencies, plays the sound of wind and when vibrating in high frequencies produces a thunderous sound. A rope produces several harmonics through an electromagnetic feedback system. Within a small window there are the lightnings. The silence also comes as an important element in this completely random composition.

PG. 102 - 105

PAULO WAISBERG

Architect, professor and artist. His studio is increasingly involved with the production of ephemeral spaces. The transition is an opportunity to experiment, both in the use of new techniques and materials and in the potential of touching people by immersion in unusual places. In his artistic explorations with technology, he gets a convergence of practices and, occasionally, a short circuit.

SLAUGHTERHOUSE

DISMANTLED STUFFED ANIMALS CONNECTED TO A CONTROLLER - 2014

Robotic chickens hanging on clothesline.

LUNG

PLASTIC BAGS, FANS, RED LIGHTS, ELECTRONICS - 2014

It's alive and it's breathing.

PG. 118 - 123

SARA RAMO

Born in Madrid, 1975. She appropriates elements and scenes from the every day, by removing them from their original context and re-organizing them in her video, photographs, collages, sculptures and installations, proposing a very particular way of organization based on a transgressor will. Her recent exhibitions include *Desvelo y traza* (Madrid, Spain), 9th Mercosur Biennial (Brazil); *Imagine Brasil*, (Oslo, Norway), *Planos de Fuga* (Sao Paulo, Brazil) and *Penumbra* (Rio de Janeiro, Brazil). She participated in the Brazilian Art Pan MAM (Sao Paulo, 2011) and of Sao Paulo Biennial de São Paulo (2010). In addition to exhibitions in institutions of international relevance such as the Venice Biennale (2009). Her work is in the collections of Inhotim, Belo Horizonte, Brazil; Museum of Modern Art, Rio de Janeiro, Brazil; Itau Cultural Institute, Sao Paulo, Brazil; and di Risparmio di Fundacione Casa Modena, Italy; among others.

ON THE MOVE

DIGITAL VIDEO - 7'46" - 2008

"This is a video I presented in the solo exhibition "Casi lleno, casi vacío" ("Half full, half empty"), in São Paulo. Admittedly the video could also have had the same name as the exhibition. Someone's back appear and the person is pulling things from a suitcase. There is a scale game in regards to the possible contents of the suitcase. In it, more things than what would be reasonable fit, objects that are covering the floor, occupying a room that was empty at first. This is a piece about the accumulation of the things we carry with us, about what must be left behind. It is an absurd journey, it is not clear where it comes from or where it goes, as it is in life itself. It also suggests a detachment movement, since you need to thoroughly empty your luggage to really go another place."

BEFORE, AFTER, NOW

TRIPTYCH PHOTOGRAPHY - 95 x 62 CM (EACH) - 2012

PG. 32 - 35

UJINO

Since the 1990s, Japanese artist Ujino (b.1964) has produced a number of sound sculptures and installations as a process of what he claims "research on the material world". Ujino's best known The Rotators project has been widely acclaimed, and lead to a number of exhibitions and live performances inside and outside Japan. His artworks have been exhibited at a number of major international institutions and biennales, including his solo exhibition at Hayward Gallery Project Space in London, and group shows at Biennale of Sydney (Australia), ZKM Karlsruhe (Germany), Deitch Projects (New York), Nam June Paik Art Center (Korea) and Mori Art Museum (Tokyo), among others. In 2013 his major museum solo exhibition POP/LIFE was held at The Hakone Open-Air Museum in Japan, presenting an retrospective of his works.

THE BALLAD OF EXTENDED BACKYARD (DINING SECTION REGENERATED)

INSTALLATION · SOUND SYSTEM, MUSICAL INSTRUMENTS, LAMPS, HOME APPLIANCES,
ELECTRONIC CONTROLLER · APPROX. 400 x 400 x 300 CM · 2010-2014

This installation is a part of "The Rotators" series. It is an human scale drum machine using common household electric appliances with motors and the amplifying technologies of rock'n roll forming a sound sculpture or performance project. Its genesis is the mass consumerism, the disposable culture I was raised in, up until 1989, with the end of a Japan that was constantly growing materially and becoming richer.

The core section to control the unit is the Rotatorhead. A disc with color pencils embedded onto it surface is set in the turntable. The uniform rhythm starts. As the pencils hit the switches, the home appliances are turned on and off.

PG. 106 - 109

ZAVEN PARÉ

Artist and researcher of the HTCE (History of Science, Techniques and Epistemology) at UFRJ. He was the inventor of the first electronic puppets (collections Ballard Institute/Connecticut and Musées Gadagne/Lyon) in the 1990s. He was a fellow of the French American Fund for the Performing Arts, of the RioArte Award, of the Villa Kujoyama/Kyoto, of the Japan Society for the Promotion of Sciences (JSPS) and of the Intelligent Robotics Laboratory of Professor Hiroshi Ishiguro at Osaka University (2010). He has received the Sergio Motta Art and Technology award in 2011. His works have been presented in several places dedicated to art and technology, such as the California Institute of the Arts, the Alameda Art Lab in Mexico, and also during the Biennial of Contemporary Art of Lyon (France).

ORIGIN OF THE WORLD

PROJECTED IMAGES · PROJECTOR, SLIDES, METAL AND THERMOFORMED PLASTIC · 40
x 35 x 50 CM · 2005

"L'Origine du Monde" is, first of all, the Courbet painting. This version is an object consisting basically of a projection, such as the wall of a prehistoric cave or the Platonic cave myth. It is therefore the origin of

representation: the image of an eye. It is an eye, the one that chased Cain, or simply an eye on the place of the sex of a woman - an anatomical approach made by Georges Bataille in the book "Histoire de l'oeil", 1935. The image of the eye becomes thus the image of the woman sex, which opens and closes; two manipulated slides projected sequentially on a frame that is the lower part of a woman's body.

SPLEEN 2.0

This work comes from the contrary of the anatomy studies and dissection of corpses. It is the result of an exercise of assemblage and reassemblage, piece by piece, simulacra of mechanisms. The presence of a body remained, in the form of a torso it is a place of origin of the sounds and noises of a tragedy, a bubble in a chest. On a tale by Jean Richepin, in a huge shed, a bit crazy builder builds a human larynx and an oral cavity driven by the bellows of a forge. The set should be able to say out loud: "In the beginning was the Word".

There are machines everywhere, and not just metaphorically: machines of machines, with their engagements and connections. The machine-body is connected to a machine-source: one emits a stream that engages another. "[...] This is how we are all bricoleurs, each with our little machines. A machine-body for a machine-source, always flows and cuts"¹.

The noise in this torso is caused by the combination of electricity, of the pump motor, of the effect of the air bubble in water and of this all amplified electronically. If we can not dismantle miracles to have fun, bring back the human body to the scene, or simulate the mechanisms of life so to laugh, thus why trying to understand them?

¹DELEUZE, G.; GUATTARI, F. L'anti-Oedipe. Capitalisme et schizophrénie. Paris: Minuit, 1972, p. 7 [our translation].

ORNAMENTAL PIECES

SCULPTURE · MECCANO AND SCREWS · VARIOUS DIMENSIONS · 2014

These ornamental prototypes are compositions inspired in indigenous pieces, made from Meccano metal parts: perforated strips, straight or curved, flexible plates, flat, curved or rigid, with or without edges, beams (brackets, ribs, base), mechanical accessories, gears and sprockets to allow for different types of transmissions.

PG. 68 - 75

GAMBIÓLOGOS 2.0

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