Skipping stages. From constructivism in architecture and in poetry to the digital media: searching for parameters to understand the emerging media and the formation of a specialized audience in Brazil¹.

As we search for parameters to understand the current production in art and technology and the formation of a specific audience in Brazil, we highlight the conditions of material production. The bases of material production, normally subordinated to the socialeconomic situation, are involved in the aesthetic resolutions of the artistic formats. However, the enculturation and modernization of the country have occurred through a process characterized by the import of foreign models artificially implemented without an organic maturation, which we call "skipping stages". The enculturation process in Brazil was composed of surprises and unexpected transpositions, such as the arrival of the Portuguese king John VI at the country, in 1807. From 1807 to 1816, the colony Brazil becomes a kingdom, and the following institutions are implemented: Museu Nacional (National Museum), Biblioteca Nacional (National Library), Academia de Belas Artes (Fine Arts Academy), Imprensa Régia (Royal Press), and Banco do Brasil (Bank of Brazil). With the Royal Press, lithography was introduced in Brazil without delay compared to other countries in Europe. This fact proves that certain technologies were implemented here and in more advanced centers at the same time, skipping stages, without duly equipping the cultural institutions and without the necessary evolution and maturation of the local context.

The cannibalistic movement of Oswald and Mario de Andrade (1922), which wished to found Brazil's own culture, marked a return to a primitivist figuration that represented a patriarchal and agrarian social-economic structure. The cultural and political context that precedes the specific production in art and technology is inquiring: the prioritization of investment in communication technologies, mainly in mass technology, so that the central government could expand and act appropriately; the coincidence of the country's industrialization with emphasis on immigration and of "developmentalism" and its policies of race whitening and of non-dependence on imports; and the effort of certain executives. mainly from São Paulo, to make the metropolis participate in the international artistic scenario through effective cultural pedagogic policies. Assis Chateaubriand inaugurated in 1947 the Museum of Art of São Paulo, Masp, and Francisco Matarazzo, also known as Ciccillo, founds the Museum of Modern Art, MAM, which will have, as an extension of its activities, the foundation of the Bienal de São Paulo in 1951. Despite the peripheral countries' difficulty in having access to cultural goods, the limited resources, and the precarious conditions of material production that hinder even more the development of modern artistic creation, the kinetic and minimalist anticipations of the Latin American artists are remarkable, specially those of the Brazilian Abraham Palatnik, and the investments that founded a Computer Art in Brazil. The first Computer Art exhibition in Brazil was organized by Waldemar Cordeiro in 1971. The exhibition was called Arteônica – a name formed by the mixture of the Portuguese words arte (art) and eletrônica (electronic). The first and phenomenal experimentations in art and technology in the Computer Art category were conducted by Waldemar Cordeiro, associated with the physicist and mathematician Giorgio Moscati, at the School of Physics of the University of São Paulo in 1968. The Computer Art in Brazil that used digital methods for creation finds its methodological antecedent in concrete art and in the pioneering concrete poetry, whose main mentors, the Campos brothers, Haroldo and Augusto, and Décio Pignatari, had theoretical affinities and the same scientific interests as Waldemar Cordeiro. A witness of

¹ Yara Guasque is a multimedia artist and a professor with the Post-Graduation Program in Visual Arts of UDESC. She graduated from FAAP with a degree in Plastic Art; she holds an MA degree in Literature from UFSC and a PhD from the Communication and Semiotics Program of PUCSP. Sandra A. R. Fachinello is a professor with UNOCHAPECO and pursues a MA degree in Visual Arts at UDESC, under the supervision of Yara Guasque. Silvia Guadagnini is a visual artist and graphic designer. She pursues a MA degree in Visual Arts at UDESC. She researches on interactivity in art.

this pioneering initiative was the publication "Poesia concreta" (Concrete poetry) in issue number 3 of the magazine Noigandres, dating from 1956, when the first National Exhibition of Concrete Art took place at the Museum of Modern Art, and its poems, whose meaning emerged only with the manipulation of the pages – already heading towards object-poems. Nevertheless, in the 1940s and 1950s the participative works of the Brazilian artists Mary Vieira and Ligia Clark already invited the participant to interact, and the manifestations of Hélio Oiticica and Ligia Clark were clearly directed at the conception of a process art, breaking with the previous object art. However, the experiences of constructivist architecture and the initiatives of the concrete and electric-acoustic music converged to the development of production in art and technology, and all of them were marked by a rationalism that coincided with the industrialization period in the country.

However, to Walter Zanini, the Brazilian artists' production in art and technology, which had been marked by some timidity, was only activated by the technological experimentation spaces. In the 1960s the first experimental space in the Museum of Modern Art of Rio de Janeiro opened the doors to innovative research supervised by the artists Lygia Pape, Antônio Manuel, Cildo Meireles, Anna Bela Geiger, Barrio and Antonio Dias. The expressive participation of plastic artists in the temporal investigations of Super 8 and of 16 mm developed a language that Hélio Oiticica called "Almost cinema". These manifestations were shown at Expo-projeção, organized by Aracy Amaral in 1973 in São Paulo. But only in 1976 did the Museum of Contemporary Art of the University of São Paulo (MAC-USP), under the direction of Walter Zanini, acquire the Sony portapak equipment, which enabled the fulfillment of projects of many artists, like Regina Silveira, Julio Plaza, Carmela Gross, Gabriel Borba, Marcelo Nietsche and Gastão de Magalhães.

The Bienal as an international exhibition kept the artists informed about the most relevant research and brought some examples in the area of art and technology. The IX Bienal of 1969, even with the boycott of international participations due to Brazil's military government, timidly opened a section called Art/Technology. The following artists participated in this Bienal, among others: Chryssa Mavromichali, Utz Kapmann, Gyula Kosice, an Argentinian constructivist who was the first to use hydraulic technological resources, Roberto Moriconi, with electrical-mechanical experimentations, Efizio Putzolu and Maurício Salgueiro, who also participated in the XI Bienal of 1971, in the section Art, Science, Life, Technology. The exhibition VI Jovem Arte Contemporânea da USP, JAC-72 (6th Young Contemporary Art Exhibition of USP), at São Paulo's Ibirapuera Park, gave priority to the process in relation to formal questions, showing the most recent research on performance. In 1973, the XII Bienal had, in its section "Art and Communication", Waldemar Cordeiro, without much repercussion among his peers. In this Bienal, Vilém Flusser was in charge of the international articulations; he brought Fred Forest. Fred Forest's proposal was to manage a communication office with the "Sociological Tour in the Neighborhood of Brooklin". The participation of video art, projected to happen in the Bienal of 1973, was effective only in the Bienais of 1975 and 1977, with the presence of Nam June Paik, Vito Acconci, Richard Serra and Bruce Nauman, among others. Explorations with new technologies, such as xerography, silk-screen processes, offset lithography, postcards, graphs, photographs and slides were exhibited in Prospectiva 74 and in Poéticas Visuais of 1977, organized by Walter Zanini with the collaboration of Júlio Plaza, both at the Museum of Contemporary Art, MAC-USP, in the Ibirapuera Park.

The First International Video Art Meeting of 1978, held at the Museum of Image and Sound (MIS) of São Paulo, discussed interactivity and telecommunications in art and technology proposals. The continuity of this focus was organized by Julio Plaza in the exhibitions of Mail Art (XVII Bienal) and Art and Videotext (XVIII Bienal) of the 1981 and 1983 Bienais.

Since the 1950s, the role of formation has been played mainly by the Bienal, with its pedagogical project of taking the masses to the exhibitions, ensuring that the audience incorporates new languages, such as holographic art, video art, art and communication, etc. Other institutions were created, like the recent initiatives focusing on the dissemination

and formation of digital media audience. In São Paulo, some examples are VideoBrasil (1991) and its Electronic Art Festival of 1994, the International Festival of Electronic Language (FILE), created in 2000, Itaúlab and the exhibitions and symposiums such as Emoção Art.ficial, promoted by Itaúcultural, and Prêmio Cultural Sergio Motta de Arte e Tecnologia, created in 2000, and in Rio de Janeiro, the electronic magazine Canal Contemporâneo, FILE Rio, and Centro Cultural Telemar (2005), today Centro Cultural Oi futuro.

Bibliography:

ARANTES, Otília Beatriz Fiori. Mário pedrosa: itinerário crítico. São Paulo: Cosac Naify, 2004.

ARAUJO, Yara Rondon Guasque. *Telepresença: interação e interfaces*. São Paulo: Educ, 2005.

ARRUDA, M.A. do N. Metrópole e cultura: São Paulo meio de século. Tese de

Livre-Docência. São Paulo, Departamento de Sociologia, FFLCH-USP, 2000.

BARROS, Leonora de e BANDEIRA, João. Grupo Noigrandes. São Paulo: Cosac & Naify, 2002.

BELLUZZO, Ana Maria; AMARAL, Aracy, A.; RESTAGNY, Pierre e PIGNATARI, Decio. *Waldemar Cordeiro: Um aventura da Razão*. São Paulo: MAC – Museu de Arte Contemporânea da Universidade de São Paulo, 1986.

CAMPOS, Haroldo de. "Depoimentos sobre arte e tecnologia: o espaço intersemiótico". In:

DIACON. Todd A. Rondon. O marechal da floresta. São Paulo: Companhia das Letras, 2004, 2006.

DOMINGUES, Diana (Org.). A arte no século XXI: a humanização das tecnologias. São Paulo: Unesp, 1997, p.207-215.

CHIARELLI, Tadeu. "Gonzaga-Duque: a moldura e o quadro da arte brasileira". (Introdução) In: ESTRADA, Luiz Gonzaga-Duque. *A arte brasileira*. Campinas:Mercado das Letras, 1995. (Coleção Arte: Ensaios e Documentos).

CUNHA, Euclydes da. À margem da história. Porto, Paris: Livraria Chardron, de Lelo & Irmãos, Ltda, 1922. FERREIRA, Orlando da Costa. Imagem e Letra: introdução à bibliologia brasileira. São Paulo: Edição Melhoramentos e Edusp, 1976, p. 180.

LUGO, Jairo; SAMPSON, Tony; LOSSADA, Merlyn. Novas indústrias culturais da América Latina aind ajogam velhos jogos Da República de Bananas a Donkey Kong. In: BARRETO, Ricardo; PERISSINOTO, Paula. (Orgs). *FILE: festival Internacional de Linguagem Eletrônica*. São Paulo: FILE, 2006, p. 164- 179.

MACHADO, L.G. "Introdução". In: MUSEU DE ARTE DE SÃO PAULO. I Bienal

do Museu de Arte Moderna de São Paulo. São Paulo, MAM, 1951, p.14.

MAMMI, Lorenzo. "Nuno Ramos na Bienal de Veneza". Publicado pela primeira vez como "Nuno Ramos". In: *Brasil em Veneza. XLVI Bienal de Veneza*. São Paulo: Fundação Bienal de São Paulo, 1995. In: TASSINARI, Alberto; MAMMI, Lorenzo; NAVES, Rodrigo. *Nuno Ramos*. São Paulo: Ática, 1997.

MORAIS, Frederico. "Vocação construtiva (mas o caos permanece)". In: MORAIS, Frederico. *Artes Plásticas na América Latina: do transe ao transitório*. Rio de Janeiro: Civilização Brasileira, 1979.

OLIVEIRA, Rita A. Bienal de São Paulo: impacto na cultura brasileira. Tese de Doutorado. São Paulo, Programa de Ciências Sociais, PUC-SP,

2001. Artigo PDF cessado online em dezembro de 2006 http://www.scielo.br/scielo.php2script=sci_arttext&pid=S0102-88392001000300004

PRADO, Gilbertto. Cronologias de experiências artísticas nas redes de telecomunicações. *Trilhas*. Campinas: Unicamp, julho a dezembro, 6 (1), 1997, p: 77-103.

______. "A arte no século XXI". In: DOMINGUES, Diana (Org.). A arte no século XXI: a humanização das tecnologias. São Paulo: Unesp, 1997, p. 243-246.

PEDROSA, Mário. Política das artes. São Paulo, Edusp, 1995.

SILVEIRA, Sérgio Amadeu da. *Exclusão Digital - a miséria na era da informação*. São Paulo: Fundação Perseu Abramo, 2001.

YÚDICE, George. A conveniência da cultura: usos da cultura na era global. Trad. Marie-Anne Kremer. Belo Horizonte: Editora da UFMG, 2004.

ZANINI, Walter. "Primeiros tempos da arte/tecnologia no Brasil". In: DOMINGUES, Diana (Org.). A arte no século XXI: a humanização das tecnologias. São Paulo: Unesp, 1997, p. 233-242.