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Art and Community Action | 2015

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Art and Community Action { REPORT: Tracing a parallel between the transformations of stones and human lives, Denise Milan uses art to foster citizenship { PAINEL: Specialists debate on art's place in 21st-century education { PROCESSION: Intervention in the community of Heliópolis shows the preciousness of life { PROFILE: The career of Denise Milan, a pioneer of Brazilian public art, combines the environment, nature and art



ACTION AGAINST HUNGER AND WASTE

Mesa Brasil is a program that collects food in supermarkets, industrial kitchens, supply centers, restaurants, bakeries and other food establishments to donate them to social institutions that serve children, teenagers, adults and senior citizens. Complementing this action, activities are also carried out involving hygiene, preservation, meal preparation and various ways of preventing waste. It is a further commitment by Sesc for fostering solidarity and citizenship.

Be a partner of this action, feed this idea.

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INTERCHANGE OF KNOWLEDGE

Danilo Santos de Miranda
Regional Director - Sesc São Paulo

WITH EDUCATIONAL FOUNDATIONS, SESC'S ACTIONS HAVE historically assumed a strong empirical dimension, thus allowing the institution to deploy multiple approaches in the area of art education. The emphasis is therefore less on the adoption of a single and hegemonic model and more on an opening to plural modalities for encouraging our publics to interact critically with cultural manifestations.

This porous, dynamic profile allows Sesc to keep open its channels of conversation and interchange with different professionals in the area, whose researches and propositions have contributed, each in its own way, toward increasing our mediation strategies, developed hand-in-hand with the programming of our cultural and sports centers. This variety of experiences has allowed Sesc to gather, interpret and evaluate indices that emerge not only from theoretical conjectures, but also from daily practices with the public that attends its exhibitions, shows, seminars,

reading workshops and film screenings, for example.

Another aspect that arises from this permeability has to do with experiments in mediation constructed from the specificities of different artistic languages. This exercise tends to add new semantic layers to the artistic phenomena, insofar as it activates their inherent dialogic property, ensuring that their interpretations and meanings are produced in a distributed way.

It is in this context that Denise Milan has been engaged in an important dialogue with Sesc, collaborating with the network of references that the institution has been developing in the field of art education over the last decades. In connection with her work of artistic creation, Milan is dedicated to a series of platforms of interchange of knowledge concerning the mineral world, for which she serves as a spokesperson, allowing us to hear what the rocks are saying.

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Photo: Levi Mendes Jr

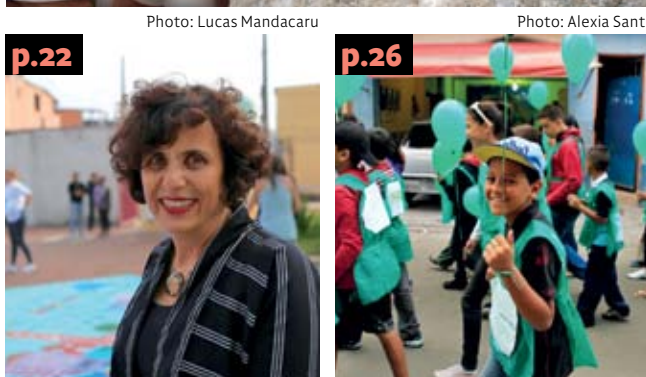


Photo: Lucas Mandacaru

Photo: Alexia Santi

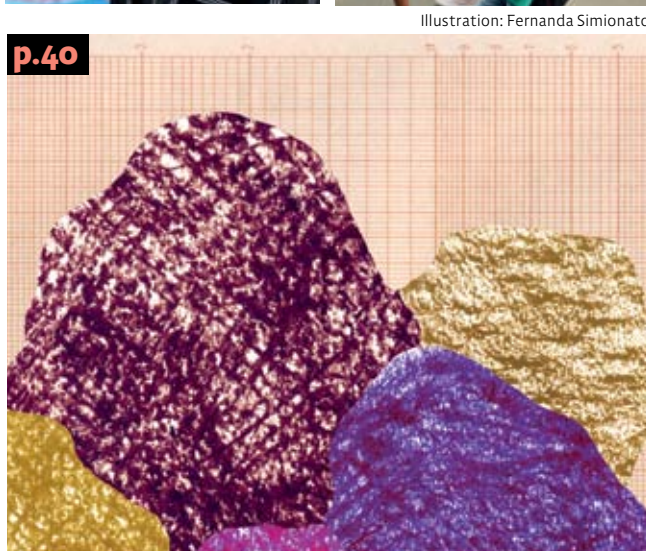


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PLATFORMS FOR EDUCATING

Visual Arts and Technology Management

SESC'S ACTION SPRINGS FROM VARIOUS EXPERIENCES IN THE CULTURAL FIELD, as the institution has had educational action as a core aim since its creation in 1946. The "Charter for Social Peace," a document drawn up by business leaders whose principles inspired the entity's creation, already mentioned the prerogative of "educational work, through which one is able to fraternize people, giving them stronger feelings of solidarity and confidence."

To reach these objectives, the institution deployed various activities with its priority public – the workers of the commercial sector of goods, services and tourism – but also with the communities through which it passed and/or became established. Up to the end of the 1940s, Sesc's work was medical-welfare in nature, due to the lack of resources of Brazilian society in regard to public health and the protection of the worker's health, but its first annual reports already mention other types of activities provided by the so-called social educators.

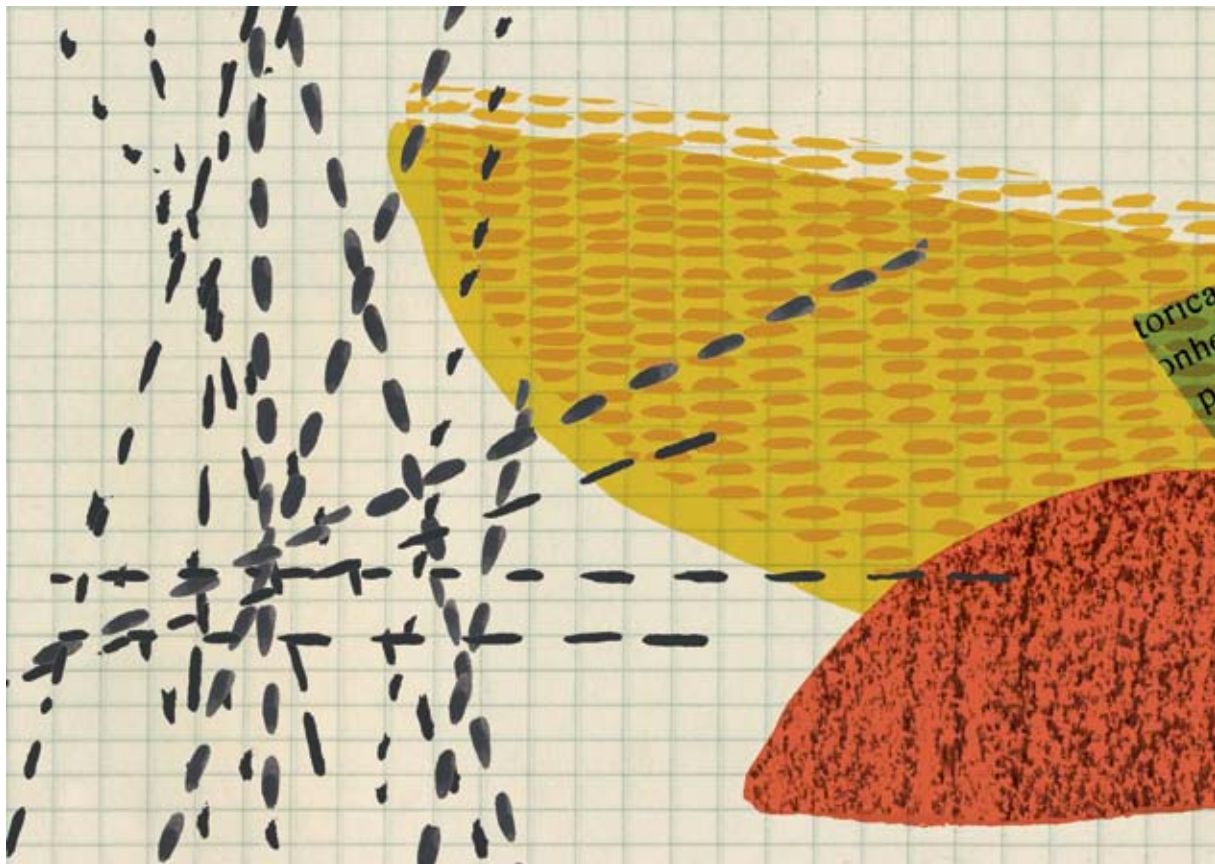
In accordance with the discussions of that time, in 1951, ICOM (International Council of Museums) and UNESCO (United Nations Organization for Education Science and Culture) defined the educational role of museums, considering education to be indissociable from culture.

In the cultural field, although Sesc is not a museum, many of its actions

resemble the definition of a museum proposed by ICOM, which defines it as "is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment." The similarities it bears with this definition notably include the fact that Sesc makes a collection of artworks available to the public at its units, as well as the breadth of its activities, offering users of various age groups and social levels a programming linked to various artistic-cultural fields, with a strong inclusive and educational thrust – aspects predicated on a belief in art's ability to foster human growth through lasting and significant experiences of art appreciation.

The idea that culture and education form an indissociable dyad is, therefore, essential for the institution, and has been a key principle especially since the 1980s – a moment when the socio-educational dynamics of its cultural action grew stronger and became core goals of the institution. Structurally, this combination is identifiable in the improvement of the spaces destined for art and in the different treatment allotted to the spaces for hosting the public, identified as areas of social interchange. Special attention was given to the presence

The Management of Visual Arts and Technology of Sesc São Paulo is responsible for the coordination of the program of exhibitions, including the actions of an educational character.



The idea that culture and education form in indissociable dyad is a fundamental point for Sesc

of exhibitions in these places, seeking a closer relationship with the users of these entities. In this sense, it is possible to see this initiative as a counterpoint to a certain hermitism that museums still face in Brazilian society, seeking, as a collateral effect, a close relationship with various publics.

Initially, the role of museums was limited to the safekeeping and exhibition of the pieces for researchers and specialists. As the public began to have access to these spaces, there also arose the first initiatives for educating the public about cultural heritage and the use of the object as a catalyst for learning.

In Brazil, the first educational experiments in museums took place at the Museu Nacional do Rio de Janeiro, in the 1920s. In the state of São Paulo, the actions of the Museu Paulista were linked to the ideology of constructing a national identity. In the art museums, one of the pioneers of this work was Suzana Rodrigues, who in 1948 created at MASP the Children's Art Club, a space for teaching art to children.

With the creation of the Bienal de São Paulo, in 1951, an important educational process was installed in the visual arts field. In 1953, with the aim of teaching the history of art, the outstanding German museologist Wolfgang Pfeiffer created the first course for training museum guides at the Bienal.

At Sesc, the emergence of educational actions linked to the world of the exhibitions took place differently than in the museum field, linked less to the presence of "guides" in the exhibition space and more to the conceptual conception of the programming. This approach can be seen in the approximation to themes that are central to Brazilian popular tradition, and in a historical recovery of the ways that Brazilians popularly expressed themselves artistically in art and handicraft, as well as in the so-called thematic exhibitions – which with the advent of Sesc Pompeia, coupled with the libertarian ideas of architect Lina Bo Bardi, shed light on the power of the cultural features present in the national identity while



showing how playfulness could be a highly effective means of interacting and dialoguing with the public.

For a long time, in line with the art-education concept proposed by Ana Mae Barbosa, which was conventionally called the Triangular Approach – combining essential points of art teaching/learning, such as appreciation, contextualization and artistic practice – Sesc configured its action in the field of cultural mediation, also consistent with other theories beyond the reception of groups at the exhibitions, with a significant program of theoretical and practical workshops and courses, aimed at developing the public’s perception of the codes of art and its critical view of contemporary artistic production.

For Sesc, the act of visiting an exhibition or participating in some of the processes of so-called art education is a special moment, for allowing encounters and dialogues with expressions and thoughts brought together by the work of one or more artists, organized under determined poetic pretexts. It is

based on the idea that the space itself can be a facilitator of the processes of approximation and understanding of the content, since the atmosphere that is created around an artwork also influences the viewer’s appreciation. Likewise, the educator works with an aim to create and propose situations of appreciation and learning based on dialogue and exchange. In this sense, art education is not merely the transmission of knowledge or the translation of content; rather, it stimulates the viewer to participate actively and creatively, contributing to possible constructions of meanings. In its cultural and educational policy, Sesc prioritizes the permanence of processes in art, ensuring that its visitors and users have a shared experience with contemporary artistic production, whether through the systematization of exhibitions, offering courses, or making its art collection available in its circulation spaces, thus aiming to become a continuous, active platform of processes for education. ▣



Art education is not merely the transmission of knowledge or the translation of content; rather, it stimulates the viewer to participate actively in creatively

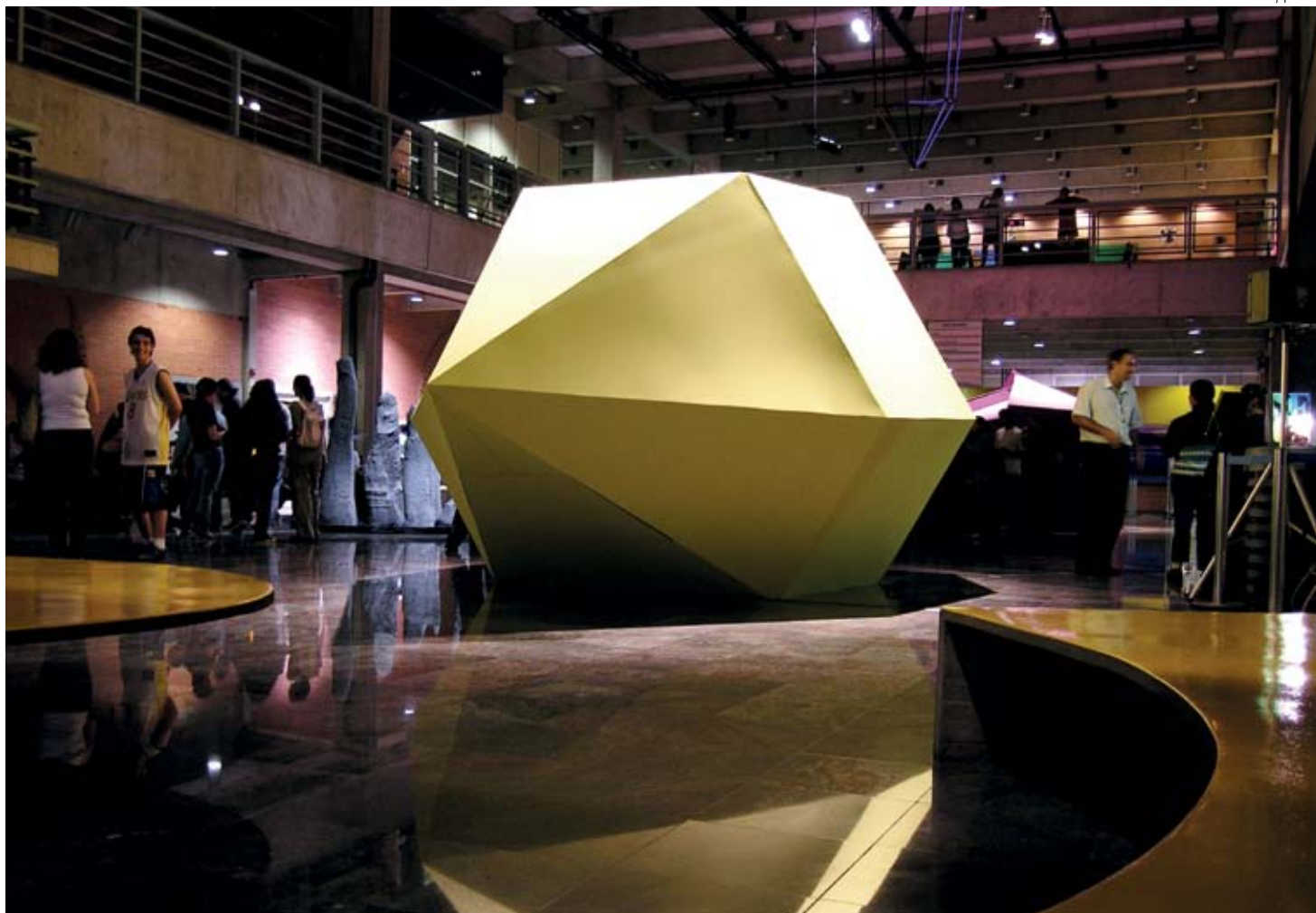




special report

This project gives the communities of the Great Metropolitan São Paulo the possibility to develop new forms of expression based on the origin and transformations of stones.

THE PATH OF THE STONES



Quartzo [Quartz], 2006, stone and wood. Pedras [Stones], 2007; Sesc Araraquara

The stones are not dead objects, they talk. Moreover, the stones even cry, as stated by Latin poet Titus Lucretius Carus (1st century BC), in his poem “On the Nature of Things.” And visual artist Denise Milan is able to perfectly understand the speech of these mineral beings that are the origin of the Earth and the basis of our connections with nature. As a faithful spokesperson for this world, she expresses the desire that everyone understands what the rocks have to say, inviting us to reflect on how these voices are part of a network that also includes the humans. To help people understand the voice of the stones, Denise created a series of events, seminars, exhibitions and

a wide-ranging project of art-education that has involved various underserved communities, thousands of people, educators and artists over the decades since its outset.

The visual artist’s mind is a factory of ideas centered in the metaphor of the anthropomorphism of the stone, whose primitive origin involves carbon, the primordial element that forms everything, including the body of humans (and of the animals in general). The artist used this principle as the basis for the first event which, in the following years spawned a series of other actions and culminated in an important process of art education.

In 2005, in the state of Rondônia, the conflict intensified between the

Cintas Largas Indians and the wildcat miners who were extracting diamonds from the indigenous lands. The tension increased day by day, leading to various deaths, beatings and kidnappings on both sides. Clearly there was a commercial interest involved in this dispute for the wealth those lands contained. But Denise approached the subject in another way. Her intention was to go beyond the beauty of art, she wanted to help foster a more profound discussion about tolerance and cultural diversity.

After all, how should man behave upon realizing that he is a guest on this planet? “Human beings often act as though the planet were an inexhaustible source, rather than a living

stone that responds to what is done to it, especially the destruction,” observes the artist.

Since that moment, Denise has acted as an *egregor* – a creative force for aggregating physical, emotional and mental energies, while also transforming this role into a character of one of her projects, *Agrégora*. Since then she has been bringing together important collaborators to help her in the development of these reflections. One of her partners is *Olgária Mattos*, a philosopher, writer and researcher of the human sciences, who captured the artist’s interest. Together, they conceived and curated an event made possible by a partnership with *Sesc*, whose support of the project included its formatting of the seminar *Gems of the Earth* as well as its role in bringing together the participants and making a space for the debates available at *Sesc Vila Mariana*.

On that occasion, the support was possible because there was already a background of trust between the artist and the institution going back



“Human beings often act as though the planet were an inexhaustible source, rather than a living stone that responds to what is done to it, especially the destruction.”

Denise Milan, multidisciplinary artist



more than ten years. The relationship began in 1995, with the holding of the 1st International Seminar of Public Art, followed by a second seminar in 1996.

These events brought together architects, business people, historians, critics and other professionals with the aim of debating public art, both in its conceptual perspective as well as from a practical point of view. Discussions were held on definitions, as well as on the historical evolution of the concept and on various forms of financing, and there was space for the report of experiments carried out in Brazil and abroad. The entire process was recorded in the book *Arte Pública*, published in 1998.

One decade after the first conference on public art, the three-day seminar *Gems of the Earth*, brought together specialists who considered the question of the exploration of nature, offering the opportunity for an encounter between the cultures. The dozens of scholars who attended the event very notably included the historian of religions *Adone Agnolin*, anthropologist *Carmen Junqueira*, the professors of mineralogy *Sonia Maria Barros de Oliveira* and *Darcy Pedro Svizzero*, essayist *Jean Galard*, philosophers *Marilena Chaui* and *João Quartim de Moraes* and art historian *Jorge Coli*, who met to consider these fundamental questions from a multidisciplinary standpoint.

At the closing of the seminar, five *Ikolen-Gavião* Indians, from *Rondonia*, staged the birth of the Earth from a stone. The legend of these people tells that men were born and lived for a long time inside of a stone, and this was represented through a circular dance, held in the unit’s public square. The participants were invited to take part in the ceremony, and the public gradually got involved with the celebration, opening the possibility of a dialogue between nature and the beings that inhabit the planet.

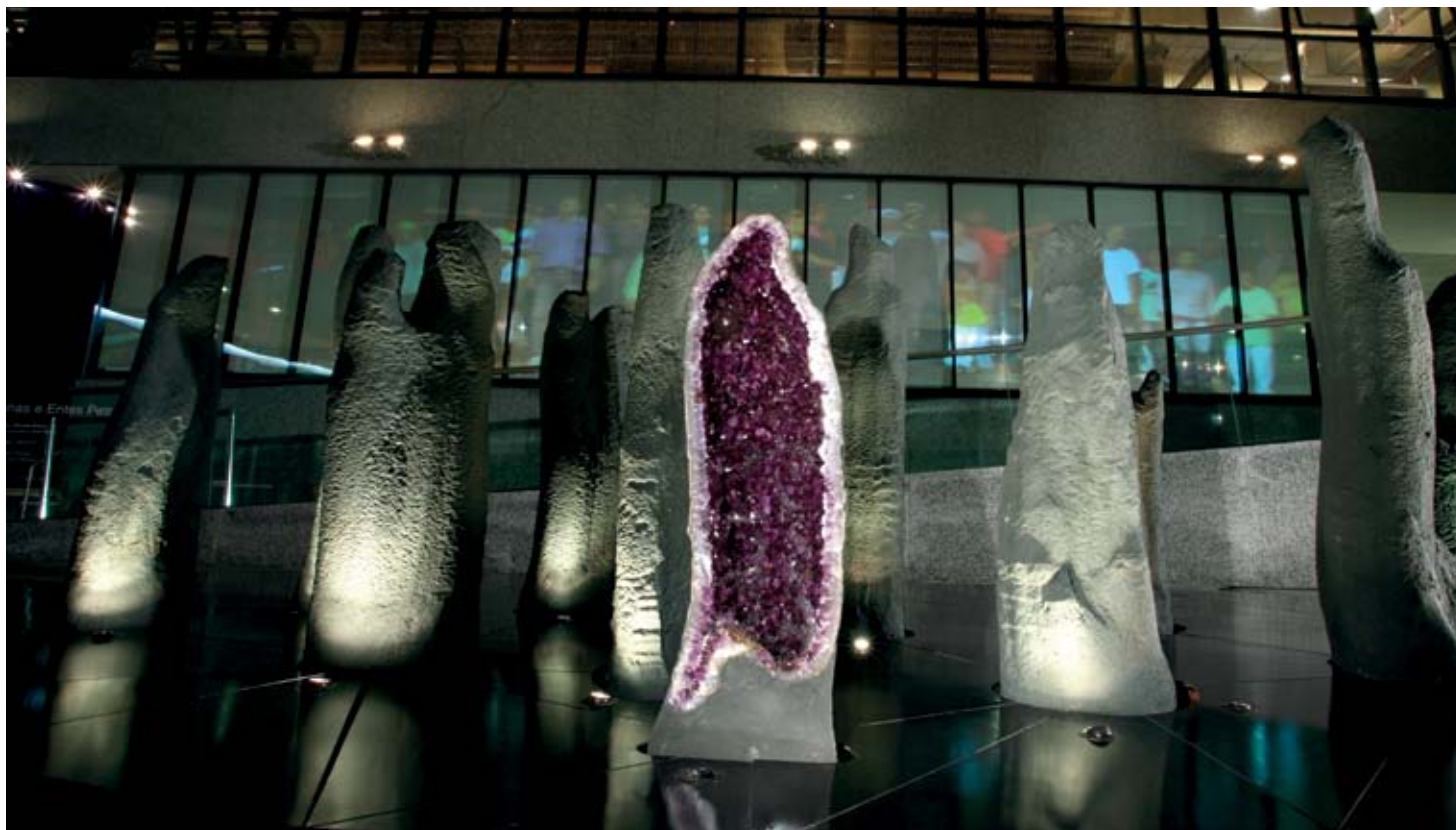
Although Denise’s art is born from her moments of contemplation

Photo: Lucas Mandacaru



Coração de ametista [Amethyst Heart], 2010. Multimedia installation; Sesc Ipiranga

Photo: Levi Mendes Jr



The work *Entes Pétreos* [Stony Beings], 2006; Sesc Pinheiros

of the world of the mineral beings, the resulting work has interactive characteristics, which presuppose the public's participation. "This is why I always propose performances, a contemporary ritual that allows people to align with the same vibration," she explains.

The seminar considered the relations between man and nature, and between people of different cultures, and set off a process that culminated in the artist's improving on her analogy between the egg of blue stone and the Earth. Blue stone is a mineral that is more than 75 million years old, found both in Brazil and Africa, thus confirming the theory of Pangaea, which holds that the continents were once all united. The meeting discussed the acceptance of diversity, limits of the exercise of tolerance, and questions

concerning hospitality and the solution of conflicts.

"We touched on the question of the protection of nature in a way practically never considered up to that moment. Society was still not very well prepared for this, it was innovative, and may have informed later discussions, including the present ones," says Olgária Mattos. The book *Gemas da Terra – Imaginação estética e hospitalidade* [Gems of the Earth – Aesthetic Imagination and Hospitality] edited by Denise and Olgária (Edições Sesc) was published in 2012 and recalls the discussions that took place on those days, seeking to enlarge them.

Fertile gems

This event showed how the apparently inert and dead stone can be rich and fertile. The Gems of the Earth seminar bore fruit, and in the following year the DVD *Ópera das Pedras – Primeiras vozes* [Opera of the Stones – First Voices] was conceived. The opera was inspired in the creation myth of the Ikolen Gavião Indians of Rondônia, and combines past and future, aiming to find solutions to problems that Brazil urgently needed to solve at that time, and which unfortunately remain current, such as the mining of mineral wealth that exists beneath the lands of the indigenous nations.

Preparations for the show began with a team of young filmmakers who worked directly with Denise. As the project took shape, various artists got together, such as musician



“We touched on the question of the protection of nature in a way practically never considered up to that moment.”

Olgária Mattos, philosopher and researcher

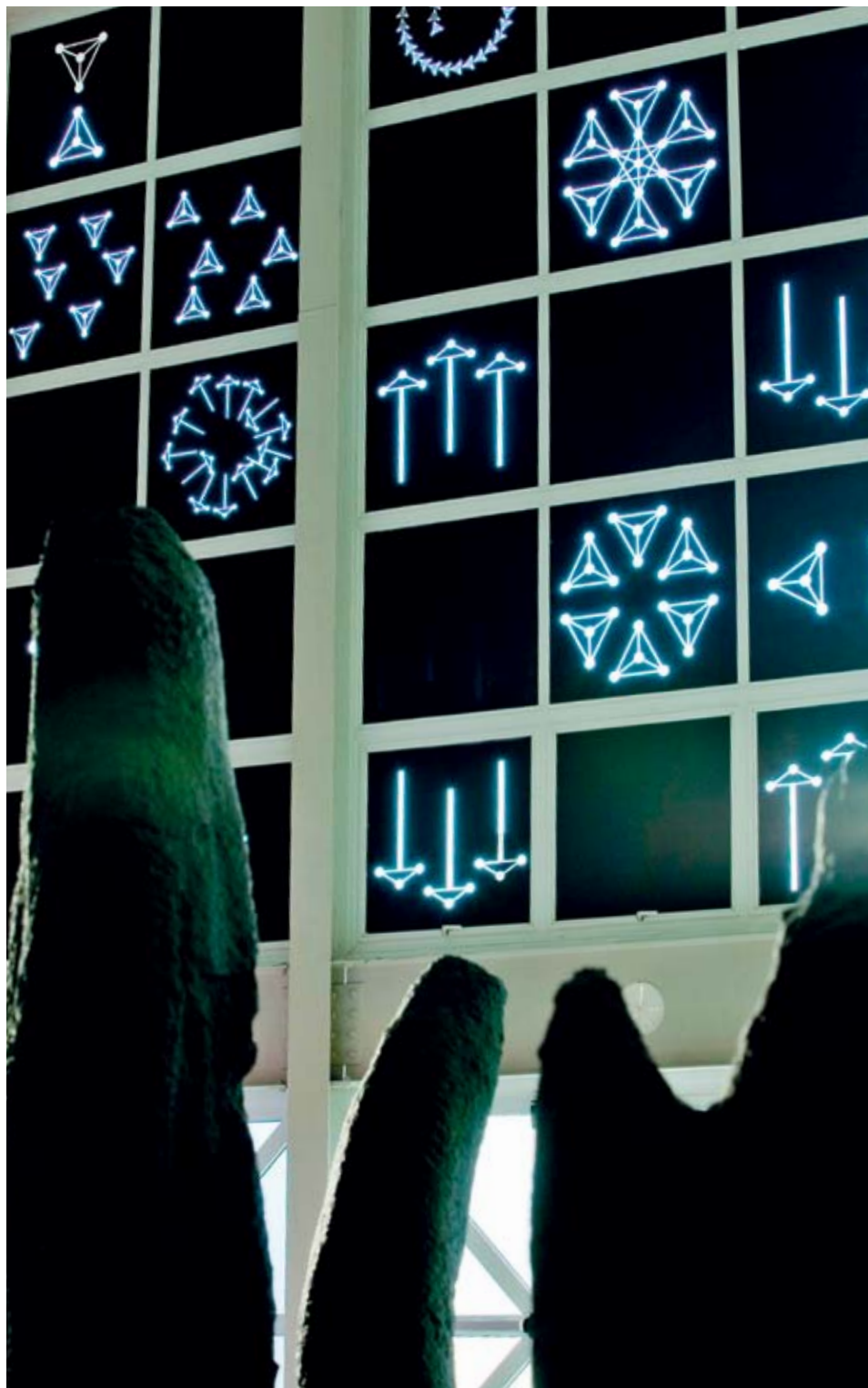


Marco Antônio Guimarães, writer Irene Machado and artist Ary Perez. “My studio transformed into a cave, a sort of laboratory, to allow for the making of *Ópera das Pedras – Primeiras Vozes*, Denise explains. The DVD was released under the Sesc label.

The work expanded in time and space, with a web of unusual relations and projects. In the following years, Denise created the installations *Entes Pétreos* [Stony Beings], *Cenas Pétreas* [Stony Scenes] and *Olho Quartzo* [Quartz Eye], shown in the units of Sesc Pinheiros, Araraquara and Santo André.

The discussion went from the DVD to the stage. *Ópera das Pedras – Espetáculo da Terra* [Opera of the Stones – Spectacle of the Earth], staged in 2010 at Sesc Ipiranga, was the next step in Denise’s project of appropriating the world and the

Photo: Levi Mendes Jr



The artwork *Entes Pétreos*, 2006; Sesc Santo André, 2008.
The installation *Ópera das Pedras* [Opera of the Stones], 2008; Sesc Santo André.
The installation *Hieróglifos Quatzos* [Quartz Hieroglyphs], 2008; in the window, Sesc Santo André, 2008.

Photo: Levi Mendes Jr



Ikolon Gavião Indians in a performance together with the installation *Entes* (2005), held on the occasion of the international seminar *Gems of the Earth*, organized by Denise Milan and Olgária Matos, Sesc Vila Mariana.

Espectáculo da Terra gained a dimension much larger than the stage and transformed into a project of art education that worked with needy communities to construct an opportunity for discussing subjects of utmost importance for the human being

imaginary of the stones in order to transcend it and transform it into something larger, in both size and meaning. It was an experimental play in which the actors interpreted compositions made especially for the play by André Mehmari, Badi Assad, Carlinhos Antunes, Clarice Assad, Marco Antônio Guimarães and Naná Vasconcelos. Aimed at an adult audience, the play considered a mythic world to reflect on human life.

Denise used an experimental dramaturgy to break away from the classic format of opera, mixing classic and popular music, for example. Moreover, at the center of the story, the stones shone as protagonists. Agrégora, a 130-million-year-old amethyst, was the main character, who became involved in a clash of epic proportions that revealed the transformation of matter,

by which the liquid magma in the deepest layers of the Earth turns into quartz. The metamorphoses of quartz since its separation from basalt allowed for an analogy with the evolution of each individual. This material drama serves to exemplify the struggle between good – represented by quartz – and evil – symbolized by basalt. From there it is possible to make an analogy with life, its successes, failures, and relations of love and hate.

As part of the event, the installation *Coração de Ametista* [Heart of Amethyst], curated by Cléo Miranda, used multimedia effects to invite the public to investigate the layers of stone, always going deeper, until penetrating the world of crystalline matter.

The project spread beyond its borders, affecting not only the public

that commonly appreciates the visual arts, but also those who never experience the art scene legitimated by institutions. *Espetáculo da Terra* gained a dimension much larger than the stage and transformed into a project of art education that worked with underserved communities to construct an opportunity for discussing subjects of utmost importance for the human being. Denise's unconventional art offered a suitable support for an experiment in this sense thanks to its link with contemporary values and ideas, such as ecology and concern for the environment. In its first year, in 2010, *Espetáculo da Terra* involved the residents of the community of Heliópolis, which held around 100 thousand inhabitants and 20 thousand families, according to the Brazilian Institute of Geography and Statistics (IBGE), more than half of whom lived in precarious conditions of sanitation and security. ■



The artwork *Entes*, 2005, at the entrance of Sesc Vila Mariana

THE GENESIS OF QUARTZ

Denise explains her vision that gave rise to the opera, to the processions and the performance event *Espetáculo da Terra*: in the melted layers of the rock that circulate inside the Earth, many different minerals are mixed. When this material comes to the surface as lava, these minerals tend to separate and fill the cavities made by air bubbles. The liquids solidify. When it is quartz that manages to enter the bubble, a structure is made within it like an amorphous shell, lined with

agate microcrystals and, finally, filled with quartz crystals.

“The opera represents the drama of the matter. The quartz symbolizes everything that is positive and immortal. The unstable basalt symbolizes mortality, that which breaks apart,” Denise explains. In nature, the transformation of quartz involves various steps, and Denise created characters that represent each of them – powerful allegories of human feelings such as fear, confusion, the need for order, the fight

against shadows and lies. *Espetáculo da Terra* fuels the imagination of adults and children through the challenges and adventures of Agrégora, Solser, Malassombbras, Konfuso, Ordenatrix, and Violetalux. “It is important to remember that basalt and quartz coexist both in nature and in my work. They do not form a duality. Even though they diverge, they complement each other and coexist, eternally integrated,” says the artist.







Estrela XXIII
2012, c-prints on aluminum. 90 x 60 cm



Estrela I
2012, c-prints on aluminum. 90 x 60 cm



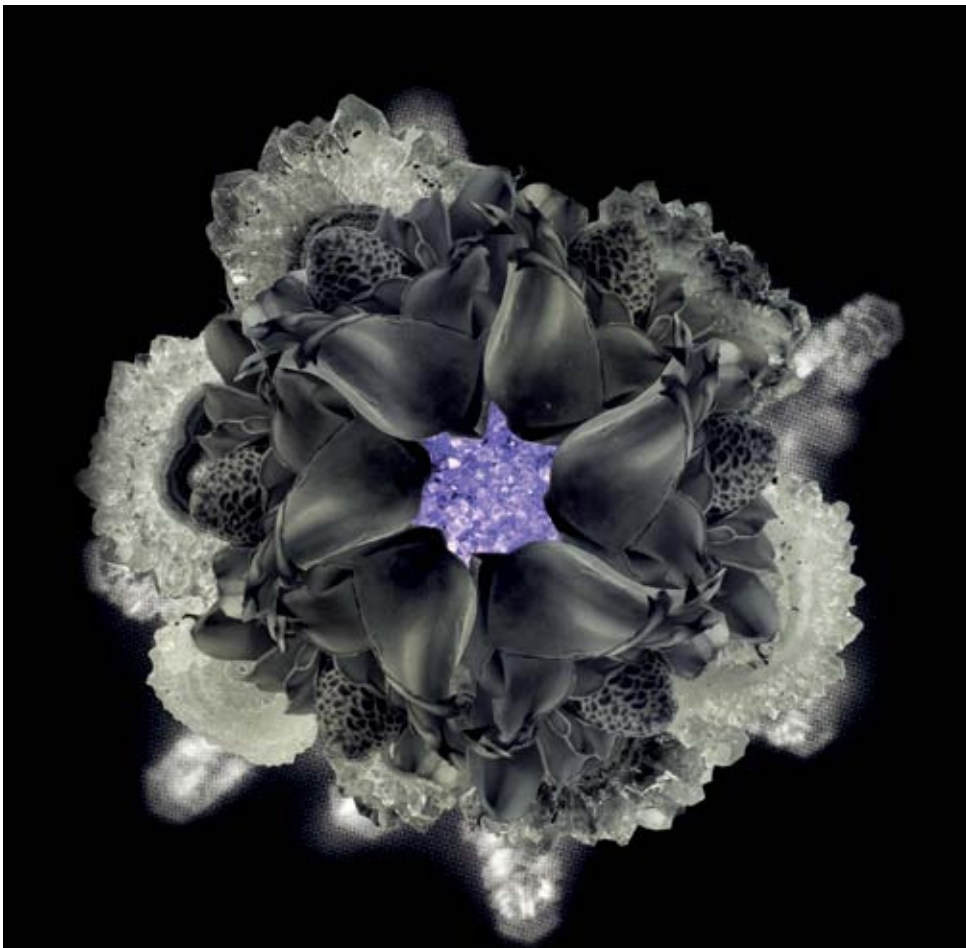
Estrela VI
2012, c-prints on aluminum. 90 x 60 cm



“The artworks move the public not because they bear Brazilian aspects, but through universal questions. Clearly, the exotic Brazilian quality is also there, but the relevant aspect is the existential questions in my work, lending another dimension to the themes constructed from Brazilian images. The question is not one of knowing the other, but mainly of recognizing oneself.”

Estrela XXVIII

2012, c-prints on aluminum. 90 x 60 cm



Estrela XIX

2012, c-prints on aluminum. 90 x 60 cm



Estrela XVII
2012, c-prints on aluminum. 90 x 60 cm



Estrela XXIX
2012, c-prints on aluminum. 90 x 60 cm



Estrela XXI
2012, c-prints on aluminum. 90 x 60 cm



Estrela X

2012, c-prints on aluminum. 90 x 60 cm

“ The path of the amethyst shows the soul of the Earth. And this soul sometimes goes to the street, sometimes goes to the community. ”

“ The stone is revealing as a process of transformation. The people think: if the stone can transform itself, why can't I? ”



Estrela III

2012, c-prints on aluminum. 90 x 60 cm



Estrela XVIII

2012, c-prints on aluminum. 90 x 60 cm

Photo: Lucas Mandacaru



A moment from the show *Ópera das Pedras* (2010): on stage, Badi Assad as Agrégora, with César Dias and Rubens de Oliveira

Quartz is a metaphor for the possibility of dialogue

Wendy Woon, vice director of the Edward John Noble Education Center, of the Museum of Modern Art of (MoMA), and Denise Milan talk about the construction of citizenship

Denise Milan has a vision: the stones are metaphors for the transformations that take place in human life. She has been constructing art based on this view since 1986. “For me quartz is a metaphor for the possibility of dialogue because it is present in 90% of the Earth, it is part of our common planetary identity.”

One of the pioneers of the movement for the valorization of public

art in Brazil, Denise believes in the creative possibilities of collaborative work and has been experimenting in this area ever since her partnerships with Ary Perez, which resulted in works scattered through the city of São Paulo, in places ranging from Anhangabaú Valley to museums of contemporary and modern art. Her public art has crossed the continent and arrived in the gardens of the Adler Planetarium of Chicago, in the USA. Moreover, mandalas by the artist are

“Quartz is present in 90% of the Earth, it is part of our common planetary identity.”

Denise Milan

today part of the collection of the city of Assisi, in Italy.

Her most recent exhibition of photos and photo collages, *Mist of the Earth*, an imaginary journey concerning the challenges brought by industrialization and modernization models of development, has been shown in São Paulo and Chicago, and has been shown at the Brazil Institute of Wilson Center, in Washington.

In this interview, Wendy Woon, vice director of the Edward John Noble Education Center of the Museum of Modern Art of New York (MoMA), and Denise Milan talk about their experience of allying art and citizenship.

How did you find out that you were an artist?

I thought I would be a mathematician, but after getting my degree in economics I went to study in Spain, in 1979. The drawing became the drawing in space: the body occupying the space. I studied with great artists of Spanish dance and with masters of the visual arts.

Works in partnership have been part of your artistic process since the outset. Did this collaborative style begin with the participation of Ary Perez, your former husband?

I didn't know how to structure the tridimensional objects I was imagining. Ary helped me to find solutions. We started a dialogue, then it became a collaboration. I don't have all the answers, I like people to contribute. My first solo show featured collages and I thought it made sense to be part of something that already existed: we don't create things, they were already created and everyone can participate in the larger act of creation. Of course, working in partnership is never easy, there are tensions, but it helps to find truly creative solutions.

You were born in São Paulo, and your family has lived for generations in Brazil. What aspects of your work reflect the Brazilian context and which are more universal?

My grandparents were Lebanese immigrants who imagined Brazil as a place where their dreams could come true, and that's how I also see it. A country with immense natural resources – fauna, flora, minerals and precious stones. A place of exuberance, which should not be confused with exoticism. Despite the magnitude of its natural potential, there are other aspects that need to be considered: the extermination of the indigenous communities, the inequality of opportunity, the construction of urban centers that distance people from the values of nature, deforestation and other practices driven by greed. It is necessary to show these scars while we

preserve the paradise and the wonders of this place. To understand, not to dominate. The most beautiful precious stones are found in Brazil, and my work is to study their geometries and listen to what the structure of the stones can teach us.

Why “blue stone”?

On their way to the moon, the Apollo 17 astronauts saw the entire circumference of the Earth all lit up and exclaimed: “It's a blue marble!” That was in 1972. We know that the Earth's crust is basically made of what we call “stone.” This is the common stone, the ground on which we walk. We live on a “blue stone.” To imagine this blue stone spinning in the vastness of the universe is to understand that we are part of a large family, that we exist and are all connected with our planet, sharing the same experience.

Photo: Lucas Mandacaru



Photo: Lucas Mandacaru



Scene of the contemporary opera *Ópera das Pedras* (2010): on stage, Tiago Pinheiro as Solser, Badi Assad as Agrégora, and Wellington Nogueira as Corifeu.



“We live on a ‘blue stone.’ To imagine this blue stone spinning in the vastness of the universe is to understand that we are part of a large family, that we exist and are all connected with our planet, sharing the same experience.”



But does there in fact exist a blue stone that you present as an element that links Brazil and Africa?

Blue stone is found in Bahia and Nigeria. It is called Bahia blue granite or royal blue stone. I used this connection in the installation *América* (2003). We must recover the time known as Pangaea, when Brazil and Africa were united. We must valorize that memory of our common origin. Blue stone is a bridge that allows us to return to the time when we shared the same beginning. We don’t know about our beginning or end. We must share this experience of not knowing. It’s not a question of our identity as children of this father or that mother, but of our planetary identity. This is a symbolic space where we can share the same language. For me, quartz is a metaphor for the possibility of dialogue because it is present in 90% of

the Earth, is part of that origin and it is a structure that talks about all of us.

Besides yourself, many artists are working nowadays in what we call the “social practices” which offer interaction with other people. The idea is that art and the artists can have a powerful and transformative impact on people’s lives. You mentioned having been influenced by the work of Joseph Beuys, the German multimedia and performance artist, whose works involve humanist, pedagogical, philosophical and anthroposophic concepts. How is he related with your work?

A work that Beuys made in Germany comes to mind: an installation of three thousand stones and seeds for reforestation. I am much inspired by nature, and through art I teach people to insert nature in their lives.

Through the art education project *Espectáculo da Terra* in six needy communities of São Paulo, for example, I saw what Beuys meant by “social sculpture.” The mythological universe of these stones that I created, their origins and structures, finds an echo in the communities in question. Discovering the connections between the lives of those people and the metaphors present in my work was a central aim of the project.

You are inspired by the structure of quartz, which offers lessons for life. What can we learn by looking at the stones?

The sculpture *Entes* [Beings] (2005) is a perfect example. It has the form of an egg, a symbol of genesis and transformation. Upon examining the interior of a geode – a hollow structure whose walls are lined with

quartz crystals, or of amethyst – we see many layers formed since its origin 130 million years ago. Both elements that form the geode – basalt and quartz – originate in volcanic lava, but their distinct natures make them separate. When quartz penetrates the air bubble in the magma, it begins to crystallize and to form a sort of protective shell that functions as a barrier for the basalt not to penetrate. Under this shell, inside the bubble, quartz will organize itself and make its structure visible. In short, in the outer layer there is chaos while in the inner layer, the agate, the structure of the material and its visibility are being defined. It is a structure we can contemplate and learn to recognize, and which recalls the formation of the Earth. Observing these phenomena can give rise to an analogy with any activity or

circumstance of life. Especially with creative processes of a collaborative character. The original narrative is there, and gets combined with various ideas. This is what enriches the collective work.

So this work was born from an analogy with the structures of the stones?

Quartz, as a metaphor, is my starting point. This artistic vision empowered me to cross through the layers of the material and transform its evolutionary stages into steps of knowledge. This is the “language of the stones.” ☒

learn more



GEMS OF THE EARTH
DENISE MILAN and OLGÁRIA MATOS
Edições Sesc São Paulo | 2010 | 394 p.

This book compiles the seminar held in 2005, at which scholars of geology, anthropology, philosophy, psychoanalysis, literature, the visual arts and history project and discuss a bridge between our origins and the objective possibility of cosmic and ethical peace.



DVD ÓPERA DAS PEDRAS
DENISE MILAN and MARCO ANTONIO
GUIMARÃES
Selo Sesc | 2006 | 27 min.

Based on the nature of stones, the opera tells the history of the Earth and its processes of creation, which unfold in artistic, scientific, metaphysical and poetic meanings. In this record of the opera created by Denise Milan, the music was composed by Antônio Guimarães, the founder of Grupo Uakti.



CD ÓPERA DAS PEDRAS
O espetáculo da Terra
DENISE MILAN
Selo Sesc | 2011 | 58 min.

This CD presents the repertoire composed originally for the play of the same name, a creation by director Denise Milan, presented at Sesc Ipiranga in May, 2010, and which deals with the imaginary of stones, showing the Earth as a living entity.

Available in the units of Sesc and at the portal sescsp.org.br/livraria

Photo: Alexia Santi



For a precious world

The Procession of Precious Lives has been held since 2010 in the São Paulo

Reporting: Gabriel Vituri and Ivonete Lucirio
journalists

“What is precious for you?” Printed on the T-shirt of hundreds of children and teenagers who crowded the narrow lanes of Heliópolis, a district in São Paulo’s South Zone, the question might even seem naïve. In practice, however, the answer demanded a process of transformation and identification as complex as the metamorphoses of the stones which for many eras have populated the planet. “It is necessary to understand the structure of the heart in order to understand the stones,” explained a piece of paper written by hand, pinned to the clothing of a boy

who looked to be about eight years old, wearing a red baseball cap and soccer-style tennis shoes.

The fourth edition of the Procession of Precious Lives, which filled the spaces of the community with colors, took place on July 13, 2013. Through the narrow and winding lanes of Heliópolis, about 600 young people – monitored by educators – walked together. Grasping multicolored balloons, they were culminating a work of many months, made with the help of the region’s Center for Children and Adolescents (CCA). This initiative was based on a poetic analogy developed over many years by artist Denise Milan: the transformations of



The Procession of Precious Lives started as a possible response to very contemporary reflections, such as environmental questions and the historical struggle for the preservation of Brazil’s natural wealth



quartz in nature can be used as a metaphor for the changes that take place in human lives.

An experiment of public art

The Procession of Precious Lives was held for the first time in 2010, with more programming, which included a manifestation at Independência Park, in São Paulo. The choice of the monument that recalls the moment when Prince D. Pedro proclaimed Brazil's freedom from Portuguese domination was not accidental. "Intervening in the city's landmarks is one of the ways that art can add new meanings to these symbolic places," explains Denise Milan.

"The children and adolescents occupied the park aiming to reinvent the history of Brazil and represent valorized human life – not like a precious stone that is only valuable once it is extracted from its context, but as something in its own right, concrete and possible," recalls Denise, concerning the inaugural editions of the procession. "The eye of the spectator is transformed into a visionary eye, connected with the Earth, nature, the people and their lives, even those which are generally forgotten," the artist adds.

Those first two processions, held in 2010 and 2011, were especially successful in terms of the engagement of the communities involved with the proposal: Heliópolis, Grajaú, Jaguaré, Interlagos, Osasco, Pinheiros, Santana, and Itaquera.

Genesis of a collective work

An unfolding of the *Ópera das Pedras*, a multimedia presentation by Denise Milan created in 2006, the Procession of Precious Lives arose as a possible response to very contemporary reflections, such as the issue of the environment and the historical struggle for the preservation of Brazil's natural riches. The artist's series based on this metaphor of the stones deals with the same theme



Procession of Precious Lives (2010), at Independência Park, São Paulo

that the children of the CCAs have been working with: the integration between the human being and the planet Earth, represented – in the artist's vision – as a large blue stone. In the case of the young people from Heliópolis and other regions in the city's outskirts, the walk and the works took on an even stronger connotation: "When these children have a valorized life, the power to evolve is introduced in their daily lives, the dream once again becomes a possibility," Denise observes.

An art education project

It was in 2009 that Carla Govêa, an educational technical analyst who has carried out educational activities at SESI for nearly two decades, had her first contact with *Ópera*. "I began to study Denise's works, I thought they were fantastic and adapted the idea with a purely educational aim in the community of Heliópolis," she recalls.

Joining with her were Regina Barros, a sociologist and educator of UNAS (Union of Centers, Associations of Residents of Heliópolis and the Region), and Rosa Iavelberg, a professor with the College of Education of the Universidade de São Paulo.

The following year, already with a framework for the teacher's training, the work of the three educators was extended to the groups of children and adolescents. "They studied history, geology and science, for example," Carla tells. The education and awareness-raising process culminated in the first Procession of Precious Lives, in 2010.

Based on these studies, the proposal of working with art as a pedagogical language, involving the principles of the *Ópera das Pedras*, began to be used extensively by the CCAs. "Education often remains apart from programs that seek to valorize culture because it is hard to see that this is all part of a single whole,"



Carla observes. In her view, the artist's work is unique in terms of its valorization of human relations, the development of self-esteem and the belief in a better society. "The proposal to ally art and culture was always a guiding principle, but Denise lent it an added freshness," she adds.

Metaphor and innovation

This work is based on the possibility of making an analogy between a precious stone, which transforms with the passage of time, and a human being's capacity for self-transformation. According to Gilmar Pereira da Hora, a coordinator of CCA Parceiros, this metaphor is above all a reflection on who we are. "Working on this concept with the children awakens their inner critical sense, which helps them to understand social and human values, and to seek tools to become active citizens," she states.

As they were used to working in more orthodox ways, they expected some initial difficulty on the part

of the learners to understand the meaning of an analogy that was not very explicit. In other words, explaining the step-by-step transformation of a mineral to children and making them understand that the process can be intimately linked with their life seemed like a complex challenge.

Juliana Kelly da Silva, a.k.a. "Fuca," the coordinator of Art and Culture of Instituto Anchieta Grajaú, recalls the case of a student who was going through a difficult moment of his life: "The child did not know how to deal with death and the feeling of missing someone," she says. "We decided to use the symbolism present in Denise's project. I asked the boy to look around the grounds for stones that demonstrated what he knew about death. He very beautifully brought me five stones and explained: one was birth, the age of a creeping infant, the second represented the first experience with school, the third symbolized adolescence, the fourth the

adult phase, and the fifth old age. I asked, and after that? The child told me that after that came death and that death was the fear of longing and the feeling of loneliness. The symbolic comparison gave colors, lightness and new meaning to the sense of loss and pain," Juliana concludes.

Carla Govêa confirms that the results were surprisingly positive. "The child is not afraid of new things or obstacles, while we adults have preconceived notions and need more time to understand ideas that are very different from our day-to-day experience." "They interacted proactively the entire time, spontaneously suggesting games, exhibitions and activities," the educator adds.

Community and challenges

The relationship of the children with the artist's work was deepened, and the entire 2013 event was organized by the representatives of the CCAs themselves, together with the children and adolescents who



“Working on this concept with the children awakens their critical sense, which helps them to understand social and human values, and to seek tools to become active citizens”

Gilmar Pereira,
coordinator of CCA Parceiros



attended the centers, and with other community residents.

“The involvement of the little ones shows how they embraced the project. Each drawing, each flag, everything bears their look, it is the construction of their own identity,” states Antonia Cleide Alves, president of UNAS, who participated in the previous editions of the procession.

Gilmar Pereira, one of the organizers of the event within the community underscores the projects’ importance: “That this started here in Heliópolis represents a process of identification with a work that has traveled around the world.” In fact, Denise Milan’s work is not limited to Brazil. Chicago, in the United States, and the city of Assisi, in Italy, possess permanent examples of her artworks. Her installations have been shown in places as diverse as Taiwan and Marknesse, in Holland.

For Gilmar, talking about precious lives in the spaces that represent the day-to-day life of these young people

is a significant achievement: “There is nothing better than debating an important subject like this, just outside the door of one’s house, sharing with the neighbor that he is also precious and can be a better person.”

In Heliópolis there is a community life,” notes Regina Barros, “there we found the seed of the collective. People fight daily for everyone’s quality of life to improve. Children abandoned by life, and sometimes by their own parents, are recovered through the activity of community leaders, who constantly struggle for the community’s sake,” the sociologist observes.

Euphoria

When the first part of the procession began, a little after 8 o’clock of a pleasant morning, the silence of the streets of Heliópolis was broken by the euphoria of the children. After months of preparation, the 2013 Procession of Precious Lives was finally beginning. “The human being seeks

Photo: Lucas Mandacaru



Photo: Lucas Mandacaru



to transform the being into its own preciousness,” proclaimed the T-shirt of the group of girls who helped to calm down the newer participants. “Don’t litter, because the world is precious,” pleaded a group of boys who held green balloons and marched slowly down the hill.

With messages about the natural environment and the importance of the family, along with requests for peace and many other things, children and young people ranging from 6 to 15 years old walked through the streets. From the windows and balconies the public – the residents as well as the shop owners – watched the noisy walkers with curiosity; red, green, blue, lilac, pink, yellow – a sea of colors representing different precious stones and the promise of a better life. “Many people think that education can be done easily, but awareness about learning is necessary, it is necessary to teach these young people that their attitudes create responsibilities in society,” reflects UNAS director and CCA Mina coordinator Genésia Ferreira da Silva Miranda.

The walk lasted less than an hour. The results of the symbolic act, however, will echo for a lifetime. “Sometimes we see a seven year old child, for example, who arrives without self-esteem, with difficulties to form relationships, and some years later that child has turned into a leader, a living example of the results of this work,” says Gilmar Pereira. “We are talking about human development, something that impacts the daily life of these young people, influencing the paths they will choose,” adds the educator who at the end of the walk

Photo: Lucas Mandacaru



received all the groups of the procession at CCA Partners for a moment of reflection.

“Each little piece of the universe is precious, and we need to take care and be proud of being a part of that,” states Ana Estela Haddad, the first lady of São Paulo, present in the parade.

Visions of the future

The hexagonal flags flying in the patio of the CCA, along with the children attentive to the speech of the

educators, anxious to finally let the hundreds of colored balloons fly up into the sky, left no room for doubt: once again, the Procession of Precious Lives had achieved its objectives. “In these four years there has been a lot of planning, it’s a continuous thing,” explains Genésia Miranda, of UNAS. For the director, this day is only a detail within a larger context. “When an adolescent leaves the center, at the age of 15, and gets on with his or her life, the training received here continues,

his or her perspective toward the future is priceless,” she says.

“It is the feeling that they are able, it is reinforcing that Heliópolis can be good, and this is very meaningful,” adds Carla Govêa. For Denise Milan, the fourth edition of the parade represented a further victory for public art: “It is a spontaneous act the proof of the relevance of this art education project we created. Heliópolis shows that the reflection has already been established and is now ready for other challenges.”

Finally the big moment arrives: as if by magic, balloons of every color fill the sky of São Paulo’s South Zone. And precious lives continue on their way. ■

THE 2015 EDITION OF THE PROCESSION WILL HAVE THEATER AND MUSIC WORKSHOPS

A new edition of the *Espetáculo da Terra* is planned for November 13, 2015. The meeting of all the educators and coordinators involved in the project was held at the Center for Educational and Cultural Interaction of Heliópolis, on May 8. Besides the

presentation of the methodology to be adopted for consolidating the results obtained throughout the last years with the art education experiment proposed by Denise Milan, together with the *Espetáculo da Terra* team, and developed by the teachers with the children of the community, the meeting also presented some new developments. The goal is

to enlarge the theatrical potential of the parade based on theater and hip-hop workshops based on the creation *Ópera das Pedras – Vidas Preciosas* by Denise Milan. Singer and composer Badi Assad and the orchestra of the Instituto Bacarelli, with 70 musicians and 60 children in the choir, will also take part in the 2015 edition of the procession.

The art of learning and of constructing citizenship

Specialists debate the possibilities of using art as a tool for education and autonomy in contemporary life

How does an art-education experience impact the life of people? How does it affect the configuration of the urban space? In an increasingly multidisciplinary world, how do experiences that combine art with educational proposals provide the children with new insights? And the young people? Educators and specialists in different areas consider the possibilities that an artistic work firmly based in contemporary values, such as respect for the Earth and emphasis of the collective, can teach today's children and youth. Especially for those who

don't have access to sophisticated resources that might give a false illusion that technology is a solution for every problem. After all, as noted by Tom Lovejoy in his statement, "for most (children), the magic of the living things is all they need and it is fascinating to discover and understand how everything works." Exploring these new paths of creativity and the construction of knowledge offered by art is a challenge. Educators Carla Govêa, Regina Barros and Rosa Javelberg evaluate the opportunities that the urban performances offer for

transdisciplinarity. Laura Greenhalgh considers the effects of these spectacles on the transformation of cities. Winner of the Nobel Prize for physics Jerome Friedman discusses the role of the culture of art for opening horizons for young people from the difficult conditions of their lives. And MIT (Massachusetts Institute of Technology) professor Vladimir Bulovic analyzes the intersections between the scientific process and art, and imagines how the pedagogical process would be enriched if these disciplines were more closely linked.



"THE ARTISTS ARE ARCHITECTS OF THE IMAGINARY AND AGENTS FOR URBAN TRANSFORMATION"

Interview of Laura Greenhalgh
by Naomi Moniz

How does the perception of the "public space" mold our relation with the cities?

LAURA GREENHALGH: We generally have an atrophied perception of the public space, and various factors contribute to this. The car culture, for example. Our cities expanded and, to a large extent, where deformed to allow for avenues that become estuaries of vehicles. We spend part of our lives locked up in cars and/or stuck in traffic jams. This is the negation of the public space, which consists of fluid interactions. The same reasoning can apply to the "compulsion to protect

oneself from the other.” In the name of security, an entire assortment of cameras, alarms, electric fences, gated communities, and security firms has been created, resulting in another sort of “social security-bars” which likewise negate the public space. We are therefore losing the renewalsense of belonging with the city that we inhabit and which also inhabits us.

How can initiatives like *Espetáculo da Terra* re-create the city-citizen link and reinvent the public space?

Initiatives that allow individuals to take a new look at their habitat are beneficial. The striking thing about *Espetáculo da Terra* is that this project, a mix of urban performance with public art, is constructed by the community, and not conceived by committees. It can therefore be more effective and overcome even the cultural changes dictated by the public power.

Are cities prepared to absorb urban performances and popular manifestations?

Ideally prepared, never. But they are prepared, yes, to embrace the desires of their people. We must not forget that cities are human artifacts. As American economist Edward Glaeser says, the cities are powerhouses of invention: Florence gave us the Renaissance, the streets of Birmingham led us to the Industrial Revolution, from the offices in Bangalore or Tokyo we see innovation. The city goes hand-in-hand with human evolution. So we can suppose that it will continue to be the ideal space for the expression of their inhabitants. We have been seeing this phenomenon in recent years, and there are many examples. The Occupy movement, which challenged the American establishment in 2011 by using the financial bastion of New York, Wall Street, as a space for protesting against economic

and social inequalities around the world; the “Arab Springs” that have erupted in the streets of the Middle East since 2010; Paris flooded by millions of people in protest against the massacre of the Charlie Hebdo journalists; the Brazilian marches of July 2013 against a diffuse “everything that is there,” and those of March of this year, against the federal government.

“ The striking thing about *Espetáculo da Terra* is that this project, a mix of urban performance with public art, is constructed by the community, and not conceived by committees. It can therefore be more effective and overcome even the cultural upsets instated by the public power. ”

Did people use the public space more in the past?

We have the memory that our life had more social interaction in the public squares, at the band stands, along the riverbank, when we had public squares, band stands and riverbanks to enjoy. The antithesis of this “open” past would be, for example, the tragedy of the Kiss nightclub, in the city of Santa Maria, in the state of Rio Grande do Sul, in 2013. Locked inside of what was basically a big concrete box in the wee hours of the morning, without emergency exits, with inadequate safety equipment, and surrounded by deafening sound, 242 university students died in a fire that injured another 600. They were enjoying the sort of fun typical for their age, but in an encapsulated space. In a certain way, Internet

likewise encapsulates us in a virtuality, and a reaction to this is perhaps the “Vem Pra Rua” [Come to the Street] movements that have proliferated. They demonstrate that the human exchanges on the virtual plane did not eliminate the need for human exchanges on the physical plane.

Who can best set urban transformation into motion nowadays? The politician? The market? The NGOs? The artists?

The citizen is demanding more participation. The market acts according to its specific rules. The NGOs follow their own logic, sometimes tied to the need to maintain a counter discourse. I call attention to a figure in the political spectrum, the mayor, who is closer to the citizen. Similar to a condominium president, he or she needs to provide quick and effective responses. Moreover, he or she can connect with other mayors, even other countries, creating very interesting urban networks. As stated by Benjamin Barber, the author of the book *If Mayors Ruled the World*, “presidents pontificate principle; mayors pick up the garbage.” Finally, we should note the role of artists who dare to launch their creativity in the public space. These are the architects of the imaginary. Like Denise Milan.

Laura Greenhalgh is a journalist by training and professional practice. With a degree from the School of Communications and Arts of USP, she has worked with important media companies. She was the executive editor of the newspaper *O Estado de S. Paulo* from 2004 to 2014, where she founded the supplements “Aliás” and “Sabático.” She currently directs *Arq.Futuro*, an international platform for discussion about architecture and urbanism. She obtained her advanced training as an editor at Stanford University (USA).



“THE CREATIVE PROCESSES ARE SIMILAR IN SCIENCE AND IN ART”

Interview of Vladimir Bulovic
by Naomi Moniz

Entering the office of MIT Professor Vladimir Bulovic, who holds the Fariborz Maseeh Chair in Emerging Technology, directs the MIT Nano Project, and is the co-leader of MIT’s Initiative in Innovation program, is like stepping into a slice of the future: a large TV screen lit with vibrant colors but operating at only a fraction of the current energy cost; an audio device powered by transparent solar cells on the lenses of eyeglasses; and panes of glass with solar cells that absorb solar energy and can revolutionize civil construction are mixed within the collection of “gizmos,” that have arisen from his experiments in science and engineering.

Prof. Bulovic has 75 patents in the areas of solar energy and photon detection, light emitting diodes, lasers, lighting and television displays,

chemical sensors, programmable memories and microelectric devices. He is a true Professor Gyro Gearloose with his “brilliant idea” light bulb always shining.

The life of this master of ingenuity, however, was marked by the need to overcome. Vladimir Bulovic was born and raised in one of the regions most fraught by age-old intolerance and wars waged for territorial, religious and ethnic differences – Serbia, the former Yugoslavia, located at the epicenter of violence that marked the Balkan wars in the 1990s. He moved to the United States before the division of the country in 1984, and, far from resigning himself to the position of an outsider, he became an inventive and resourceful educator.

Prof. Vladimir’s routine is marked by the need to transcend limits. Together with his wife, the MIT professor creates educational materials and gives classes to introduce elementary school children to the fabulous world of mathematics applied to the real world and has a somewhat “different” hobby – he is a mime, a master of pantomime, the art of gestures and expressions that express the universality of human feelings.

“The creative processes in the sciences and in the arts are very similar: the feeling of experimentation, of creating new knowledge, of working with various disciplines.”

How did the experience of collaborating in an installation by multidisciplinary artist Denise Milan dovetail with your work?

VLADIMIR BULOVIC: I seek innovation, always. Like many of avant-garde artists, I seek the democratization of creation, I start work with a passion every day, stimulated by what is new and different. My mission, as leader of the MIT Nano Project, is to build a laboratory of cutting-edge nanotechnology, a transformative workshop that will define new parameters for the next three decades, until at least 2050. For this we need to create a research base that is flexible and adaptable to the circumstances.

You are a scientist, inventor, educator and practitioner of the art of pantomime. At what point do art and science combine?

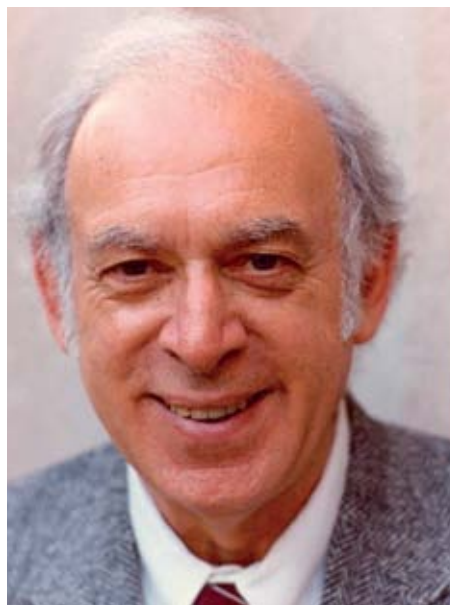
The creative processes in the sciences and in the arts are very similar: the feeling of experimentation, of creating new knowledge, of working with various disciplines. Observation and curiosity to imagine solutions. As an engineer, I create something that is technologically useful, but as a mime I touch people with emotion and set off a spark of insight.

Why did you choose pantomime as a form of artistic expression?

I participated in the pantomime group Princeton Mime Theater, which gives a lot of performances at Princeton University, where I studied. I discovered that laughter unites people. The ability to make people laugh, to touch them emotionally, profoundly marked me and gave me confidence, it was a form of universal communication. Later, already an MIT professor, I offered a course to the students, most of them in engineering and the hard sciences – and, generally, the most introverted

people – which was called “Mime for the Intriguingly Imaginable.” The course prescribed: “Sign up and learn to explore expression and movement. Learn to express yourself without using a single word. Open your eyes, use your body and think about the space around you; your imagination will color the rest.”

Vladimir Bulovic holds the Fariborz Maseh Chair in Emerging Technology, directs the MIT Nano Project, and is the co-leader of MIT’s Initiative in Innovation program.



“IMMERSING CHILDREN IN THE CULTURE OF ART CAN FREE THEM FROM THE DIFFICULT CONDITIONS IN WHICH THEY LIVE”

Interview of Jerome Friedman
by Naomi Moniz

“Art opens cultural horizons in the present and future of children. It also offers a sort of psychological ladder to boost them above the difficult and sad aspects of their environment. The themes dealt with by Denise Milan can give them a feeling of respect for the wonders of nature and the lessons that it teaches us. My parents were Russian immigrants who arrived in the United States in 1914 and settled in Chicago. I grew up during the difficult years of the Great Depression. My father earned his living by selling and fixing sewing machines, and my family suffered great financial difficulties during that time. Although my parents did not have a formal education, our house was full of books and my brother and I were encouraged to dedicate ourselves to our studies.

My mother liked music very much and had a beautiful voice. During the summer we would always go to the free open-air concerts at Grant Park in downtown Chicago.

I wanted to be an artist. When I was a child I spent many hours drawing and painting. In high school I took a special program in arts that was part of the normal curriculum. I would spend two or three hours a day there, working with art. I even received a scholarship to study at the School of the Museum of the Art Institute of Chicago when I finished high school. During that period, as an art student I took a few courses in mathematics. I took a course in physics that was very badly taught and it didn’t inspire me at all. I was in the second year of high school when I visited the Chicago Museum of Science and Industry, where I entered the bookstore. I saw a book called Relativity written by Albert Einstein and was absolutely fascinated by it. After reading and trying to understand it I realized that there was a lot in the world of physics that I didn’t know and would like to know, and that I needed to learn more. I ended up rejecting the scholarship to study art at the Art Institute, much to my teacher’s displeasure, and enrolled in the University of Chicago. What attracted me in that book? I thought that it would help me understand some mysteries that I had read about in science popularization articles: how the yardstick shrunk and the clock slowed down when moving at high velocity. I read the book very carefully and did my best to understand it. But really I did not understand the basic concepts of relativity. This made me even more curious and more determined in my decision to understand them. It became clear to me that I would have to study physics in order to understand those ideas.

Currently much is said about technological innovation in the economy, with an emphasis on science, technology, engineering and mathematics. Nevertheless, I have encouraged the role of “Art and Science” as a fundamental element of education. The imagined models can be based on new conceptual ideas. It’s not by chance that the word imagination – which denotes an ability – is the cradle of creativity and is based on the word image.

Generally, what is lacking in the educational processes is the opportunity to challenge the students in their creativity. This is where the art courses can play an important role. The “practice” of art forces the students to seek solutions that are not prescribed by the rules and can, therefore, have a liberating effect on their thinking.

Art offers opportunities for them to take risks in their mental process. Besides classes, making contact with artworks opens new ways of seeing, listening and experiencing. This goes hand-in-hand with the revolutions in science and reinforces the idea that no model is sacred, but should rather be constantly tested in light of new experiences. The visual arts that enlarge the ability of students to visualize and can play a special role because visualization is so important in the development of science and technology.”

Jerome Friedman is a professor at MIT and shared the 1990 Nobel Prize in physics along with Taylor and Kendall for the discovery of subatomic quark particles.



“IT’S IN OUR CHILDHOOD THAT WE LEARN ABOUT NATURE”

Interview of Tom Lovejoy by Naomi Moniz

“The changes the planet has been going through represent one of the worst social injustices of all time because the damage is not restricted to this generation. In order to remedy this scenario we will need to be optimistic and be open to continuous collaboration and learning. The schools are essential for the training of young researchers who help to face the challenges and find ways to improve the planet.

Children tend to be very optimistic and it’s up to the institutions to encourage this optimism, along with a taste for knowledge and creativity. We should expose people, still in their childhood, to nature. At that time they are naturally curious and this curiosity extends into all areas: geology, physics, chemistry, and others. Nowadays, video games, cell phones, tablets and television can be a very serious distraction. But they are

also tools that foster learning, even though they cannot substitute actual experience. Thirty-three years ago I myself began a television program that is still popular today.

It was thanks to a wonderful teacher that I got interested in biology, when I was only 14 years old. I went on to specialize in that field at Yale University, earning my PhD. Still in college, I wanted to have scientific adventures elsewhere in the world. My advisor at Yale invited me to spend a summer working with him in the Brazilian forest around Belém. In June 1965 I took a flight to Pará. Later I worked at Instituto Evandro Chagas and Museu Goeldi. Just imagine working in the world’s largest tropical forest, where there was only one highway. It was the dream of any biologist.

I later began to study the fragmentation of forests, that is, to what degree this segmentation harmed the biodiversity. The discussion was whether the reserve forests should be large or small. The 2003 study in which I participated demonstrated that a 100-hectare fragment lost half of the species of birds in less than 15 years. The conclusion was that the fragments need to be larger. During these nearly 50 years I began to also understand the importance of this immense experimental laboratory which is the forest.

Biological diversity is the basis of all life and is essential for man’s well-being. The ecosystems are extremely important. So much so that Emperor Dom Pedro II deployed the first reforestation project at the place which is now the Tijuca National Park, in Rio de Janeiro. As biological beings we obtain daily benefits from the fruits of the forest, either as food, or for the production of clothing, housing, medicines, agriculture, and wood.

A forest's influence extends far beyond its borders. The hydrological cycle of the Amazon region is essential not only for maintaining the forest but also for producing rain in the farmlands of the state of Mato Grosso. The Amazon region is approaching the point of no return, with 20% deforestation, which could lead to the disappearance of the forest in the south and east of the region. The recovery of the ecosystems is extremely important because it can help to remove carbon dioxide from the atmosphere, which would help to decrease the temperature by half a degree.

Moreover, biodiversity is a sort of living library for the sciences. Each species represents a set of solutions for biological questions; any one of them has the power to transform our scientific knowledge. There are recent discoveries that can revolutionize medicine and the problems related to the use of antibiotics to combat resistant pathogens. Many vaccines and antibiotics are the result of accidental observations of biological activity.

We need to be creative when it comes to protecting the forest. In the United States, there is an application, Leafsnap, which helps to identify the trees in the country's East. We need to think creatively about how to develop synergistic technologies that benefit science, ecology and the environment.”

Tom Lovejoy is an American environmentalist who has studied the Amazon region for 50 years, having disseminated the concept of biodiversity. A pioneer in the study of fragmented tropical forests, he is the creator of the *Nature* television series, on the air for 33 years.



“URBAN PERFORMANCE CHANGES PEOPLE”

Statement by Carla Govêa

“Performance has the great merit of involving people, making everyone participate. It does not isolate. That’s why it works so well in communities, giving everyone a chance for self-expression. *Espetáculo da Terra* gave rise to a feeling of belonging in the participating children (and adults), fostering inclusion. Many of them came in feeling inferior but left with higher self-esteem. I remember a boy about nine years old who had lost his (murdered) father, and lived with his grandmother. After the process he saw that he could change his own history, that he was not a hostage of his prior experience. I also remember a girl of about 11 who was teased at school and at home because she had difficulties in learning. Now that girl is able to

say ‘I don’t let them humiliate me anymore.’ She even wants to be a journalist. That’s how you measure a performance and an art education project, by the impact it has on people’s lives. I myself was changed. Before participating in this project I used a formal method of teaching. And I began to see how everything could be different. I understood that a piece of information should not be seen as pertaining exclusively to a single area. And this is what we tried to convey to the art educators. Some of them caught on fast, others had more resistance. But the overall result was very positive.”

Carla Govêa, an educator with Sesi, is a psychologist and teacher specialized in children and young people, and in the elaboration and development of projects for students with learning difficulties. She has been working 20 years in communities in the outskirts of São Paulo, and is one of the pedagogical coordinators associated to Denise Milan’s artistic creation, *Espetáculo da Terra*.

“Performance has the great merit of involving people, making everyone participate. It does not isolate. That’s why it works so well in communities, giving everyone a chance for self-expression.”



“EDUCATORS AND CHILDREN ARE ARTISTS, NOT SUPPORTING ACTORS”

Statement by Regina Barros

“An urban performance extends far beyond the moment it is taking place. In the case of *Espetáculo da Terra*, it was the result of a three-month-long process. And it is through this process that the participating children and adults recognize their paths, their limits, and overcome their personal questions. It was not chaotic, people knew what they were doing there. This was especially important for the children, who recovered their own (albeit brief) history, and could understand that life is precious. The interesting thing is that the participants had the autonomy to represent their histories, create characters, fantasies. The educators and the children became artists, not only supporting actors. We should not undervalue the importance of the moment the performance was taking place. Those who watched it could get to know the community’s inhabitants a little better, and the people on the street

were mobilized by the power of the event. The performance was also important from an educational standpoint. The participants learned about Denise Milan’s work, they understood the meaning. And there was the possibility to work with transdisciplinarity since the themes could be approached from a variety of disciplines. Kite making uses mathematical concepts; the study of stones involves science; describing in writing what each person was seeing led to knowledge about the Portuguese language. This sort of movement works best for school-age children, over six years old. The younger ones might be interested in the playful aspects, or be curious, but they can’t always grasp all the meaning.”

Regina Barros is a sociologist and educator. She has developed various projects for young people in Heliópolis, working with UNAS from 2003 to 2011. She encouraged the deployment of the project *Espetáculo da Terra*, by Denise Milan, in the community.

“This was especially important for the children, who recovered their own (albeit brief) history, and could understand that life is precious.”



“ART MAKES CHILDREN MORE AWARE OF THEIR ENVIRONMENT AND OF OTHERS”

Statement by Rosa Iavelberg

“Performance is a contemporary mode of artistic presentation, it is a concept, a content of the area of art in education. Beginning at the moment when the children understand the meaning of what they are doing there, they can act in a performative way. This depends on the how the activities leading up to the moment of the performance are developed. In the project *Espetáculo da Terra* the performance fulfilled the artistic proposal of the collective action that publically manifests what the participants worked on in the project, and what they experienced. It is performance because it involves action, movement, music, visual arts and scenography in an integrated way and can be watched by whoever is on the street or even afterwards, in a video or on Internet, for example. You can also call it a parade, a performative parade. To participate in the project it was necessary

to associate and work constantly on the relations between art and the life of each participating child. In this way the students gain awareness of the relations between the contents of Denise Milan's work, which aims to bear relation with questions of life, helping to foster equity on the planet. What students learn in a project like this will stay with them all through life, if the contents are conveyed well through the work. Art raises their awareness about their environment and about others; this is an important benefit of actions of this sort. The applications are not predictable, because the project does not use art as a means for actions that lie outside of it, but rather to raise the awareness of the participants, who can then go

on to other initiatives in life and in the community.”

Rosa Iavelberg is a professor with the College of Education of the Universidade de São Paulo and holds a PhD in arts from the School of Communication and Arts of the same university. She has a great deal of experience in the arts area, with an emphasis on teacher training, working mainly with the themes of art, teacher training, art in education, curriculum for art in education, the drawing of children and youths. She contributed to establishing this project and is one of the pedagogical coordinators associated with the artistic creation by Denise Milan, *Espetáculo da Terra*.

“What students learn in a project like this will stay with them all through life, if the contents are conveyed well through the work. Art raises their awareness about their environment and about others.”

Photo: Alexia Santi



THE VOICES OF THE SPECTACLE

“The best part of the event was to see the kites soaring into the sky. It’s as though everything that was captive sprouted wings and became free. It’s possible to believe in dreams.”

Ingrid, 12 years old

“It’s necessary to educate the people to care about others and about nature, because it is also special.”

Naelly, 8 years old

“We live in a society to learn from each other.”

Lilian, 11 years old

“There are precious things inside of us: love, hope, happiness and peace.”

Ludymila, 9 years old

“Human beings have precious lives that cannot be bought.”

Arthur, 10 years old



THE STONE AS METAPHOR

text: Naomi H. Moniz

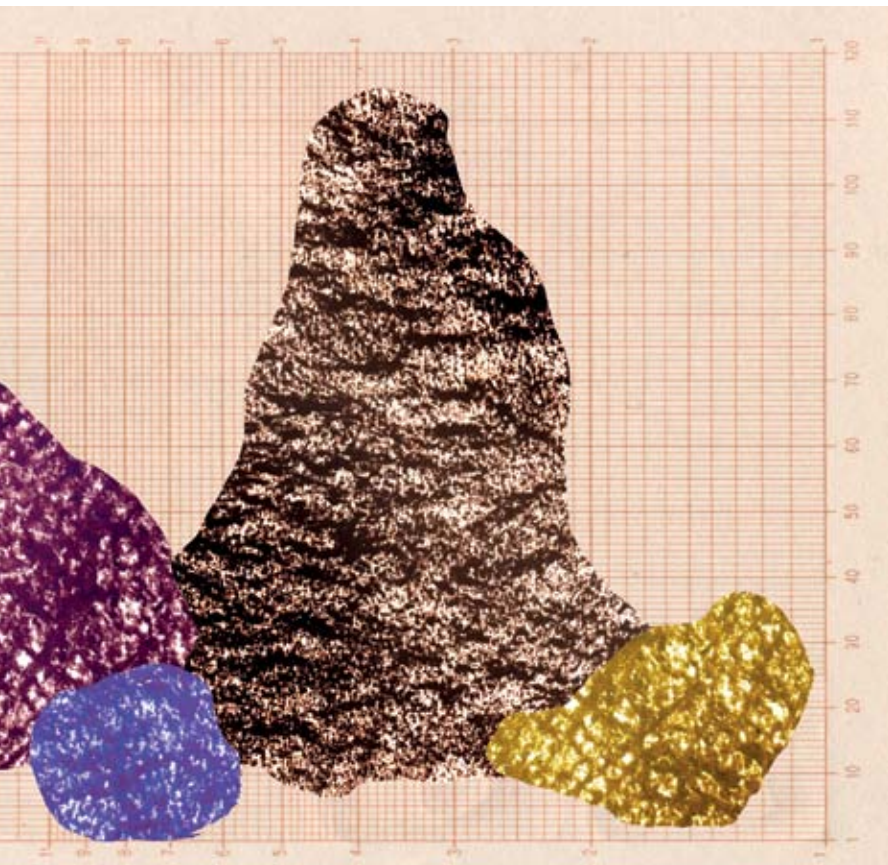
MY FIRST CLASS IN “EDUCATION BY THE STONE” HAPPENED WHEN I HAD THE opportunity to witness the total commitment of Denise Milan to the stone – as a metaphor in her work during our pilgrimage to the great national parks in the American West: Monument Valley, Bryce Canyon, and Zion National Park. I learned to look at stones in a new way and understood how Denise’s vision makes converts of other people. For days we stopped to admire, photograph and meditate among the beautiful colossal stone cathedrals around the Four Corners. It’s a region with the largest numbers of Indian reservations, with pueblos poised in the vastness of a horizon of 360 degrees and a sheltering sky with light that reflects various shades of pink, purple, ochre of

the rock formations. All this has inspired painters, writers, composers, architects, pottery makers and actors. This is also the last refuge of hippies and of those who seek to live out of the grid – far from civilization and society in search of alternative and sustainable forms of life style. These landscapes are known all over the world, in Georgia O’Keefe’s paintings, in the music of Copland and Dvorák and the iconic Monument Valley with its panoramic views seen in the classic western movies or in the mythical Marlboro Man of the commercial posters.

After driving 950 miles on this plateau of sedimented rock with mesas, mesetas, towers, monoliths and hoodoos we crossed the Colorado River,

Naomi Moniz is a professor emeritus of Georgetown University. She won the 1993 APCA Prize, with *As Viagens de Nélide, a Escritora* and the 2002 Rio Branco Commendation of Itamaraty. She was the director of Brazilian Studies, Comparative Literature, of the Department of Portuguese at Georgetown University.

Illustration: Fernanda Simionato



we entered the 1.1-mile Zion–Mt. Carmel narrow tunnel carved in the heart of the sandstone wall of Pine Creek Canyon, we went down approximately 870 yards in an almost vertical fall to the valley and arrived dusty and exhausted to the Pearl in the Desert Inn. It was elegant and simple in its Zen style with the water of the Virgin River running nearby in its shallow bed of stones.

On the first day a “handyman” came to fix the television and talked very knowledgeably about the region. He soon came back with a big fruit basket and suggested that we could trade the ground floor apartment for another with a full view of the huge pink stone mountain bathed in the twilight: “I am an artist that works

with the stone, I must have my feet on the ground, I would never go to the second floor!” she answered, with unexpected pride and offense that surprised this admirer who was just trying to please her.

To visit the space where Denise lives is to discover the white cube in which she expresses herself artistically. I can see before my eyes her autobiography in three dimensions: the Brazilian Scheherazade spinning tales of a magic childhood in the Moorish-style mansion of her Lebanese grandparents and her fascination for the pure mathematical geometry of the Arabesque designs in the walls, floors and in the six-pointed star on the backgammon box – a star that became the leitmotif of

her work, the atom of quartz. Nearby is the rocking chair that belonged to her father, Rachid, husband of Rosa, her mother. Both parents have names symbolically linked to the Rosetta Stone (found in the town of el-Rachid, in Egypt) with hieroglyphs deciphered by Champollion. Denise, the youngest of three daughters was to be the one who would create “the language of the stone,” because, literally *maktub* (it was her destiny).

To understand Denise’s imagination is to penetrate the realm of voyages, discoveries, observations of the natural world, and sciences; it is to enter a *Wunderkammer* – a Cabinet of Wonders with an encyclopedic rock collection. In this library, the books are made of stone and function as the old European maps with drawings of the celestial spheres, of the wind rose, books mounted with old instruments of navigation such as the astrolabe, the sextant, the magnetic compass and the telescope that helped the sailors find their way by observing Nature.

In the corner of the room there is a stand with models of her works in partnership with Ary Perez, a collaboration that characterizes the way she works and has evolved into other partnerships: an opera with six composers using her libretto and direction with her musical pictographic notations of the “language of the stone.” Another work is her art education project in the underserved communities of Metropolitan São Paulo *Espetáculo da Terra*. It’s a social practice that involves many collaborators and is representative of the contemporary trend of art in partnership “because creativity is interdependence” according to the artist Olafur Eliasson – considered in Europe the philosopher of the spectacle and in whose studio more than 90 people are working with him.

At the top of the stand there is a white marble head whose brain is a laminate of an amethyst star, similar to the “steampunk” aesthetics –

a revival movement of the Victorian style fascinated by the mechanics of “how things work” during the Industrial Revolution and practiced today as an art and design style. The stone brain defies and subverts with humor and irony the futuristic dystopias of cyborgs and cyberpunk.

On a large wall there are photocol- lages from her prophetic *Mist of the Earth* exhibition in Chicago (2013). In it she reexamines the myth of Brazil as paradise on earth since the Age of Discoveries. The collection is a trilogy: the first is “Paradise” with anthropomorphic tropical plants and zoomorphic people – the communion between nature and the inhabitants of the Atlantic Forest; the second is “Paradise Lost” where the dreams of Eldorado lead to ecological disaster caused by deforestation, and mining; and finally, the third is “Paradise Re- gained” with a message of hope in the stellar mandalas formed with geodes and flowers suggesting a return to the origins of the universe as well as its future in anticipation of our evolu- tion in the cosmic journey. All this is part of a “total installation” pre- sided by the human-size amethyst “Agrégora,” the protagonist in the *Opera of Stones*. In this opera, the heroine crosses dark caves and dan- gerous paths, overcoming tempta- tions and obstacles to find “Solser” the rare solar heart of the amethyst that will illuminate her path and help her save the Earth.

Denise is a multimedia artist and has worked in different media and genres: sculpture, collages, drawing, photography, video art, installations,

poetry, dance, choreography and per- formance. She also organizes inter- disciplinary intellectual salons about public art, art education and urban performance such as the case of *Espe- táculo da Terra* in public spaces.

Given this multidisciplinary ap- proach her work becomes a vehicle for many iterations and readings leading to different types of collabo- ration and partnerships. The way she works mirrors her posture as a 21st- century artist with themes related



“If we become aware of the relativity of this moment in the large spectrum of time, we will be able to be united and face the mistakes and destruction that Earth suffers to discover the path to a healthy way, here and now.”

Artist’s collection, 2012.



to fast technological changes in the world and the urgent question of sus- tainability and survivability on the planet. She examines this critical moment and the fragility of what she calls “the blue stone.

Denise borrowed this epithet from the astronauts on the Apollo 17 space mis- sion in 1972 when they saw the whole Earth, round, illuminated by the Sun and took its first photograph – taken by a human: “It’s a blue marble.” One of the astronauts had an epiphany looking at the planet Earth “alone, fragile and isolated in space,” and felt that we were part of one tribe, the Human. The only Arab astronaut to have been on a space mission, Sultan bin Salman, made a comment that re- veals the spirit of the new age: “We realize that there is one Earth.” This moment marks a change in the par- adigm of human history: a phase in which there is a unified vision of life, where we see ourselves as partici- pants of a larger cosmic journey. In these times of the commodification of human experience in the “society of spectacle” and of the hyper-stim- ulating culture of the social media, Denise asks us to pause and to think.

“If we become aware of the rela- tivity of this moment in the large spectrum of time, we will be able to be united and face the mistakes and destruction that Earth suffers to dis- cover the path to a healthy way, here and now. As in the epic stories we will traverse the mythic passage of the blue stone, Earth, a healthy planet that allows Nature to be free from destruction and offer us its regener- ative power.”



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