INTERNATIONALISM, *BRASILIDADE*, AND POLITICS:
Waldemar Cordeiro and the Search for a Universal Language

Adrian Anagnost, Department of Art History, University of Chicago

In 1952 the seven-man Brazilian avant-garde group *Grupo Ruptura* held their inaugural exhibition at the São Paulo Museum of Modern Art, an institution established just four years earlier during a wave of technological and cultural modernization in Brazil. In keeping with the tradition of all good avant-garde groups, a strident manifesto accompanied the exhibition. Penned by Brazilian painter Waldemar Cordeiro, the manifesto rejected both naturalism and Expressionism in favor of rationally-structured geometric abstraction in painting and sculpture, a style known as concrete art. Where the populist figuration predominant in Brazilian painting during the 1930s and early 1940s could be marshaled for nationalist interests, concrete art was for Cordeiro a cosmopolitan, international style with the potential for universal communication.[1] Soon after this turn from figurative painting to concrete art, Cordeiro turned to conceptual and digital art, a shift that similarly took up broad communication as a goal for advanced art. By the 1970s, in a time marked by increasingly repressive rule under Brazil's authoritarian military government, Cordeiro's interest in digital art mounted a different type of challenge to institutional repression of left-wing politics. Across two decades, in the disparate styles of geometric abstraction and digital art, Cordeiro remained committed to clear communication by visual means as a way to promote an egalitarian political vision. However where concrete art used ostensibly universally intelligible *forms* to communicate as broadly as possible, the communicative potential of digital art resided in its *structures*, its means of distribution and transmission.

Before delving into the specifics of Cordeiro's body of work, it is worthwhile to call attention to one possible reason for the relative neglect of concrete art: its claim to universal intelligibility. In retrospective accounts of early twentieth-century avant-gardes, utopian desires for a universal language have often been written off as naïve fantasies of a more innocent time, when it was still possible to conceive of an art form out of reach of cooptation. For many early twenty-first century art historians, it is shock, disruption, or making strange—characteristics of the art of Brecht, Dada, or revolutionary

المنارة للاستشارات

Russia, for example—that remain relevant in late capitalism and are at times retroactively assumed to be the only valid strategies for earlier avant-gardes as well. Yet to write off earlier generations as naïve not only diminishes the relevance of the historical context in which they acted, it also disregards these avant-garde artists' own recognition of the limitations and challenges inherent in their desire for universal communication. For example in "The Work of Art in the Age of Mechanical Reproduction," Walter Benjamin holds film up as the revolutionary medium par excellence, though in hindsight it is all too easy to dwell on the instrumentalization of film towards totalitarian or capitalist ends.[2] For the dream of universal communication is not so different from a vision of successful propaganda or successful advertising, both of which have intermittently been viewed as antithetical to the project of avant-garde art. However the international intelligibility and cosmopolitanism attributed to concrete art can be seen as a way to avoid regressive nationalist tendencies that emphasized the ties of blood and land as grounds for national cohesion. The conditions that gave rise to concrete art in mid-century Brazil are thus not entirely dissimilar to the interwar period in Europe, when calls for cosmopolitan internationalism squared off against rising militarist nationalisms. Yet there is an added complication in the uncertain relationship of Brazilian artists to foreign models, where young Brazilian artists might take up geometric abstraction as a way to insert themselves into contemporary artistic discourse worldwide, and Brazilian institutions might promote this style as part of a self-avowedly modernizing thrust.

The *Grupo Ruptura* manifesto is central to a popular foundation myth of Brazilian concrete art, which from its inception was tied to contemporary political discussions over Brazil's relation to Europe and the United States. In many accounts geometric abstraction emerged in toto on the heels of post-war visits or migration to Brazil by artists and curators of the European avant-gardes, in the manner of Athena springing fully-clothed from the head of Zeus.[3] The external impetus for this flowering of concrete art in Brazil has been variously attributed to the 1949 São Paulo Museum of Modern Art (MAM) exhibition *Do figurativismo ao abstracionismo* [*From Figuration to Abstraction*], a show of primarily European artists curated by Belgian/French art critic Léon Dégand; or the 1951 exhibition of concrete art by Swiss artist Max Bill at the São Paulo Museum of Art (MASP).[4] Controversially the former

المنارة للاستشارات

exhibition included just three Brazilian artists—Cordeiro, Cícero Dias, and Samson Flexor—amongst a roster that included Jean Arp, Alexander Calder, Robert and Sonia Delaunay, Wassily Kandinsky, Fernand Léger, Joan Miro, and Francis Picabia, among others. The prevailing style in 1940s Brazilian painting was figurative, often accompanied by explicit assertions of aesthetic independence from European models. The teleological thrust of Dégand's conceptual framework thus excluded many of the most renowned artists in contemporary Brazil and positioned European artists at the forefront of avant-garde tendencies. While the artists exhibited in São Paulo's newly established museums of art tended to be European, the museums' structures were modeled on United States institutions such as the Museum of Modern Art in New York (MoMA). Both MAM and MASP initially received support from then-president of MoMA Nelson Rockefeller as part of post-war, anti-socialist cultural diplomacy practiced by the United States.[5] But the interest in concrete art on the part of Brazilian artists and business elites cannot be seen as simply following in the footsteps of their counterparts in Europe and the United States.

It was less an emulation of foreign models than an opportunistic, pragmatic approach that drove the founders of MASP and MAM in their alliances with, and splits from, foreign interests. In 1947 Brazilian media magnate Francisco de Assis 'Chato' Chateaubriand Bandeiro de Melo founded the MASP with the help of Rockefeller and of Brazilian business elites, whom he convinced to donate money in return for positive press coverage.[6] MAM was established in 1948 by Brazilian industrialist Francisco 'Cicillio' Matarazzo Sobrinho, who also spearheaded the foundation of the Bienal de São Paulo in 1951. Despite Rockefeller's efforts to counteract the influence of European culture in South America—with European Communism of particular concern—for both Chateaubriand and Matarazzo European art would play a major role during the initial years of their institutions' existence. Furthermore Matarazzo shocked Rockefeller by choosing Dégand, who wrote for the French Communist newspaper *Les Lettres Francoises*, as the first director of the MAM.[7] The presence of European art did not suggest allegiance to a left-wing agenda for Chateaubriand and Matarazzo, however. Chateaubriand explicitly framed European bourgeois culture as a bulkhead against Communism. In 1947 he stated:

المنارة للاستشارات

> *[A]dotei como minha uma técnica de indiscutível eficiência para reeducar a burguesia: anunciar para breve o fim do mundo burguês, que sucumbirá aos ataques soviéticos. Apresento, contudo, a única hipótese de salvação, que é o fortalecimento das células burguesas. Uma das formas de fortalecê-las é doar Renoirs, Cézannes e Grecos ao Museu de Arte. O que significa que enfrentar os bolcheviques pode custar a cada um dos senhores modestos 50 mil dólares.*
>
> [I've adopted as my own a technique of indisputable efficiency in order to reeducate the bourgeoisie: to announce the imminent end of the bourgeois world, which will succumb to Soviet attacks. I present, nevertheless, the only possible solution, which is the strengthening of bourgeois cells. One of the ways of strengthening them is to donate Renoirs, Cezannes and Grecos to the Museum of Art [MASP]. Which means that confronting Bolshevism may cost each of you gentlemen a modest fifty thousand dollars.][8]

Concrete art emerged in a postwar Brazil characterized by competing political interests, when various interests attempted to use aesthetics in the service of political ends.

While these institutional and political forces certainly played a role in the rise of concrete art in 1950s Brazil, many artists already were interested in, and knowledgeable about, artistic developments outside of Brazil. The country did not exist in a vacuum previous to Rockefeller's interest in sending art from the United States to Brazil, or before Brazilian businessmen's efforts to establish art museums that initially emphasized the cultural history of Europe. There was a long history of artists traveling between cities in Brazil and Europe, from Tarsila do Amaral studying painting in 1920s Paris to Lasar Segall's contemporaneous immigration to Brazil from Lithuania, by way of Berlin. Cordeiro too was well positioned to act as a conduit in the postwar period as he traveled back and forth between Brazil and Italy from 1946 to 1948.

In contrast to some Brazilian artists who positioned themselves in opposition to Europe, Cordeiro maintained strong ties to European art and political life.

المنارة للاستشارات

Cordeiro was born in 1925 in Rome, where he studied at the *Accademia di Belle Arti di Roma* [School of Fine Arts, Rome] as a teenager.[9] Soon after his arrival in São Paulo, the newspaper *Folha da Manhã* [Morning Paper] contracted Cordeiro to write political reports, draw illustrations, and write art criticism, the subject of which soon became his discovery of recent trends in Italian painting during his frequent stays in Rome.[10] During a 1947 trip to Rome, Cordeiro encountered surprising new developments in art, including *Forma*, a collective of avowedly Marxist abstract artists. *Forma's* manifesto read, "We declare ourselves Formalists and Marxists, convinced that the terms Marxism and formalism are not unreconcilable. . . . The necessity of taking Italian art to the level of contemporary European artistic language forces us to take a clear and resolute position against any foolish nationalistic position."[11] Working in a similar vein, the international Art Club of Rome, formed in 1945 by Polish painter Jozef Jarema and Italian painter Enrico Prampolini, among others, included many of the same artists as *Forma*.[12] Both *Forma* and the Art Club of Rome opposed the Communist Party of Italy's increasingly rigid adherence to the socialist realist aesthetic, and insisted instead that abstraction and socialism were compatible. Cordeiro seized upon this union of abstraction and socialist politics, returning to São Paulo permanently in 1948 as a 'delegate' of the international Art Club. At the same time leftist figurative artists in Brazil continued to insist on the importance of figuration. In a speech entitled "Mitos do Modernismo" ["Myths of Modernism"], which was also published as "Realismo e Abstracionismo" ["Realism and Abstraction"] in a 1948 issue of *Fundamentos*, the cultural journal of the Brazilian Communist Party, Emiliano di Cavalcanti criticized the abstraction favored by the newly opened MAM, and instead favored an accessible, characteristically Brazilian realism.[13] The insistence of these Italian groups that abstraction could not only be reconciled with leftist politics, but was in fact to be preferred over social realism, helped Cordeiro to justify distancing himself from the figurative populism that enjoyed state patronage under Vargas' recently-ended authoritarian *Estado Novo*, while remaining committed to left-wing politics.

Cordeiro's experiences in Italian and Brazilian contexts during the 1940s and 1950s also provided him with several different models for artists' involvement with the state. The recently-ended Vargas regime's aesthetic preferences bore striking resemblance in ideology, if not always formally, to those of Italian dictator Benito Mussolini, who praised Italy's *Novecento* group for

المنارة للاستشارات

"its emphasis on Roman styles and *Italianitá*, its rejection of the recent past, and its embracing of cultural nationalism."[14] Similarly Vargas had promoted *Brasilidade* as "an intangible but highly coveted sense of Brazilianness" that combined modernism and tradition.[15] While the transition to a democratic regime, the rise of abstraction, the move away from outmoded forms of nationalism, and the establishment of modern art museums across the country seemed to signify a fresh start during the postwar period, the government was certainly engaged in artistic life in Brazil during the democratic period of 1946-1964. Kubitschek's massive 1950s architectural project for the new modernist capital of Brasília is only the most visible example. During the early 1960s and under the leftist government of João Goulart, the Ministry of Education and Culture subsidized the *Centro Popular de Cultura* (CPC). The CPC, which "consist[ed] largely of radical middle-class students who wanted to use popular culture to push Brazilian society in a progressive direction . . . stag[ed] plays in factories and working class neighborhoods, produc[ed] films and records, and participat[ed] in Paulo Freire-style literacy programs."[16] Did the future for artists and progressives now lie with the leftist state?

As he shifted from paintings to conceptual and digital art, Cordeiro's leftist politics initially emerged as friction with arts institutions before becoming visible in the structures of his work. Cordeiro's early abstractions resemble the work of Dutch artist Piet Mondrian, but it was Max Bill's notion of 'concrete' art that was formative for Cordeiro's articulation of abstraction in the *Grupo Ruptura* manifesto. In the words of Max Bill:

> We call 'Concrete Art' works of art which are created according to a technique and laws which are entirely appropriate to them, without taking external support from experiential nature or from its transformation, that is to say, without the intervention of a process of abstraction. . . . It is real and intellectual, anaturalist while being close to nature. It tends toward the universal and yet cultivates the unique, it rejects individuality, but for the benefit of the individual.[17]

In Cordeiro's work this conceptualization became visible in artworks such as the 1952 painting *Desenvolvimento ótico da espiral de Arquimedes* [*Optical Development of the Archimedean Spiral*]. Inspired by Cordeiro's study of

المنارة للاستشارات

Gestalt aesthetics, this work explored one of the elements of painting—in this case, line—in a systematic way, taking two straight vertical lines as starting points for a thick red spiral and a series of thinner curved lines arranged in a series of concentric and overlapping circles. The Archimedean spiral is characterized by a fixed distance between the successive curves of the spiral, and no imitation of nature determines the bounds of the surrounding circles, whose diameters correspond to three and six times the length of the spiral segment, respectively. During the 1950s, though Cordeiro's work did not challenge the predominance of painting in São Paulo arts institutions, he challenged the politics of those institutions with actions such as withdrawing his work from the second São Paulo Bienal.[18] In the middle of the 1960s, however, in response to his reading of Umbertos Eco's and Antonio Gramsci's ideas of communication and participation in society, Cordeiro shifted from abstract painting to a more object-oriented art. Cordeiro's rationally-structured concrete painting gave way to brightly-colored, optically-charged abstract paintings made with spray paint or brush, and by the end of the decade painting had disappeared from Cordeiro's *oeuvre* entirely. In response to his reading of Umbertos Eco's and Antonio Gramsci's ideas of communication and participation in society, Cordeiro shifted from abstract painting to a more object-oriented art. In his effort to break down the gap between art and society, Cordeiro's new body of work required audience participation and appropriated features of mass communication.

Cordeiro's leap from canvas to object occurred with a unique, syncretic medium called the *popcreto* [pop-crete], which combined elements of concrete and pop art. Cordeiro's most famous *popcretos* are *Opera Aperta* [*Open Work*] and *Ambigüidade* [*Ambiguity*], both from 1963 (Plate 1a and 1b). *Opera Aperta* takes its name from Eco's seminal collection of essays with the same title, in which Eco describes artworks "characterized by the invitation to *make the work* together with the author and . . . which . . . are 'open' to a continuous generation of internal relations which the addressee must uncover and select in his act of perceiving the totality of incoming stimuli." Eco acknowledges that these qualities can be said to characterize all artworks, but argues that contemporary art has been privileging 'openness' in order to bring about a new relationship between the work and the observer, such that the observer enters into an interpretive dialogue with the work.[19] Taking the point quite literally, Cordeiro created *Opera Aperta* and

المنارة للاستشارات

Ambigüidade by applying small square mirrors in loosely gridded patterns to the surface of painted canvases. Simply put, in seeing fragmented images of themselves and their surroundings, viewers engage in the perceptual games Eco recommends in order to activate semantic plurality. The work is necessarily unique for each viewer. *Opera Aperta* and *Ambigüidade* also bear thematic and conceptual resemblance to Cordeiro's concrete artworks. The solid colors of the backgrounds—deep blue and matte silver, respectively—and the arrangement of geometric shapes in loosely regular configurations do not immediately visually recall Cordeiro's concrete paintings, but the interest in repetitive permutations is conceptually akin to earlier work. Cordeiro constructed his concrete paintings by applying regular, geometric transformations to an initial form, seemingly arbitrarily chosen from an array of basic shapes.[20] Similarly the images of humans and rooms reflected in the mirrors of *Opera Aperta* and *Ambigüidade* are random, arbitrary, unbounded, irregular forms submitted to the standardizing frame of the small square mirror. Cordeiro explained that these works 'open' concrete practice to "ampler and more complex relations that have their roots and branches outside of the specific field of art."[21] Constructed of silver mirrors placed on silver paint, in certain lights *Ambigüidade* forms a chromatically even plane of silver, though the contrasting textures of smooth mirror and canvas almost immediately challenge this perception. The more regular staggered grid pattern does not simply rationalize the human body or surroundings. Instead—in a prescient foreshadowing of Cordeiro's digital works—it creates a fragmented image, in which the visual information between the mirrors is lost, or apprehended through implication from context. The irregularly placed mirrors of *Opera Aperta* fragment the surroundings not into equally-spaced bits of information, but into three columns of mirrored squares that do not attempt to blend into the deep-blue painted background. Scraps of paper once covered the mirrors, and viewers peeled the paper away to reveal the mirrors below. The middle column of mirrors is left covered to convey the work's incompleteness. While these *popcretos* formally resemble Cordeiro's concrete paintings, their incompleteness and ambiguity contrasts with the earlier paintings' geometric abstraction, which was intended as unambiguous manifestations of clear, rational forms. The *popcretos* are thus transitional works between the concrete painting and the digital art that would come to characterize Cordeiro's *oeuvre*.

المنارة للاستشارات

Dubbed *popcretos* by the poet Augusto de Campos, these works were exhibited alongside de Campos' visual poetry in a 1964 exhibition at São Paulo's Atrium Gallery. Cordeiro himself preferred the term "semantic concrete art" rather than *popcreto*, emphasizing his interest in exploring how meaning is made in art. This project took Cordeiro in two aesthetic directions: toward materiality and toward verbal/visual communication. The goal of both directions was for his artworks to exist as a means of communication within broader society. To emphasize the materiality of the media of communication, Cordeiro incorporated found objects into artworks and altered the built environment through his work as a landscape designer. To emphasize aspects of verbal and visual communication, he used text and found images and gave special attention to photographs from mass media sources, often addressing contemporary political issues.[22] This interest in the mass media as a fraught space of communication, through which elites attempted to guide society, was especially pertinent to the period preceding the 1964 military coup in Brazil.

As journalism became increasingly implicated in governmental control of information during the 1960s, the relationship of text and image became a primary focus of Cordeiro's art. During the early 1960s, high-ranking employees of nationwide press organizations, such as Assis Chateaubriand's *Diarios Associados* [Associated Daily Press], participated in the *Instituto de Pesquisas e Estudos Sociais* [Institute of Research and Social Studies] (IPES), which aimed to "mobiliz[e] democratic public sentiment against the leftists that surrounded now-president João Goulart."[23] The IPES developed out of a group of Brazilian businessmen who originally gathered to discuss the "communist menace," among other problems facing Brazil. The IPES formally established itself as a research institute in 1961, when the resignation of president Jânio da Silva Quadros put the even more left-wing Vice President João Goulart in power. In the wake of Fidel Castro and Ernesto "Che" Guevara's 1959 overthrow of Fulgencio Batista's dictatorship in Cuba, the military, landowners, and multinational corporations in Brazil became increasingly paranoid about the threat of leftist revolution.[24] The U.S. government took this fear seriously and attempted to combat Communism, both overtly, by offering debt-ridden Brazil foreign aid through the State Department, and covertly, by means of CIA funding to IPES.[25] In early 1962 IPES leaders traveled to Washington, D.C. and met with Teodoro Moscoso, then-director of President John F. Kennedy's newly-established Alliance for

المنارة للاستشارات

Progress, "a long-term crusade to combat Communism and shore up Latin America's fledgling democracies through trade and economic assistance."[26] Barely one month later, "on Sunday, March 25, 1962, IPES distributed a special supplement to major Brazilian newspapers: entitled *Cartilha Para O Progresso* [Primer for Progress] the insert's subtitle was 'How to Make a Revolution without Blood.'" IPES wanted a revolution against the leftist government that would preempt the socialist revolution they feared. Though the IPES was ultimately less revolutionary than reformist, this involvement in mass communication demonstrates the behind-the-scenes machinations of anti-leftist factions both in Brazil and abroad.[27]

During this period mass communication was marked by a slippage between what was stated and what was understood, between what was declared and what was intended. Cordeiro's 1964 work *Jornal*, a newspaper page constructed of mismatched strips from other newspapers, quite literally portrays the reading between the lines necessitated by the context (Figure 5). Enough of the strips are taken from the same newspaper page that one expects to be able to construct a narrative from parts, but only snatches of clarity are possible. A sufficient part of the structure remains to reveal that the physical construction of a newspaper page is standardized: a newspaper title and publication information stand at the top, above any news, and a descriptive headline falls below, followed by an enormous, eye-catching phrase and photographs. The fact that the page is instantly recognizable

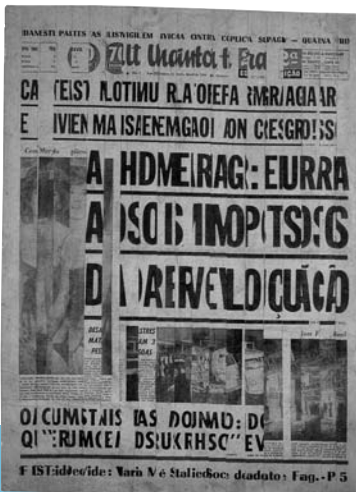


FIGURE 5. Waldemar Cordeiro, *Jornal*, 1964, Newspaper collage on paper, 65 x 22.5 cm. Image courtesy of Ana Livia Cordeiro.

المنارة للاستشارات

for what it is, despite its cobbled-together character, draws attention to the tactics the press uses to draw attention. Yet Cordeiro chose suggestively conflicting articles from two contrasting newspapers, juxtaposing an article from a newspaper read by bourgeois audiences that praised the government with an article on taxes from a newspaper more popular among the working classes.

Another work inspired by Eco's notions of openness and responsiveness to viewer's presence is *Texto Aberto* [*Open Text*] of 1966, in which the element of the letter itself is questioned (Plate 2). A selection of capital letters are printed in black on three white slats set on a wooden backboard, with approximately a third of each letter falling on the top, middle and bottom slat. The stationary middle slat is surrounded by moving segments of letters that create new imaginary glyphs as they move horizontally in the grooves of the wooden backing. The very intelligibility of each individual letter is called into question, but the notion of the letter itself remains intact. Viewers manipulating the letter segments can imagine and create new letters within the rational, orderly permutations Cordeiro set out for them. And in *Auto-retrato Probabalistico* [*Probabalistic Self-portrait*], this play with pattern and order is enlarged from the level of the letter to that of the word, but Cordeiro fractured the image in two ways. The words 'yes' and 'no' are printed on square sheets of acrylic, with each word occupying a square one-sixteenth the size of the acrylic sheet. Arranged in random order, the words are placed in front of segments of an enlarged photograph of Cordeiro's face split into sixteen equal squares on three parallel sheets of acrylic. The face is thus split into sixteen equal squares on three parallel sheets of acrylic so that the face is split both from side to side and onto planes at different distances from the viewer. Like readers of a newspaper text—or, increasingly, spectators of a television report—the artist presents viewers with fragmented and ordered information. The words 'yes' and 'no' force viewers to acknowledge their complicity in constructing the image. What will be left out, and who chooses the omissions? Are the questions as simple as yes or no? Cordeiro presents his own visage in part to insert the artist as a visible creator analogous to the news media's typically invisible creators; this position also calls forth questions about the role of the artist.

"We are with Gramsci," Cordeiro insisted, "that culture only begins to exist historically when it creates a unity of thought among 'ordinary' people and

المنارة للاستشارات

artists and intellectuals. Indeed, only in that symbiosis with 'ordinary' people does art become purged of its intellectualistic elements and subjective nature to become life."[28] Regarding the role of intellectuals vis-à-vis society and the state, a question that runs throughout the political turmoil of twentieth-century Brazil, Gramsci offers a devastating analysis:

> The intellectuals have the function of organizing the social hegemony of a group and that group's domination of the state; in other words, they have the function of organizing the consent that comes from the prestige attached to the function in the world of production and the apparatus of coercion for those groups who do not 'consent' either actively or passively or for those moments of crisis of command and leadership when spontaneous consent undergoes a crisis.[29]

It was no longer enough for artists to approach society from a privileged stance. For Cordeiro the hermeticism of concrete art had grown untenable, particularly given contemporary political events that drew an increasingly broad swathe of people into their orbit.

In 1968 the military government of Brazil "responded to civil protest and incipient armed resistance with a decree known as the Fifth Institutional Act (A1-5), which outlawed political opposition, purged and temporarily closed congress, suspended habeas corpus, established blanket censorship over the press, and effectively ended the protest movement."[30] Just three years later a secret presidential act extended these powers to the Ministry of Justice, and it was no longer necessary to obtain explicit presidential permission for acts of censorship.[31] In this context of communication systems stymied by an authoritarian regime, art historian Alexander Alberro claims that an "interest in the discursive potential of systems of distribution pervades Brazilian strands of conceptual art in the 1960s."[32] Cordeiro's digital artwork should be seen in dialogue with such conceptual works as Brazilian artist Cildo Meireles' *Inserções em circuitos ideológicos* [*Ideological Circuits: Coca-Cola Project*] (1970). By covertly spreading politically provocative messages via recycled Coca-Cola bottles, Alberro claims that Meireles' project "function[ed] to communicate a revolutionary, anti-imperialist message to a potentially enormous public at a time when the dictatorial regime was

المنارة للاستشارات

vigilantly monitoring all the conventional channels of communication."[33] Like Cordeiro's digital art projects, Meireles' *Inserções em circuitos ideológicos* reached a large audience using common techniques of mass distribution—in Meireles' case the distribution of products, rather than the immaterial television or newspaper images that Cordeiro references. However Cordeiro's interest in mass media or mass communication was not simply due to its ability to reach wide numbers of people, though he saw one of the failings of 'old' art as its inability to do so.[34] Nor was it simply a way to evade government censorship, though that seems to be an implicit goal of this work. For Cordeiro digital art offered the potential to build a new type of interpersonal communication.

As a pioneer digital artist Cordeiro wrote a second manifesto twenty years after his first, in which he rejected the ideas of his youth. At a digital arts conference in 1973 Cordeiro claimed that Constructive art—and here, twenty years after the fact, he seems to mean concrete art—"belong[ed] to the past . . . to the Paleocybernetic Period" before computer art.[35] In his 1971 text "Arteônica: Electronic Art" Cordeiro identified two problems of communication for contemporary art. The first was physical inaccessibility. He argued, "Traditional artworks are physical objects to be displayed in physically determined places, and they assume the physical displacement of the viewers," a difficult task in a city like São Paulo, and "even less viable for international culture."[36] Cordeiro criticized artists, presumably including himself, who misunderstood the limitations of this physicality and attempted to escape it by creating works in the urban micro-landscape or the regional macro-landscape. For Cordeiro earthworks and interventions into the urban fabric merely enlarged the scale of the traditional art objects and failed to change its very nature. The second problem of contemporary art was its conceptual inaccessibility, "a form of isolation, not a physical but a semantic one, inasmuch as the consumption of the artwork requires previous knowledge of exclusive repertoires."[37] In "Arteônica" Cordeiro promoted digital communication for three primary reasons: its ability to travel long distances without alteration, presenting information in the same (mass media) language across space and time; its radical intangibility, as "the work of art is not an object, not a thing, but a proposal to man"; and its potential to incorporate feedback.[38] And while Cordeiro did not explicitly conceptualize digital networks such as the internet, his approach to questions of mass communication anticipates issues of networking.

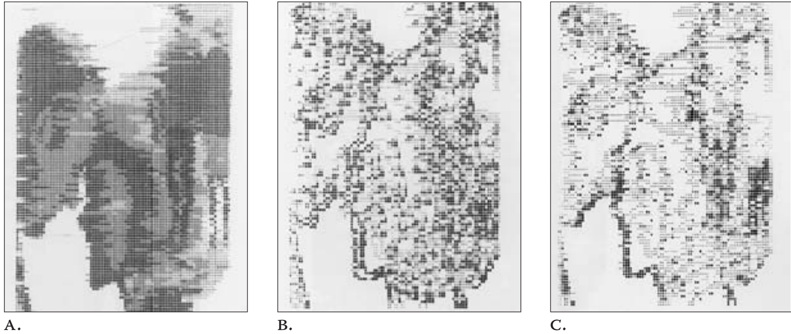
المنارة للاستشارات

Derivadas de uma Imagem [*Derivatives of an Image*] of 1969 was Cordeiro's first image-based digital artwork, which he created with the assistance of physicist Giorgio Moscati (Figure 6a-c).[39] Using a Valentine's Day advertisement as the source image, the collaborators enlarged the image and manually assigned each of its 10,978 points a number from 0 to 6, depending upon where that point lay on a gray scale from white to black. The resulting digital image was transformed by the simple mathematical function of taking a derivative; that is, at places in the original image where there are abrupt changes in intensity, e.g. from 0 (white) to 6 (black), there appears on the first derivative a dark output (black). At places where the intensity is constant in the original image, there is no output (white), and a gradual change in shade in the original image produces an intermediate intensity (gray) in the first derivative. Moscati pointed out that this process converts a shaded image to a contour image, types of images apprehended very differently. He explained:

> [Y]ou've got a blank picture, then you draw a line building the contours of a figure…and you immediately recognize the person. But if you compare a shaded image to a contour image, they are completely different….When you learn how to read, and you read all those symbols,…you apparently acquire this ability of interpreting this language symbolism.[sic][40]

In this example digital imagery offers an exact contrast with earlier *forms* of concrete art. The forms of the altered digital image are precisely *not* universally intelligible, but must be read within a system. However perception of the digital image is not restricted to those with a 'previous knowledge of exclusive repertoires,' that is, a knowledge of the history of art. Instead the intelligibility of digital images lies in their structures; digital images can be shaded images or images reduced to contour, images whose intelligibility appeals to perceptual processes inherent to the human mind, rather that an extensive knowledge of art historical motifs and styles. Furthermore it is the structures of transmission and distribution that make digital art intelligible to a wide audience. By taking up the structures of mass media and mass media's subject matter as well, such as the St. Valentine's Day advertisement, Cordeiro aspired to a form of communication available to all.

المنارة للاستشارات



A. B. C.

FIGURE 6. Waldemar Cordeiro and Giorgio Moscati, *Derivadas de uma Imagem* [*Derivatives of an Image*], 1971, Computer printout, 47 x 34.5 cm. (a) zero order transformation; (b) first order transformation; (c) second order transformation. Images courtesy of Ana Livia Cordeiro.

In Moscati's description of the conceptual puzzles with which he and Cordeiro struggled, Gramsci again emerges as a key theorist. Gramsci stated, "Mass formation has standardized individuals both in terms of technical ability and psychologically, giving rise to the same phenomena as in all other standardized masses: competition among individuals that creates unemployment, the need for professional organizations, etc."[41] While Cordeiro's vision of universal digital communication may seem to fall into this trap, language constantly changes in Cordeiro's experimental and interactive scenario. Cordeiro's digital artwork presages an image mathematically determined by pixels, an image that will ostensibly never distort or be misunderstood during its peregrinations. This utopian vision of immutable clarity is further characterized by the importance of feedback. Cordeiro anticipates a future of digital works whose forms are altered by successive viewers, through dialogues between viewers and artists. Within Cordeiro's understanding the artist was still responsible for formulating this language, and he or she would do so by incorporating feedback from viewers. Cordeiro explained:

> When the number of viewers increases, the cultural situation becomes more diversified and the feedback becomes more complex. As the understanding of general conditions grounds all creative effort, the creative act requires more complex methods and more efficient media. It is in this direction that art will find again the conditions to realize its historical role.[42]

المنارة للاستشارات

It is probable that were he to have lived to see digital networks, Cordeiro's essay would have been more explicit about a breakdown of the categories of artist and viewer. Certainly he would have recognized the potential of participatory networks to avoid strict state control. Just as theories of concrete art depended upon the supposed consistent logic of geometric shapes and mathematical permutations, the computer artworks necessarily possessed the logic of transformations applied evenly and consistently. The wild card was, of course, the input, an issue that would have loomed large for Cordeiro as technology advanced and became able to handle more varied input.

When Cordeiro died in 1973, he was in the middle of his first color digital artwork. Entitled *Pirambu*, it depicted a house on stilts in Forteleza, a city on the northeast coast of Brazil that Cordeiro visited as part of an urban planning trip. This final work was also explicitly political, dealing with the contemporaneous destruction of low-cost wooden housing in favor of large apartment complexes that would simultaneously provide running water but also cause an increased level of environmental destruction.[43] As in his concrete paintings, *popcretos*, and digital artworks, Cordeiro worked to juxtapose the human and the technical, to combine randomness and order within logical transformations potentially understandable to all. He also worked to undermine facile readings of common cultural artifacts and to question nationalist rhetoric surrounding aesthetic decisions. An artist can be sponsored or controlled by politicians, or by the public. An artist can also raise questions and respond to issues raised in the political sphere. Or an artist can ostensibly follow only the internal logic of his or her work. For Cordeiro, and other Brazilian artists of the twentieth century, these possibilities and questions were never far from sight.

ADRIAN ANAGNOST is a Ph.D. Student in the Department of Art History at the University of Chicago. Anagnost's dissertation will consider concrete art in São Paulo in relation to industrialization, urban development, and the politicized body.

NOTES:

[1] For Cordeiro, concrete art was a "*linguagem que pode exprimir o individual, o coletivo, o nacional, e o universal a um só tempo*" [language that can express the individual, the collective, the national, and the universal at one and the same time]. Quoted in Aracy Amaral, "Waldemar Cordeiro," in *Textos do Trópico de Capricórnio: artigos e ensaios*

المنارة للاستشارات

(1980-2005) - Vol. 3: Bienais e artistas contemporâneos no Brasil (São Paulo: Editora 34, 2006), 150.

[2] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, ed. Hannah Arendt (New York: Schocken, 1969), 217-252.

[3] See Pepe Karmel, "The Year of Living Minimally," *Art in America* (December 2004): 90-101, 149; and Cf Ana Maria Belluzzo, "The *ruptura* Group and Concrete Art," in *Inverted Utopias: Avant-Garde Art in Latin America*, ed. Mari Carmen Ramírez (New Haven: Yale University Press, 2004), 203-209.

[4] Adele Nelson, "Monumental and Ephemeral: the Early São Paulo Bienais," in *Constructive Spirit: Abstract Art in South an North America, 1920s-1950s* (Newark, NJ: Newark Museum, 2010), 139n8.

[5] Serge Guilbaut, "Sleeping in Bilbao: The Guggenheim as a New Cultural Edsel?" in *Learning from the Bilbao Guggenheim*, ed. Ana María Guasch and Joseba Zulaika (Reno: University of Nevada Press, 2005), 139; and Andrea Giunta, *Avant-garde, Internationalism, and Politics*, trans. Peter Kahn (Durham: Duke University Press, 2007), 197.

[6] Roger Sansi-Roca, *Fetishes and Monuments: Afro-Brazilian Art and Culture in the Twentieth Century* (New York: Berghahn Books, 2007), 128; and Jose Carlos Durand, "Culture in Brazil," in *Art and Business: an International Perspective on Sponsorship*, ed. Rosanne Martorella (Westport, CT: Praeger, 1996), 68.

[7] Guilbaut, 136-137.

[8] Fernando Morais, *Chatô, o rei do Brasil* (São Paulo: Companhia das Letras, 1994), 483. Translation by the author.

[9] Rejane Cintrão and Ana Paula Nascimento, "The Exhibition of the Rupture Group in the São Paulo Museum of Modern Art 1952," in *Grupo Ruptura*, ed. Rejane Cintrão and Ana Paula Nascimento (São Paulo: Cosac & Naify, 2002), 68.

[10] Helouise Costa and Vivian Boehringer, *Waldemar Cordeiro* (São Paulo: Cosac & Naify, 2002), 76; and Fabricio Vaz Nunes, "Waldemar Cordeiro: Da Arte Concreta Ao Popcreto" (master's thesis, University of Campinas, São Paulo, 2004), 31, 32, and 35.

[11] Gino Moliterno, *Encyclopedia of Contemporary Italian Culture* (New York: Routledge, 2000), 344. The *Forma* group was also sometimes known as *Forma 1*.

[12] Galleria d'arte Niccoli, *Art Club: 1945-1964: la Linea Astratta* (Parma: Galleria d'arte Niccoli, 1998).

[13] Aracy A. Amaral, *Arte para quê?: A Preocupação Social na Arte Brasileira 1930-1970* (São Paulo: Studio Nobel, 2003), 234; and José Mindlin and Cristina Antunes, "Brasiliana: Published Works and Collections," in *Brazil in the Making: Facets of National Identity*, ed. Carmen Nava and Ludwig Lauerhass, trans. Elizabeth A. Marchant (Lanham, MD: Rowman & Littlefield, 2006), 81.

[14] Philip V. Cannistraro, "Mussolini's Cultural Revolution: Fascist Or Nationalist?" *Journal of Contemporary History* 7, no. 3/4 (1972): 123-124.

[15] Daryle Williams, *Culture Wars in Brazil: The First Vargas Regime*, 1930-1945 (Durham, NC: Duke University Press, 2001), xvii.

[16] Robert Stam, *Tropical Multiculturalism: A Comparative History of Race in Brazilian Cinema and Culture* (Durham, NC: Duke University Press, 1997), 189.

[17] Max Bill, "Concrete Art" (1936-1949), in *Theories and Documents of Contemporary Art: A Sourcebook of Artists' Writings*, ed. Kristine Stiles and Peter Selz (Berkeley: University of California Press, 1996), 74.

المنارة للاستشارات

[18] Waldemar Cordeiro, *Waldemar Cordeiro: uma aventura da razão* (São Paulo: Museu de Arte Contemporânea da Universidade de São Paulo, 1986), 184.
[19] Umberto Eco, "The Poetics of the Open Work," in *The Open Work* (Cambridge: Harvard University Press, 1989), 21-22.
[20] Vaz Nunes, 88.
[21] Waldemar Cordeiro, "Realism on the Level of Mass Culture" (1965) quoted in Costa, 67.
[22] For a rewarding phenomenological analysis of the *popcreto Subdesenvolvimento* (1964), see Artur Freitas, "Poéticas políticas: as artes plásticas entre o golpe e o AI-5" [Political Poetics: Plastic Arts between the '64 coup and the AI-5], *História: Questões & Debates* 40 (2004): 59-90.
[23] Alessandra Vinhas, "O golpe que a imprensa apoiou," 17-20 *Imprensa* (March 1994), in *Watchdog Journalism in South America: News, Accountability, and Democracy*, ed. Silvio Ricardo Waisbord (New York: Columbia University Press, 2000), 20.
[24] Clara Nieto, *Masters of War: Latin America and United States Aggression from the Cuban Revolution through the Clinton Years*, trans. Chris Brandt (New York: Seven Stories Press, 2003), 164.
[25] Jeffrey F. Taffet, *Foreign Aid as Foreign Policy: The Alliance for Progress in Latin America* (New York: Routledge, 2007), 95-121; Thomas C. Wright, *Latin America in the Era of the Cuban Revolution* (Westport, CT: Praeger, 2001), 53-54; and Ruth Leacock, *Requiem for Revolution: The United States and Brazil, 1961-1969* (Kent, OH: Kent State University Press, 1990), 72.
[26] Leacock, 73; and Timothy Naftali, "Introduction: Five Hundred Days," *July 30 – August 1962*, Vol. 1, The Presidential Recordings: John F. Kennedy: The Great Crises (New York: W. W. Norton & Company, 2001), xvi-liv.
[27] The newspaper insert "quoted the preamble of the Alliance [for Progress]'s charter in its entirety, and promised benefits for the poor. . . . But IPES seemed unable to suggest any immediate, specific action that required the participation or involvement of individual volunteers. . . . The 'Revolution without Blood' also promised to be one without sweat, tears, or nationalism." Leacock, 73.
[28] Waldemar Cordeiro, "O Objeto" (1956), quoted in *Da Antropofagia a Brasília*, ed. Jorge Schwartz, et al. (São Paulo: Cosac Naify Edições, 2002), 540.
[29] Antonio Gramsci, "The Intellectuals," Fourth Notebook (1930-1932), no. 49, in *Prison Notebooks*, Vol. III, ed. and trans. Joseph A. Buttigieg (New York: Columbia University Press, 1996), 200-201.
[30] Christopher Dunn, *Brutality Garden: Tropicália and the Emergence of a Brazilian Counterculture* (Chapel Hill, NC: University of North Carolina Press, 2001), 2.
[31] L. Maklouf, "A Guerra da Censura," in *Retrato do Brasil: Da Monarquia ao Estado Militar*, vols. 1-2 (São Paulo: Editora Tres/Política Editora, 1984), quoted in José Roberto Zan, "Popular Music and Policing in Brazil," in *Policing Pop*, ed. Martin Cloonan and Reebee Garofalo (Philadelphia: Temple University Press, 2003), 214.
[32] Alexander Alberro, "Reconsidering Conceptual Art, 1966-1977," in *Conceptual Art: A Critical Anthology*, ed. Alexander Alberro and Blake Stimson (Cambridge, MA: MIT Press, 1999), xxvii.
[33] Alberro, xxvin8.

المنارة للاستشارات

[34] Waldemar Cordeiro, "Arteônica: Electronic Art" (1971), trans. Eduardo Kac, *Leonardo* 30, no. 1 (February 1997).
[35] Waldemar Cordeiro, "Analogical and/or Digital Art," paper read at "The Rational and Irrational in Visual Research Today/Match of Ideas," Symposium T–5, 2 June 1973, Zagreb, Croatia, quoted in Darko Fritz, "Vladimir Bonacic: Computer-Generated Works Made within Zagreb's New Tendencies Network (1961-1973)" *Leonardo* 41, no. 2 (April 2008): 175-183.
[36] Cordeiro, "Arteônica": 33.
[37] Ibid.: 33.
[38] Ibid.: 34.
[39] Previously in 1968 Cordeiro and Moscati collaborated on *Beabá* [ABCs], in which a computer invented six-letter words by randomly alternating vowels and consonants. Costa, 73.
[40] Giorgio Moscati, "Waldemar Cordeiro: Art and Computing," (1986), interview by Ana Maria Belluzzo and Aracy A. Amaral, *Leonardo Online*, available at http://www.leonardo.info/isast/spec.projects/moscati.html (accessed 5 December 2008).
[41] Gramsci, 201.
[42] Cordeiro, "Arteônica": 34.
[43] Personal communication with Analivia Cordeiro, daughter of Waldemar Cordeiro (22 July 2010).

المنارة للاستشارات