INTERVIEW WITH ADRIANA SÁ FOR ORO MOLIDO54.

1. You are a multidisciplinary artist, performer, musician and composer, and you created a graphic notation system to visualize your compositions, which provides indications with respect to musical vocabulary and dramaturgical sequence, leaving other aspects open to improvisation. How do you place your artistic work in relation to space and time?

This question requires a long answer, because it has many layers. I will ground my understanding of music, explain how my notation system addresses sonic structure and real-time expression, and describe how my work throughout the years has been dealing with space and time.

I always thought that music involves vision and space, beyond sound itself. During my six years of classical piano training as a child, I was advised to imagine different characters and situations for each part of the music, and develop the expression of my playing accordingly. During my visual arts education, my mentor Pedro Morais, an artist and Zen practitioner, taught us that "making for the sake of making" is a fundamental artistic principle, regardless of the medium. On the one hand, we needed to discover the reality beyond our usual ways of perceiving the world. On the other, we needed to permeate that wider reality with our works, so that the audience could have their own, individually significant experiences. Armed with this understanding, my thinking about painting started to fluidly embrace volume, space, sound and performance. At some point I realised that my thinking was actually about music.

Music can be defined as the construction of experienced time, and experienced time is informed by attention dynamics. The interplay of automatic and deliberate attention concerns all our physical senses, because perception is a process of multisensory synthesis.

My graphic scores only provide indications regarding the sonic domain. They reflect how I think that a musician can master the sonic dramaturgy. On the one hand, it is good to rely on preset decisions regarding the sequence of sonic vocabulary, texture and density variations. On the other, every situation is unique, thus one also needs openness to take decisions in real-time. That which makes a sonic event "right" or "wrong" is very subtle. An unexpected event could feel "wrong" within the musical logic, yet that logic can shift such that the event becomes gloriously "right". The unexpected event creates tension, which the audience senses as suspense. This is followed by a release, as the musical direction shifts with semi-conscious precision, boldly or surreptitiously. To me, this motion between tension and release is at the heart of musical expression. Moreover, the mastery of timing is crucial to any performer's expression.

My understanding of music also embraces the audience's feeling of presence in a mediated space: the performative arena. This subjective sense of space can contract and expand while attention shifts in-between the performer, the surrounding environment, and other places beyond the physical performance space. It depends on many variables, which cannot be fully detailed with any notation system. Inclusively, because they intertwine in perceptual experience: the interaction with the instrument, the sonic & visual dynamics, the audio-visual relationship, the physical setup and the global semantics.

I developed a few instruments that consider the performative arena as whole; they can be labelled new interfaces for musical expression. With those instruments, some of the variables are purposefully more versatile than others. I think that these different thresholds of variability reveal their distinguishing characteristics as personal, idiosyncratic instruments.

In the 1990s I started using sensor technologies and software so as to relate sound with light, space, movement, architecture, weather and social context. I developed the "sounding light instrument", while exploring a diversity of sonic materials, digital mappings and physical configurations. It was an instrument of architectural scale - not only because its sonic output changed depending on light, but

also because the cables connected to the light sensors were suspended from the ceiling, forming drawings in space. Moreover, I configured the software to process pre-recorded sounds from the environment, expanding the performative arena to that environment.

During an installation in the Japanese Northern countryside, a musician stretched an amplified wire from my gallery space to the forest, so as to integrate the sound of the snow falling with the soundscape of my installation, which changed according to daylight. I started playing the amplified wire, and multiplying the wires. This resulted into the "bodiless instrument", which acquired different timbrical qualities in every space; the wires were attached to the walls. As I moved in space to play the wires, my shadow upon light sensors also affected the processing of digital sounds. Neither the digital nor the acoustic components of my setup were fully controllable. I found this stimulating in performance, because the interaction with the system felt reciprocal, and I needed a particular state of concentration to create musical meaning upon the unexpected.

In 2008 I started developing an audio-visual instrument; it evolved through several iterations, until today. The instrument includes a modified zither (ancestral multi-string instrument) and an audio-visual 3D software, which was developed from scratch in collaboration with my husband John Klima, an artist and video game programmer. The software operates based on pitch analysis from the zither input: it processes pre-recorded sounds and modulates a digital 3D world. Technically, the software would operate upon any audio input detection. But the design specifications, mappings, parameterisations and structural sections are made for a specific zither with aged strings, a personal tuning system, and personal zither playing techniques.

The configuration of this instrument does not really depend on site-specific conditions, as happened with the previous instruments. But there are common aspects.

Indeed, the instrument potentiates sonic expression and a cinematic performative arena, while considering vision and space, beyond audition. Whereas unexpected digital sounds create tension, the immediacy of my interaction with the zither enables me to shift the musical logics in good time and direction. My sonic constructions include unexpected events, which can direct attention to the performer or to any other point in space - the loudspeakers always surround the audience, enabling a sense of immersion. Also, my use of some pre-recorded, recognizable sounds can extend the feeling of presence to other imaginary spaces. At the same time, a large visual projection over the performer extends the arena into a digital 3D world that morphs with sound. The visual dynamics have no disruptive changes, which would distract attention from the relations between the sounds. Sometimes I also dispense with the digital image, and use light projectors to create shadows. Both the image and the shadows have an environmental role: they function like a reactive stage scene, which extends the feeling of presence beyond the material space.

Score examples: http://adrianasa.planetaclix.pt/_scores.html
Instruments: http://adrianasa.planetaclix.pt/texts_w_menu/glossary_layer1.htm
Art music projects: http://adrianasa.planetaclix.pt/texts_w_menu/home.htm

2. The design and construction of instruments is part of your creative process, and you consider that music implies vision and physical space, which goes beyond hearing. How do you see the presence of the public in the performance space?

In my performances I like the audience to sit comfortably, and my installations are not intended for constant human interaction either. People need time and quietness to focus on the subtlety of intertwining events. Every detail matters. I think that the most precious function of art is to vitalize the mind through the sublime, which Kant defined as an extraordinary experience (1790): "we fail to understand the greatness of nature by means of determinate concepts, and yet supplant this failure with a delight stemming from our ability to grasp that greatness".

In a previous answer I detailed how my instruments address sonic expression, vision and space. As a performer, I see the instrument simultaneously an extension of the body and a means of destabilisation, which awakens unconscious body knowledge. The presence of the audience makes all the difference in this process, which drives the emergence of musical flow. Indeed, a performer can feel how the audience's attention works, how they deal with counteracted and fulfilled expectations. There is an empathic bind, which grounds on common, human biophysical rhythms.

3. Using sensor technology, you explored music by relating it to light, space, movement, architecture and environmental context. In your attitude as a musician you combine analog and digital components. What is the relationship between sound and movement?

The definition of music as construction of experienced time implies perceptual motion, which might not manifest in a visible way. Nevertheless, I believe your question refers to physical movement, which is also important in my performances and installations. I always take into account how perception and attention articulate audition and vision. Indeed, one's experience is multisensory by nature.

For example, my physical gestures as a performer influence how the audience experiences the music. Body movement does not interest me per se; it always has a function. As such, it also provides cues about causation. I find it important to produce a sense of causation, which indicates the instrument.

At the same time, I find it important to confound the base cause and effect relationships: the audience might desist to understand the instrument, and focus on perceptual experience itself. In early performances, when I played the "sounding light instrument" through the shadow, the cause-effect relations were not clear because I didn't touch the sensors. My playing the "bodiless instrument" was also somewhat mysterious, because wires stretched in the air are not clearly visible; I recuperated that instrument in recent years, with the projects "String Practice #1" and "Entresons". And finally, in performances with my audio-visual instrument, the physical playing of the zither produces an immediate audible sound, but the digital sound and the digital image might change at different times. This confounds the base cause-effect relationships, extending the sense of causation to the performative arena as a whole.

I also explore a different type of physical movement, in installations where the soundscape changes according to natural light: the movement of the sun and the clouds, which brings light and shadow to the material architecture. This type of movement does not produce an immediate sense of causation, because it is slower than perception can grasp. Yet, the connection between sound, physical environment and cosmic space can be indicated through the physical setup. For example, in my early project series with the "sounding light instrument" – "Parallax" and "Metaparallax" - the sensors were often attached to windows, and their cables were always suspended from the ceiling, forming drawings in space. This gave them a physical meaning – a presence – that invited the audience to speculate about causation while listening to the soundscape variations.

Most of my current works are performance-driven, but occasionally I also create site-specific installations in collaboration with my husband John Klima. We use analogue systems with light sensors to modulate a diversity of site-specific soundscapes. These works involve yet another type of movement, namely the one of the audience. An example is "To agitate the waters to better see the depth", an installation in a cave with water located in a greenhouse. By producing shadow over light sensors, people activated floating metal bowls, which contained marbles. The orchestration emerged while listening to the relation between objects, space, water, and shadows. Another example is "Habitat", an installation in the cloister of Convento de S.Francisco, in Coimbra. Several sound tracks were played back simultaneously, through ten loudspeakers modified with light sensors. The speakers were distributed through the cloister, forming a larger interactive composition. The soundscape varied depending on the hour of the day, the meteorological conditions, the material environment, and the specific place where a person was at the moment.

Audio, pictures, text and more about…
STRING PRACTICES: http://adrianasa.planetaclix.pt/docu_img/stringpractice.htm
HABITAT: http://adrianasa.planetaclix.pt/docu_img/cloisterworks.htm
TO AGITATE THE WATERS TO BETTER SEE THE DEPTH:
http://adrianasa.planetaclix.pt/docu_img/LS.htm#installation
PARALLAX: http://adrianasa.planetaclix.pt/texts_w_menu/introlayer1new.htm
METAPARALLAX: http://adrianasa.planetaclix.pt/texts_w_menu/metaparallax.htm

4. You bridged creative practice and perception science while developing an audiovisual 3D software, which operates based on pitch detection from a modified acoustic instrument. Can you tell me about this process?

My research questions emerged when I started developing the first version of my audio-visual instrument, which combines acoustic sound, digital sound and digital image. The combination of acoustic and digital components raised questions about interaction, and I wanted to extract musical meaning from those questions. I wanted the image to function as a reactive environment, and that was problematic because I had the strong impression that vision tends to subordinate audition. In the context of my PhD in Arts in Computing (Goldsmiths, University of London) I developed a scientific perceptual approach to instrument design, composition and performance, which can be useful to a broad range of researches and creative concerns. It led to three creative principles and a parametric visualisation model that can be used to analyse any audio-visual performance work. Those investigations fed back into my artistic work, and will continue to do so into the future.

My concern with visual dominance led me to look at different types of audio-visual relationships and the artistic debate on sensory dominance. After distinguishing between "one-to-one" and "structural" approaches to audio-visual performance and animation, I looked at works exploring music with digital 3D environments. This made clear that the one-to-one approach might be adequate for networked participatory interaction, but it is problematic for the experience of music. The question of whether and how visual dominance can be avoided remained unanswered, though. I realised that in audio-visual theory and music the debate lacks resolution.

Perception science established the foundations of my approach to the problem, shedding light upon how perception works, and how multisensory integration relates to attention. It revealed that sudden visual discontinuities and high ecological fit lead to visual dominance, but synchrony in itself does not. This made clear that I needed methods to analyse the sonic and visual dynamics, as well as the audiovisual surplus. I found an inspiring notion of intensity in music perception research, which became useful for the design of those methods.

Perception science also provided a useful perspective over interaction design and sonic expression. After looking at the notion of embodiment, I questioned the relation between intensity, effort and chance. Analysing how different notions of flow inform different types of interaction design showed that effort is a variable that can be used to parameterise different understandings of expression.

In practice, my investigations led me to define the creative principles of sonic complexity, visual continuity and audio-visual fungibility, which are applicable in instrument design, composition and physical performance setup. These principles derive from methods for the analysis of sonic expression and sensory dominance, which later informed the design of the parametric model and the development of my practical work.

Bridging perception science and philosophy enabled me to clarify how intention frames the mind through previous assumptions, and intentionality conveys the experience of complexity. I examined how interfaces convey one or the other, elaborating a notion of musical expression where the combination of effort and embodiment conveys intentionality and sonic complexity. This understanding grounded the principle of sonic complexity. Considering different notions of expression, I established a method for the analysis of any interaction design.

The question of sensory dominance required a method to analyse the sonic and visual dynamics, and compare their relative strength. The method should enable the distinction between apprehensions automatically driven through stimuli, and apprehensions more dependent on individual control. This led me to redefine "intensity" and create a taxonomy of continuities and discontinuities related to attention. The taxonomy grounded the principle of visual continuity.

The next challenge was to understand how an audio-visual relationship can produce a sense of causation without subordinating audition. Bridging perception science and audio-visual theory, I created a method to analyse how different ratios of congruence/ incongruence affect perceptual prioritisation. I introduced the notion of a fungibile audio-visual relationship, which produces inconclusive concepts of causation. And I conducted a related study, which demonstrated that a fungible mapping combines synchronised and non-synchronised components, exhibiting complexity and inconsistency. This is equally applicable to the audio-visual relationship in space.

Describing the first version of my instrument and physical setup through the lens of the creative principles and the parametric model was very useful to clarify artistic motivations. Now that the boundaries of my previous insights were clear, I was prepared to specify new software from scratch. The principles and the model framed and inspired the expansion of my creative strategies in depth. The following audio software used several layers of digital analysis to increase sonic complexity. I adopted a particular zither tuning system, and discovered the potentials of applying the difference between the detected pitch and the closest tone/half tone to pre-recorded sounds, as a pitch-down value. I developed specific combinations of zither techniques and digital sounds, creating digital constraints that enable levels of unpredictability and rule out undesired outcomes. My design strategies enabled versatile musical dramaturgies, and the music became much richer and meaningful than with the first version of the instrument.

The audio software was then combined with a 3D engine, written from scratch. The creative principle of visual continuity rules out radical visual discontinuities, and that was an inspiration to overlap multiple images with transparencies, in ways that accentuated the impression of an organic, moving painting. The Gestaltist psychology was useful to create a wealth of visual discontinuities that facilitate perceptual simplification, but my creative decisions were not driven by demonstrative purposes. Exploring gray areas where the intensity of visual dynamics might depend on time and individual predispositions was more exciting than assuring visual continuity.

Furthermore, the principle of fungibility inspired a complex audio-visual mapping, which uses the difference between the detected pitch and the closest tone/half tone as creative material; the mathematical value is applied as delay time, and it also influences the magnitude of visual changes. The digital 3D world became much more organic than in the first version of my instrument. The role of the image continued highly environmental, but attention was invited to focus on a greater amount and variety of ambivalent discontinuities.

THESIS: http://research.gold.ac.uk/19431/
RESEARCH WEBSITE with audio, pictures, text and more:
http://adrianasa.planetaclix.pt/research/practiceOverview.htm

5. In your research you combine artistic practice, interaction design, audiovisual theory, neuroscience and experimental psychology, so as to discuss new interfaces for musical expression. You have published in several scientific journals and conference proceedings, and currently you teach at two institutions, in multiple departments – Dep. of Art, Dep. of Sound & Image, Dep. of Graphic & Multimedia Design and Dep. of Sound Sciences and Technologies. In your opinion, where will the global technological process go in the near future?

That's a very big question indeed. Computers are tabula rasa. Software mediates physical action through code, and code embeds theories informed by specific purposes and criteria. The problem is, theories embedded in software are too often taken for granted. In everyday life we are used to handling computers as magic black boxes that save us labor. When the black box works, its origins are

forgotten; the more science and technology succeed, the more opaque and obscure they become, and the more distant we become of computation as creative material.

As a daily life example, Google works like a magic thing, and yet, the ranking of our search results is actually made according to corporative profit. We deal with "artificial intelligence" all the time, and we forget the aims that govern the underlying fitness algorithms. Moreover, the term implies an understanding of intelligence that relates to calculation, and the wealth of human mind cannot be reduced to calculation.

In the field of 'generative art', there are endless discussions about authorship - if you program a computer to make art, is the author the programmer, or the computer? In contrast, 'live coding' is a practice where software that generates music and/or visuals is written and manipulated as part of the performance. Usually, the code is projected on a screen so that people can see the process. That reminds us of the human behind the machine. Indeed, humans have always handled the world through tools, and the tools always influenced the thinking.

My personal work is certainly not live coding, inclusively because I am not a programmer. But it entails a related political aspect. It seeks to emphasise the human behind the machine, while stressing that one's interaction with a digital system is always mediated by theories embedded in multiple layers of code, regardless of whether the interaction feels immediate or not. I am particularly interested in exploring the disparities between human perception and digital analysis as creative material.

Another question is what I find important to offer as teacher. I have been teaching in different programs at different universities and polytechnic institutes, and am responsible for multiple curricular units. The syllabuses and challenges are different in each case, but there are several common aspects. My classes are not about how to use a tool; students can learn that through the internet, and even develop their own tools. The important is to think of the why prior to the how. I promote a transversal approach to sound, image, movement, matter and space. My classes articulate creative practice and perception science, so as to promote the understanding of how a creative work drives the audience's experience. And, I stimulate the students to ponder about the sublime.

Sometimes, I ask them to equate how their creative motivations could manifest in graphic notations systems, installations or performances – sonic, visual, or audio-visual pieces that deal with the experience of time and space. I suggest experimental approaches, which expand one's paths beyond the comfort zone. Other times, I propose them to investigate a current issue of debate – I provide a list of possible choices. Subsequently, the students team up to create interactive installations, animations and performances. The challenge of articulating apparently unrelated subjects can be fruitful: it stimulates imagination. The challenge of articulating opposing perspectives about the same issue can be equally fruitful: tension can become creative material.

The discussion about the function of art is of course out of fashion, and so is the notion of sublime. Not coincidentally, the term 'art' has been generalized to the extent of meaning nothing. But the principles that govern creative industries convey a very different type of experience, more ordinary and commercially attractive, than the principles that govern artistic practices. Art cannot subordinate to dominant paradigms, and that is financially risky. Nevertheless, the making for the sake of making, with no other purpose, enables us to permeate ambivalence and complexity. In my opinion, this is the most precious function of art. In one way or another, my scientific publications always seek to emphasize it.

If we want a healthy, humanistic world, we must expand ourselves continuously beyond presuppositions. Our society is dominated by economical and techno-centric values, but history teaches that life is a spiral, and I have noticed that a hunger for free-thinking is reemerging, finding new forms.

SCIENTIFIC PUBLICATIONS: http://adrianasa.planetaclix.pt/research/outputs.htm

6. Your research process is an interdisciplinary "work in progress". Also, you organized and participated in residencies and meetings where the artists challenge each other, exploring and crossing conceptual boundaries and individual techniques. How do you see your role in the invention of new ways of facing the arts and sciences through technology?

>I assume myself as somebody who navigates the plasma in-between different paradigms of knowledge - I am specialist in not being specialist. That doesn't mean that my perspective is more truthful than others, and also, I cannot dispense with knowledge provided by specialists. I only started scientific investigation after thirty years exclusively dedicated to artistic practice. To operate in the scientific world, I had to learn how to communicate my artistic motivations very clearly, so that everybody understood what I wanted to say. Initially, I feared that explaining my work in this way would limit the extension of those motivations. But on the contrary. My practice continues to explore the immeasurable. My words try to stress the importance of that search. And my collaborative activities draw from both.

7. In December 2019 you participated in a conversation about performance and new technologies, which was a part of the Disorganized Sound Meetings, at Sonoscopia, Porto. You participated in a session that also included Victor Gama (Angola) and Mateo Mena (Spain), who belong to different generations. Victor Gama (read interview in OM. 21) is known for his knowledge of traditional Angolan instruments; his new musical instruments reflect an interest for the mutation of tradition. Mateo Mena is a composer and sound artist interested in hardware hacking, circuit bending, design and sound sculptures; he works with software such as MAX / MSP and SuperCollider, building electronic instruments and sound devices. How did it feel to share experiences with these artists?

>Our creative approaches are very different, but also have a lot in common. Victor seeks to recuperate myth and mystery, and Mateo is concerned with the environment. Ultimately, we all question how humans interact with technology. In one way or another, we all attempt to re-position the human being in the universe, to emphasize our little scale, to make sense of it. It felt good to participate in an event that exposed how this fundamental concern manifests across generations.

8. Your meeting with Anna Homler happened in the context of "Hysteria", a series of workshops and concerts promoted by Francisca Marques. The idea of these meetings is that Portuguese female artists interact with other artists from other countries to "jointly explore technical, creative and critical processes." Homler uses singing as a primary and innovative element, extracting melodies from phonemes, so as to create exploratory paths through a language that is invented spontaneously. How was it for you, to share this creative process with Homler?

>It was great. Usually I am not very interested in collaborating with vocalists, because when we recognize a human voice we are naturally driven to focus on the sound emitter - a person - rather than on the sonic construction itself. But Anna uses her voice in a way that manages to become abstract, so to say. Her phonemes intertwine with a wealth of sounds extracted from multiple children toys, in a very poetic way. This makes it possible to interlace our sonic emissions like a braid, each emerging and submerging from the soundscape. It invites perception to focus on the music as a whole.

>Press Review: https://jazz.pt/report/2019/10/11/pura-magia/

9. Among your musical projects we must mention TIMESPINE, where you collaborate with bass player John Klima and guitarist Tó Trips, creating structured improvisations based on your graphic scores. In your first album you play zither and sampler, Tó plays dobro and John plays bass guitar. In the second album you also play your audio-visual software, which processes prerecorded urban sounds based on the zither input. Tó switches to electric guitar with effects, and John adds bass overdrive. Can you describe how your work process developed throughout the years, and where it is now?

>The name of our trio indicates where our music comes from: the spine of time. Our work stems from an apparently improbable encounter of three different musical styles. Indeed, Tó is a blues inspired

guitarist, the co-founder of Dead Combo; and John was a member of the pop group who became The Presidents of the United States of America, many years before their MTV days. In both our albums, we intertwine strummed, plucked, percussed, and bowed strings, all tuned unconventionally. Our sonic emissions converge and diverge according to biological timings, rather than metrics. In the first album the music flows softly, suspending time. We explore something archetypical, where the musical forms transpire our individual backgrounds and simultaneously expand beyond any ego, any desire of affirmation. With the second album, the creative question was how the music could maintain its idiosyncratic identity and simultaneously be something totally different. Here, we are playful with the ego. The term "urban" is actually a comment to contemporary culture. The composition in this album has eleven sections, and transitions matter. However, the requirements of digital distribution platforms are beyond the musicians' control; they fragment the piece in eleven tracks, adding one second between them. As a sign of protest, the album gathers all sections in a single track, which stresses my desire to provide a continuous listening experience.

Our current work draws from both albums. In our latest shows we didn't follow a score. We were rather driven to articulate vocabulary, feelings and techniques according to a deep, semi-conscious knowledge of each other's sensibility. I like to think that we keep challenging our imagination and musical habits, so as to explore a musical idiom that reveals something beyond categorization.

Audio, pictures, text and more about TIMESPINE:
http://adrianasa.planetaclix.pt/docu_img/timespine.htm

10. You have a PhD from Goldsmiths, University in London, and you developed research with Atau Tanaka. I remember listening to his Sensorband trio, with Edwin Van der Heide and Zbignew Karkowski. They used gestural interfaces sensitive to infrared light, ultrasounds and bioelectricity. Each had their particular way of introducing a visceral, physical factor in the development of interactive technologies. Atau used the BioMuse, a system that tracks neuronal signals (EMG), translating the body's electrical signals into digital data. What did you learn from Tanaka and his way of interacting with space?

I met Atau, Edwin and Zbig in the 1990s, and felt very inspired by how their interfaces sonified physical phenomena that we cannot perceive directly. At the time I didn't know much about electronics or software. Atau introduced me to STEIM (Amsterdam) and Metronom Studio (Barcelona), where I got technological support to build the first prototype of the "sounding light instrument", described earlier in this interview. My instrument had several technological aspects in common with the Sensorband's: it included sensors, an I-Cube to convert their signal into digital data, and software to process sonic materials according to previous mappings and real-time input signals.

I was interested in developing an instrument with site-specific potentials: the output sound should react to environmental light, so as to activate the perception of light variations in any given space. Today I employ different technologies in installations where the soundscape morphs according to natural light; but similarly, the soundscape tends to change very slowly. It is interesting to notice how human perception cannot grasp that slow, continuous change. It is equally interesting to notice how perception smoothens sudden light changes, which happen when the day faints, or the sun hides behind a cloud, or the shadow of a building starts reaching a sensor; indeed, light sensors do not smooth those changes.

The subject of my PhD is related to these concerns, but not directly. That research led to the development of my audio-visual instrument, as described before. It was not concerned with site-specificity, indeed. Yet, it relates to my "sounding light instrument" and the instruments from Sensorband in a different way. The new instrument also combines analogue and digital components, and it can equally generate sonic complexity. The physical input can introduce chaotic aspects, and a multitude of digital mappings can make it impossible to fully predict the output. As I explained before, volatile interface behaviors convey my understanding of expression.

When I decided to start the PhD in 2011, Atau was simply very well positioned to be my supervisor. With him I learned a lot about academic writing, including how to structure and clarify my ideas. In any case, our research exchange was always more focused on motivations and methodologies than technological tools. Those were rather developed with my husband, throughout our creative collaboration process.

11. The sound environment is a fundamental part of your pieces, but so is the physical and visual component. What do you feel when interacting with your electronic instruments and devices in a place like the tropical garden Estufa Fria of Lisbon?

The development of a site-specific project needs adequate financial means, time and logistics. The creative work must start on-site. Firstly, I open myself to the spirit of the place. Then I try to permeate that spirit through my work. The place activates me, I activate the work, and the work activates the place.

Audio, pictures, text and more about the GREENHOUSE projects:
http://adrianasa.planetaclix.pt/docu_img/LS.htm

12. Another of your musical projects is ENTRESONS. Four musicians exploring microtonal sonorities, based on a graphic score. You play the zither and amplified wires, combined with your reactive software, which processes prerecorded sounds based on their input. In addition you use light sensors and a stroboscope to create audio-visual beats. John Klima plays a long amplified wire, capturing its magnetic resonances with a pickup made from scratch. Tiago Sousa plays piano, and Diana Combo drums and percussion. This quartet played in two emblematic venues in Lisbon: O'Culto dAjuda and the Maria Matos Theatre. When you prepare for a show, how do you distribute the instruments and their resonances in the architectural space of the place?

In those previous shows we needed quite some time to setup our instruments, balance their volume and timbre, and figure out the light design, so as to create a wealth of moving shadows. In the future, I might dispense with the "bodiless instrument" - amplified wires stretched longitudinally, attached to a wooden structure. That instrument is very unique, I know, but it needs to be remade in every occasion, and that requires a lot of logistics. Also, I feel that John "inherited" the idea of a bodiless instrument, transforming it in a remarkable way; he will continue playing his long wire, which must be firmly attached to the walls, or some other steady structure.

In any case, every show brings motivation to refine the musical vocabulary and the global dramaturgy. It is important to have multiple speakers distributed in the room, so that the audience feels immersed. It is important to have good sound definition, so as to stress our micro-tonal textures; and a good bass response, so as to enhance the body of the music. Beyond those aspects, a lot depends on the place and the occasion.

Video teaser for ENTRESONS: https://vimeo.com/267062988
Project description: http://adrianasa.planetaclix.pt/texts_w_menu/home.htm

13. In the beginning of this interview, you described how your graphic scores leave a space for improvisation. How is the process of making a score?

Sometimes I make scores for my solo performances, but mostly I make scores for collaborative works. Basically, the process starts with free improvisation. This is recorded, and I listen to it many times. I select a set of sonic vocabulary for each musician, and imagine how those selected techniques could intertwine, forming a cinematic sequence of musical sections.

The actual graphic scoring starts with axes and words, which systemize the sequence of vocabulary for each musician, and reveal how the different emissions combine. Subsequently, I make a drawing that expresses how the music evolves as a whole, through different textures, densities and dynamics. This drawing represents the distinguishing characteristics of each section in an immediate, very subjective

and intuitive manner, without distinguishing who plays what. It provides another type of indications, very open to free interpretation.

14. CORAL FURTIVO is a recent musical project in which you interact with Ricardo Jacinto (cello + electronics) and Yaw Tembe (trumpet and electronics). You play the zither and your reactive software AG#3, which processes audio samples based on the zither input. Among those samples, some are sounds from the cello and the trumpet. The project is of architectural dimensions: it involves not only the exploration of a graphic score concerned with the sonic construction, but also the exploration of the material space, which is site-specific by nature, plus the light design, which requires its own dynamics and technological resources. This project was presented at Teatro del Barrio Alto, November 21, 2019. The concert was organized by Diana Combo, who previously interviewed you on her radio program "Dito e feito", which, by the way, can be heard on the podcast. Would you like to tell me about the plans you have for this project in 2020? Do you intend to release a CD, or do you prefer to tour Portugal and Spain to make this work known?

> This work was created from scratch, for TBA. It was developed throughout a year. This was possible because TBA commissioned the project, paying us accordingly. Now that we worked so hard for this show, it is also easier to adapt to different situations. Nevertheless, the live-experience of the work involves site-specific decisions related to the material space and the light design. And that of course needs time and logistics.

> The idea of a CD is stimulating, but making a CD is an entirely different project, with its own creative challenges, technical requirements, logistics and expenses. We will certainly be happy to make one if someone proposes to commission the work.

> Audio, pictures, text and more about CORAL FURTIVO:
> http://adrianasa.planetaclix.pt/docu_img/coralfurtivo.htm

15. What artistic and musical plans do you have for the year 2020?

> I'll continue to develop the duo projects with my husband John Klima, be they in the line of "String Practices", or something totally new. I also have a few shows with other projects. There is going to be a "Timespine" show at the opening of the film animation festival "Monstra", and I was kindly invited to collaborate in a performance directed by Maiko Jinushi, which is going to be presented at Culturgest, in the context of "IndieLisboa"; another type of film festival, interestingly. Furthermore, "Coral Furtivo" is likely to be presented in Spain — I am thankful for how the Spanish agents in the field of art music keep paying attention to what happens in Portugal.

16. Are you interested in adding an issue that has gone unnoticed?

> I just want add my thanks for your extensive investigation about my work, and for such a large set of questions. Those questions were quite deep, and I tried to answer accordingly. However, words are words. If the reader is interested in actual documentation — such as audio recordings, pictures, scores, videos, scientific publications, ect. — please visit my website: adrianasa.planetaclix.pt