

***BUILDING STRENGTH – A METHODOLOGICAL APPROACH
IN A PERFORMANCE ART CONTEXT******BUILDING STRENGTH – UMA ABORDAGEM METODOLÓGICA NO
CONTEXTO DA ARTE DA PERFORMANCE***

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This paper presents a performance art piece, *Building Strength*, as a case study for a relational model in performance art. This model was proposed some years ago within my artistic practice and also to connect with other artists' practices. In this paper, the model, instead of being used to create a performance art piece, is proposed as a research tool to connect with my *Building Strength* as a researcher.

Keywords: Performance art. Case study. Intersectionality. Relational model.

Este artigo apresenta uma performance, *Building Strength*, como um estudo de caso para um modelo relacional em performance. Este modelo foi proposto há alguns anos no contexto da minha prática artística e também na relação com práticas de outros artistas. Neste artigo, o modelo, ao invés de ser usado na criação de uma performance, é proposto como ferramenta de investigação em *Building Strength*.

Palavras-chave: Performance. Estudo de caso. Interseccionalidade. Modelo relacional.

1. Introduction

In 2009, as a PhD student in Calculus of Variations (mathematics) and a performer working mainly with movement improvisation tools in site-specific settings, I realized that I was using a similar approach in scientific research and performance art creation. In scientific research, I was searching for the validity of properties of solutions to minimize problems in a variational context. The conditions for the validity of these properties are mainly related with conditions of permanence (non-change). In performance art, I was searching for transitional moments (change) and changes in their representativity in landscapes which allowed them to reach conditions of permanence. At that time, I was reading José Gil's book *Movimento Total* (2001) and I decided to send an email asking Professor José Gil if he could suggest some references for how to

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deal with present moments, as if it was possible to freeze one moment and discuss it as central in another context. I found the suggested book some days later in my email, *The Present Moment in Psychotherapy and Everyday Life*, by Daniel N. Stern.

Daniel N. Stern proposes, in the context of his ongoing research on empathy and mother-child interactions, the concept of the intersubjective matrix as the concept which best describes the landscape created within each human being and also with others, when empathy — the ability to connect with others' experiences — is developed and activated:

We live surrounded by other's intentions, feelings and thoughts that interact with our own, so that what is ours and what belongs to others starts to break down. Our intentions are modified or born in a shifting dialogue with the felt intentions of others. Our feelings are shaped by the intentions, thoughts and feelings of others. And our thoughts are cocreated in dialogue, even when it is only with ourselves. In short, our mental life is cocreated. This continuous cocreated dialogue with other minds is what I am calling the intersubjective matrix. (Stern 2004, p. 77)

This concept is important in the sense that it needs also to be inscribed individually in order to generate the possibility of cocreation. As such, each of us develops an intersubjective matrix, a continuous matrix of connections between thoughts, feelings, memories and interpersonal connections with others. Therefore, I articulate a performance art piece as an intersubjective matrix where I research particular moments in order to amplify them. In other words, I was interested in one-dimensional points through continuous two and three-dimensional universes, which were not well formulated. I understood that I could not consider two different dimensional spaces with the same tools. A new concept arose, that of *in betweenness*. The concept of *in betweenness* is used to embrace what it is not possible to define through classical or established concepts. *In between spaces* are new landscapes, continually changing to adapt to new ways of being *in between*. But between which spaces? These pre-established spaces are ones which are already established. The main problem of *in betweenness* is that it has to be described within each case study. It has general properties, but it can only be defined accurately in each contextual setting.

I created an encyclopedia of mathematical concepts to help me map performance art through case studies. This encyclopedia led me to propose a relational model. I ended up using *intersectionality* as a concept that is implicated in my artistic work, as well as interconnected research, using a new concept: *in between intersectional spaces*, made up of countless factors, features, and dynamic connections.

The first section in this paper is dedicated to the introduction of some definitions and characterizations of performance art as an artistic practice. The second section is dedicated to *in between intersectional spaces*, arguing that performance art is an intersectional practice. In the third section, I share an encyclopedia of mathematics, with some concepts of mathematical analysis, as a tool to introduce in the fourth section a relational model in artistic creation. In the final section, the performance art piece *Building Strength*, developed throughout 2017/2018, is presented as a case study. In this performance art piece, I searched for *in between intersectional spaces* and I applied the

relational model at the end as a researcher. I have been using this relational model for several years to create performance art pieces as an observer/researcher into other artists' performance art pieces. On this occasion, I proposed using this model as an observer/researcher in my own performance art piece.

2. Defining performance art

Following Erving Goffman, the word *performance* means “all the activity of an individual which occurs during a period marked by his continuous presence before a particular set of observers and which has some influence on observers” (1956, p. 13). Our daily actions are performative and most of the time we are aware of their performativeness: “While in the presence of others, the individual typically infuses his activity with signs which dramatically highlight and portray confirmatory facts which might otherwise remain unapparent or obscure” (*idem*, p. 19).

In the context of any work-life-research, Erving Goffman reinforces the validity of everyday life human performativeness as an artistic tool, as a natural feature that can be turned on in order to create meaning through the performing arts. Also, the presence of some kind of audience is necessary to consider a performance art piece. Of course, the audience can be virtual. Even if it is established that the audience's energy can change the course of the action's energy, or even the reason of its existence, the acknowledgement that some action, movement or state is being shared with someone else, even if in a virtual setting, brings a specific type of energy, especially when you interact with the audience's reactions and behaviors.

Performance art opens up the possibility that these established practices can communicate with everyday activities, exhibiting their performativity and discursive force. As Erving Goffman affirms,

It does take deep skill, long training and psychological capacity to become a stage actor. But this fact should not blind us to another one: that almost anyone can quickly learn a script well enough to give a charitable audience some sense of realness in what is being contrived before them. (...) The legitimate performances of everyday life are not 'acted' or 'put on' in the sense that the performer knows in advance just what he is going to do. (...) But [this] does not mean that [the person] will not express himself (...) in a way that is dramatized and preformed (...). In short, we act better than we know how. (Goffman 1956, pp.70–74)

One of the main features of performance practice is contextuality. We have to consider the context from which the performance artist comes, since this raises important contextual themes. Nevertheless, as an embodied practice, it is a universal language that can be shared in different contexts, allowing for shared experiences, artistic viewpoints, and mappings, as well as collaborations and contaminations, as a way to search for spaces in between the universal and the contextual.

In a performance art piece, it is possible to find a personal perspective on the actual world surrounding the performer(s) and, therefore, a contextual perspective. However, not only the languages used are universal, but also some contextual elements,

such as questioning society, ways of organizing it and, in particular, gender, race and personal traumas. The integration of ideas, the perceptive work, communication tools, the ‘here and now’, are part of this artistic practice that, in this way, can be seen as a barometer of the way social, economic, political, anthropological, cultural, and technological issues are mapped, and their subjective interconnections. As this artistic practice is anchored in the use of diverse tools from diverse practices and fields of study, it can also be shared in less conventional places to connect with, or to reinforce the idea of multiplicity. As Roselee Goldberg writes,

The work may be presented solo or with a group, with lighting, music or visuals made by the performance artist himself or in collaboration, and performed in places ranging from an art gallery or museum to an ‘alternative’ space, a theater, café, bar, or street corner (Goldberg 2011, p. 9).

Moreover,

its practitioners do not base their work on characters previously created by other artists but on their own bodies, on their autobiographies, on their specific experiences in a given culture or in the world, that become performative in that practitioners are aware of them and exhibit them before an audience. (Carlson 2011, pp. 4–5)

It is also through the audience that performance takes place. Or, as Peggy Phelan writes,

Performance approaches the real through resisting the metaphorical reduction of the two [representation and real] into the one. But in moving from the aims of metaphor, reproduction, and pleasure to those metonymy, displacement, and pain, performance marks the body itself as loss. Performance is the attempt to value that which is nonreproductive, nonmetaphorical. This is enacted through the staging of the drama of misrecognition (twins, actors within characters enacting other characters, doubles, crimes, secrets, etc.) which sometimes produces the recognition of the desire to be seen by (and within) the other. Thus, for the spectator the performance spectacle is itself a projection of the scenario in which her own desire takes place. (Phelan 1993, p. 152)

3. Performance art as an intersectional practice

I started to perform from a personal need to use dance techniques together with mathematics, personal-political viewpoints, edited and real-time video and sound. The main feature of my performance art projects is the crossing of several fields and the presence of *in between* spaces. From 2011–2013, I developed the project *On a Multiplicity*¹, and throughout 2013–2015 I developed *In Between Selves*.² Both projects cross artistic practice, artistic and scientific research. In 2016 - 2017, I created two more performance art pieces *We Are Us*³ and *Unnamed Scroll*.⁴ In the project *On a Multiplicity*, I improvised movement daily after spending at least five hours researching

¹ See www.telmajoaosantos.net.

² See www.facebook.com/InBetweenSelves/

³ See <https://www.youtube.com/watch?v=GCsO7V7qKIg>

⁴ See <https://www.youtube.com/watch?v=i6672DREhr0>

calculus of variations.⁵ I had a maximum of 10 minutes between the end of daily mathematics research and improvised movement. Movement improvisation was video registered, academic papers were written and a constantly reconfigured performance art piece was developed. In the project *In Between Selves*, I decided to improvise movement focusing on the mathematics research I was undertaking at the time, and to produce academic research and a performance art piece.

I went back to documentary projects in 2018. I started by defining the starting day, the timing, body techniques, focus techniques and self-restriction techniques. Several questions arose: Does the manipulation of a body-memory relate to the present body in the eyes of the *other*? Does the introduction of scientific research in the discussion of my body as image mismatched as a stereotype of itself still valid? Does the writing of academic papers diminish my detachment? Does it diminish my desire to make myself fragile in specific moments in order to analyze them?

From the above state of art of my research-creation activity, I argue for its intersectionality. I develop my performances based on creating new environments where I can generate new ways of connecting differences: being a woman, being most of the time alone, being a mathematician, using nakedness as tool, being 'white', 'black' or 'brown' depending on the context, due to my North African ancestors.

3.1. What does intersectionality mean?

Intersectionality is a concept coined by Kimberlé Crenshaw in 1989, within women's studies:

Because the intersectional experience is greater than the sum of racism and sexism, any analysis that does not take intersectionality into account cannot sufficiently address the particular manner in which Black women are subordinated. (1989, p. 140)

Discrimination is part of our daily lives. It is based on the idea of power, strength and the 'norm', working through means of comparison. One executes power over the other(s), one executes strength over the other(s), one dictates the 'norm' over the other(s). Relationships constructed through power, strength and the 'norm' characterize discrimination. The concept of intersectionality, coined within women's and gender studies, is considered in this paper in a broader sense, referring to methodologies that consider the intersection of different aspects which are apparently not connected, including always the intersection within identity's non-normative multiplicities.

Intersectionality can be seen as the process of being aware of issues of race, gender, sexuality, patriarchy, and to perform them as objects and subjects. As a performance artist and researcher, I cannot detach my self-construction from my performative selves in everyday life and how this informs artistic work, generating manifestos and mapping bodies displayed in underground spaces.

⁵ See Goncharov & Santos (2011).

3.2. In between intersectional spaces

In this section the concept of *in between intersectional spaces* is introduced. I start with the concept of *in-betweenness*, actualized through the term ‘interstitial’ from the cross-cultural studies context:

Mixed or hybrid identities, resulting from experience of immigration or of growing up in two cultures, seem to challenge this Western bias toward allegiance. This ‘in-betweenness’ is a status that challenges the idea that ‘belonging’ to a nation can serve as a basis of art making and appreciation. This was a common thesis during the 1980s and 1990s. A more recent term, interstitial, has brought this concept into the new century. Interstitial means the spaces between; this can include the spaces between cultures, but also the spaces between artistic media (...) All of these interstitial spaces (in medium or genre) can become fertile ground for exploring spaces of cultural in-betweenness. (Leuthold 2011, p. 67)

I consider, in the context of this paper, *in-between* as *interstitial* and contextualize it in the performance art landscape as essential to its effectiveness. In between radical, stereotyped, real/virtual and cultural spaces, lies the central question in performance art: how to negotiate in between spaces? I argue that the main difference between the concept of *in-between* and the concept of *intersectional*, and this is why both concepts are combined in this new expression of *in between intersectional spaces*, is that *in-between* spaces refers to new spaces, grey areas, situated in between known spaces that are usually the focus of research and artistic practice. *Intersectional* spaces are the ones resulting from the intersection of several different spaces at the same time. We have to take into consideration what and how different aspects are being identified and intersected. Beyond these differences, there is also the difference of identity as a multiple and layered intersectional centrality.

In between intersectional spaces allow new spaces of intersectionality to fill in grey areas and to map artistic creation.

4. Encyclopedia of Mathematics

In this section, some mathematical concepts from mathematical analysis, a branch of mathematics which deals with notions of limit, convergence, continuity, and related theorems, are presented as an encyclopedia.

- **Definition:** An **axiom** is a proposition that is not proved, but considered either self-evident or subject to necessary decision. Therefore, its truth is taken for granted and serves as a starting point for deducing and inferring other (theory-dependent) truths.

An axiom can be of two different types: logical or non-logical. Logical axioms are statements that are taken to be universally true. For instance, the fact that $1=1$, or more generally, that for any number x , we have $x=x$. Non-logical axioms are defining

properties of the domain of a specific mathematical theory. For instance, the fact that $1+2=2+1$ (and both are equal to 3), or more generally, the fact that for any two numbers x and y we have $x + y = y + x$. Either way, it is a mathematical statement that is a starting point to deduce other derived ones. For instance, the initial idea or concept of a performance art piece is considered to have an axiomatic origin. We then derive other ideas, concepts, as the *Sub-Images* and the *Dynamics* addressed below, but we consider that first one to be uncontested, that is, axiomatic in its origin; and that is why we call it, as we will see, the *Axiomatic Image*.

- **Definition:** (a) A **set** A is a gathering together into a whole of definite, distinct objects of our perception and of our thought – which are called elements of the set. We denote $a \in A$ when we want to say that a is an element of the set A ; (b) We say that B is a **subset** of A , or that B is contained in A , and we denote this by $B \subseteq A$, if every element of B is also an element of A .

Let us now recall some sets used in Mathematics. We have the set of natural numbers, represented by $\mathbb{N} = \{1, 2, 3, 4, \dots, 100000, \dots\}$, that is, it is the set where its elements are the natural numbers $1, 2, 3, 4, \dots$. If we add 0 to it we obtain $\mathbb{N}_0 = \{0, 1, 2, \dots\}$, which is the above set \mathbb{N} plus zero. Joining the negative numbers, we obtain the set of integer numbers represented by $\mathbb{Z} = \{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$ (here we add the symmetrical numbers, the negative ones). If we add to \mathbb{Z} numbers of the type a/b , or $a \div b$, where $a, b \in \mathbb{Z}$ (a and b are members of the set \mathbb{Z}) and $a/b \notin \mathbb{Z}$ (the number $a \div b$ is not a member of \mathbb{Z}), we have the set of rational numbers $\mathbb{Q} = \{a/b : a, b \in \mathbb{Z}\}$, i.e., numbers which can also be seen as finite or periodically infinite tithes, as for instance $1/2, 2/3, 5/8, 0,5; 0,666(6)$, or even nonperiodic infinite tithes that can be expressed by a fraction a/b . Finally, adding to the set \mathbb{Q} the non-periodically infinite tithes such as $\sqrt{2}, \pi, e$, etc., we obtain the set of real numbers \mathbb{R} . This set is usually called the real line, and we say we cover \mathbb{R} or the real line when we go with the pencil or pen from minus infinity to plus infinity without taking it off the paper, and so it is a continuous set.

We also can consider some subsets of a set. For example, the set $A = \{1/2, 1/4, 3\}$ is a subset of the set \mathbb{Q} , and the set $B = \{1/2, 3\}$ is a subset of the set A . Considering real numbers, some of their subsets are usually called **intervals**. For instance, the set $C = [0,4]$ is the interval that goes from 0 to 4 , including 0 and 4 , and it is a subset of \mathbb{R} . Also, $D =]0,4]$ is the interval that goes from 0 to 4 but does not include 0 , including just 4 , and it is also a subset of \mathbb{R} . We can consider $E =]5/4, \pi [$, which is the interval that goes from $5/4$ to π without including both $5/4$ and π , and it is a subset of \mathbb{R} .

- **Definition:** Consider the set of real numbers \mathbb{R} , any fixed element x of this set, that is, $x \in \mathbb{R}$, and consider also any fixed sufficiently small positive real number, that is, $\varepsilon > 0$. A **limb** is an interval that goes from the number x minus the small ε to the number x plus the small ε , and we denote it by $]x-\varepsilon, x+\varepsilon[$.

As an example, we can consider the interval $]1,9; 2,1[$, which is a *limb* of the number $2 \in \mathbb{R}$, being $\varepsilon = 0,1$ in this case. Let us observe that, in mathematics context, a *limb* or neighborhood is only considered within real numbers (and so by means of a continuous idea of a set).

- **Definition:** (a) An **interior point** of a set $A \subseteq \mathbb{R}$ is a point $a \in A$ such that considering some small limb of this point a , all this small limb is contained in A , that is, this limb is a subset of the set A ;
- (b) An **exterior point** of a set $A \subseteq \mathbb{R}$ is a point $a \in A$ such that considering some small limb of this point a , all this small limb is outside the set A , that is, this limb does not have any point in common with the set A ;
- (c) An **isolated point** of a set $A \subseteq \mathbb{R}$ is a point $a \in A$ such that on some limb of this point a , it is the only point of A that is inside this limb. That is, it is a point such that it's the only point in common with some limb is the point itself.
- (d) A **boundary point** of a set $A \subseteq \mathbb{R}$ is a point $a \in A$ that is near points that are members of the set A and at the same time nearby points that are not members of the set A is on the boundary of the set A . That is, considering any limb of this point a we can find points from the set A and from outside the set A .

- **Definition:** A **sequence** (u_n) is an operation which maps some subset A of \mathbb{N} into some subset B of \mathbb{R} , and we denote by

$$(u_n): A \subseteq \mathbb{N} \rightarrow B \subseteq \mathbb{R}$$

$$n \mapsto u_n$$

For each element a of A ($a \in A$) we correspond one and only one element b of B ($b \in B$) through (u_n) .

For instance, if we define $u_n = 1/n$, we have that for $n \in \mathbb{N}$, that is, for $n = 1, 2, 3, 4, \dots$, we obtain through u_n the values $1, 1/2, 1/3, 1/4, \dots$, and so $B = \{1, 1/2, 1/3, 1/4, 1/5, \dots, 1/150664, \dots\}$.

- **Definition:** A **function** f is an operation that maps elements of $C \subseteq \mathbb{R}$ into elements of $D \subseteq \mathbb{R}$, that is

$$f: C \subseteq \mathbb{R} \rightarrow D \subseteq \mathbb{R}$$

$$x \mapsto f(x)$$

For each element $x \in C$ we correspond one and only one element which is the value of x through f , that is, $f(x) \in D$. We usually denote by C the domain of the function f , *i.e.*, $C = \text{dom } f$, that is, the set of members of C for which the function f is defined and achieve real valued numbers.

For instance, if we define $f(x) = x - 2$, we have that for $x \in \mathbb{R}$ we obtain through f values that also belong to \mathbb{R} . If we consider the function $f(x) = 1/x$, we cannot consider the value $x = 0$, because the number $1/0$ is not defined in \mathbb{R} (it is one of the non-logical axioms regarding numbers: we cannot divide any number by zero) and so the domain is the set \mathbb{R} excluding zero, and it takes values on all \mathbb{R} excluding zero.

- **Definition:** Consider the function

$$f: C \subseteq \mathbb{R} \rightarrow D \subseteq \mathbb{R}$$

$$x \mapsto f(x).$$

(a) We say that $b \in \mathbb{R}$ is the **limit** of the function f when $x \in C$ tends to a , and we denote by $b = \lim_{x \rightarrow a} f(x)$, if each time $x \in C$ approaches the point $a \in \mathbb{R}$, the function f through x approaches $b \in \mathbb{R}$.

(b) We say that f is **continuous** on a point a if each time $x \in C$ approaches $a \in \mathbb{R}$, f approaches $f(a)$ through x . That is, considering the notion of limit defined in (a), $b=f(a)$.

(c) We say that f is continuous on any subset $B \subseteq C$ if for any $x \in B$ approaching $a \in B$ then f approaches $f(a)$. If $B=C$ we say that f is continuous everywhere on C .

Consider for instance $f(x)=1/x$. We have that $\lim_{x \rightarrow 1} f(x) = 1$. This means that if x approaches 1 then $f(x)=1/x$ approaches $1/1 = 1$. In fact, this function is continuous on its domain. An example of a function that is not continuous is

$$f: C \subseteq \mathbb{R} \rightarrow D \subseteq \mathbb{R}$$

$$f(x) = \begin{cases} 1 & \text{if } x \leq 1 \\ 2 & \text{if } x > 1 \end{cases}.$$

This means that, if we consider x approaching 1 from values greater than 1 , we approach 2 , but $2 \neq f(1)=1$. So, f is not continuous on $x=1$. But it is actually continuous on all other points except this one, which lead us to the next definition.

- **Definition:** We say that a function

$$f: C \subseteq \mathbb{R} \rightarrow D \subseteq \mathbb{R}$$

$$x \mapsto f(x)$$

is **almost continuous** when it is continuous for almost all points $x \in C$. That is, f is continuous on the set C except a set E , which is made of only isolated points regarding continuity.

- **Definition:** A **cut** is a point $a \in \mathbb{R}$ where a function $f: C \subseteq \mathbb{R} \rightarrow D \subseteq \mathbb{R}$ takes some concrete value $f(a)$, where a is an isolated or a boundary point regarding some predefined subset A of C , but it is an interior point regarding the all domain C . That is, it is a point where the almost continuous functions is not actually continuous; so, a point of discontinuity, but a point that is in the interior of the domain.

Considering the function defined above

$$f: C \subseteq \mathbb{R} \rightarrow D \subseteq \mathbb{R}$$

$$f(x) = \begin{cases} 1 & \text{if } x \leq 1 \\ 2 & \text{if } x > 1 \end{cases},$$

the point $x=1$ is a cut of the function in the sense that 1 is an interior point of the domain \mathbb{R} , but f is not continuous on 1 . We have that $f(1)=1$ but if we approach 1 from superior values $x > 1$, we reach $2 \neq f(1)=1$.

5. A relational model as a tool to search for in between intersectional spaces

The relational model approaches the construction and documentation of concrete performance art pieces. It is composed of several elements: theoretical, experimental, math-based, performance studies-based, and media-based.

This model studies and searches for *in between intersectional spaces* as its foundations come from mathematics, performance art, perception studies, movement and media studies. The introduction of mathematical concepts in the performance studies context is the central new tool in this model. It was first introduced in (Santos, 2014) in a hierarchical and chronological way; that is, I started by finding an *Axiomatic Image*, characterizing it, identifying then several *Sub-Images* in order to work on the *Dynamics* inside each one. In the context of this paper, we will present these three concepts – *Axiomatic Image*, *Sub-Images* and *Dynamics* in a non-hierarchical and non-chronological way.

I start by introducing the notion of *Axiomatic Image*, which is connected with the main concept of a performance art piece. It has an axiomatic nature and needs to be part of a conscious and creative process of research. Then I introduce *Sub-Images*, concrete three-dimensional dynamical images, which result from a paradigm where mathematical notions, together with movement improvisation techniques and artistic research are present. This part of the construction is composed of experimentation tools, that may or not result from the initial *Axiomatic Image*, depending on the methodology used by performers.

I finally introduce the *Dynamics* inside each *Sub-Image*. The *Dynamics* are associated with the movement narrative of a performance art piece. The *Dynamics* may also result or not from the *Sub-Images*, depending on how performers work. I argue that it is possible to construct a model with three different parts, where the idea of an axiomatic origin and several mathematical definitions are present, and where it is possible to develop an artistic process combining the three parts, nonchronologically, converging in the performance, which can be seen as the *intersubjective matrix*, or as the *almost convergent* function that describes the respective artistic process.

5.1 Axiomatic Image

The aim now is to introduce the notion of *Axiomatic Image*, relating it with the notion of axiom.

- **Definition:** *Axiomatic Image* (AI) is an initial image which appears axiomatically, having as a sufficient condition the creation of consciousness and mental patterns' conditions on what surround an individual, and which allow for it to happen.

An *Axiomatic Image* is then a proposition that is not proved, which in any specific performance art piece can be seen as a concept, idea or bounded conceptual universe, which cannot be proved, as its truth is taken for granted. Since in the performance art context we deal mainly with subjective ideas, concepts and actions, we can accept that,

except in some rare and concrete cases, the axiomatic origin of the *Axiomatic Image* is non-logical. So, it doesn't have to be considered universally true, but it is considered viable within a perspective on life and art.

Any specific artistic process has an *AI* associated that is shaped inside consciousness and within the construction of patterns. We can determine the time of its origin as the moment when we are able to perceive its appearance and pertinence. We may also affirm that *AI* defines the universe of research in which the performer is engaged.

5.2. Sub-Images

In any specific artistic process, we consider the domain of a function that represents the artistic process associated with the performance art piece, which allows us to state that the universe where *AI* is shaped, defined and becomes conscious is then a set. In this set, we define the global function: the artistic process itself. Inside this set, we can consider several subsets and also several functions associated with several possible environments and actions. The process, if we maintain some of the smoothness and stability of the performers, will define *almost continuous* functions that will also give rise to a process of generating new sets of imagery. In parallel, a theoretical study associated with these techniques and concepts is developed, in order for them to be included in the creation process to produce a structured final object – the performance art piece.

- **Definition** A *Sub-Image (SI)* is a concrete three-dimensional image that appears as a possibility.

There are many — and I believe they can be conceptually infinite — possibilities of considering and defining *Sub-Images*, depending on the *almost continuous* functions and also on the *cuts* in the specific creation process. There is a limit point in this process of generating *Sub-Images* in which the *almost continuous* functions converge. If we don't stop, we go beyond the boundary of that set and attain its exterior, which doesn't interest us anymore, since we are dealing here with finite sets and dimensions.

5.3. Dynamics

The *Dynamics* are the effective narrative inside each *SI*. The *Dynamics* are associated with the effective narrative of the concrete final performance art piece. They can be seen as a methodology where movement, perception skills, together with theoretical approaches to those techniques and related concepts, are essential tools to materialize each *Sub-Image*. We consider as axiomatic a first body movement, action, or even a presence/absence body state. We then follow the methodology already introduced to generate *SI's* – of using movement and perception techniques as well as related theoretical approaches in this specific context. These techniques and theoretical approaches lead us to create *almost continuous* functions with points of discontinuity that will be the *cuts* that we analyze and in which we can stop or decide to continue the

path associated with the function defined on some continuous subset, or to change direction so that this *cut* becomes a turning point for other possible directions. In this way, we have the definition:

- **Definition:** The *dynamics* are a set of almost continuous functions from the set of movement and perception techniques, as well as theoretical approaches of the performer in a back and forth movement between cuts and continuity.

The model presented above is a possibility within artistic creation, which I believe is general enough to be applied in many artistic areas. In fact, it characterizes three phases in any artistic process that are not chronological. In applying the model, we also find many points that are convergent or *almost* convergent, related to associated functions describing some specific circumstances. We deal with a final artistic object that is an *intersubjective matrix* of elements, *almost continuous* functions as well as cuts.

6. *Building Strength*, a case study

In 2018, I decided to research within a metamorphosing daily life, constructing a new project: *Building Strength*, from some initial questions: How can I define my physical effort? Where do movement and dance belong? How do I manage frustration? How do I manage research? How do I establish a connection with my own self as a teacher? The central issue is how daily life can be seen as a set of rules, each set matching a self and the set of sets/selves composing identity as a multiplicity in an intersubjective way. *Building Strength* was developed over a year and although it was not a documentary project like *On a Multiplicity* or *In Between Selves*, with daily videos and texts and rules, it had almost invisible strict rules: to endure daily training at the gym to strengthen muscles and to metamorphose my body, changing it to active and fit and searching for images and movement poses inspired by masculine fitness images on the internet.

6.1. *Building Strength* and the creation process

This project started in August 2017 when I was living in the countryside for three months. I was starting to have trouble breathing in between sadness, disappointment, regret, fragility and I decided to build strength. It was not enough to convoke it; I would build it from scratch. I lived for four more months in the countryside, in a new setting: daily gym training, Pilates and movement improvisation techniques, as well as a new research around contextualized and (auto)biographic ideas of strength.

Building Strength started with Instagram posts, reactions, debates on body strength and fragility and how this imagery was identified as ‘self-deplorable’ and ‘attention seeking despair’. Also, the problematization of women’s objectification became an issue: my body is privileged: I am thin, perceived in this area as white, I am

becoming fit and when I perform, people recognize an ancestral and defiant body. I cannot separate myself from my privileged body. If we focus on it as an object, I have back pain because of a herniation L5/S1, I have hip pain since I have a bad joint where the femur joins the hip, and I have knee pain, since I have a bad joint on both rotulas. It is not a good healthy body in its full potential, but it is a body perceived as white, thin, which equals being in a privileged place concerning the stereotypes under which bodies are governed in social dynamics.

I shared *Building Strength* for the first time in Gil Vicente Academic Theater's bar, in Coimbra, in the context of the scientific-artistic meeting "Neurological Landscapes #4", November 2017, organized by Isabel Maria Dos. The bar was an inspirational place and I was able to explore initial ideas on fighting/exposing fragility⁶. The second time *Building Strength* was shared in the context of the event MU!, organized by Vaca Magra Cultural Association, in Palácio Pancas Palha, Lisbon, May 2018, where I presented a new version already informed by moving to a large cosmopolitan city.⁷

Building Strength was also shared in the Zaratán Gallery in Lisbon, June 2018, curated by Bruno Humberto, where I had to adapt the performance to the space, engaging in site specific content.⁸ In July 2018, *Building Strength* travelled to the 4th anniversary of *Clandestine Poetry Tuesdays*, an event of poetry, performance and live music organized by Vasco Macedo, in *Desterro*, Lisbon.⁹

This performance art piece was presented for the last time in the context of *Performing Intimacy*, an international colloquium organized by the Research Group in Performance Studies (GIEP) at the Universidade do Minho, together with Teatro Oficina and Noc Noc Festival, at International José de Guimarães Arts Center, November 2018, in Guimarães, Portugal.¹⁰

6.2. *Building Strength* and the relational model

The final presentation of *Building Strength* was at the beginning of October 2018. Two months later, at the end of the year, I decided to go back to the relational model and use it to research my own work, without implying the model in the process explicitly. I am not separable and I am not a different person from myself, but I chose to highlight *varieties of presence*, as formulated by Alva Noë (2012).

The *Axiomatic Image* in this performance art piece is *On Strength, through fragility*: the performance is a journey through fragility as strength and empowerment. I found four *Sub-Images*:

⁶ See <<https://tagv.pt/public/uploads/2018/10/tagv.pt-paisagens-neurologicas.pdf>> for the program. See also <<https://www.youtube.com/watch?v=OufieN05LzY>> for some video excerpts.

⁷ See <<https://www.facebook.com/events/827736350759569/>> for the program. See also <<https://www.youtube.com/watch?v=9u0otzax6II>> for the video.

⁸ See <<https://www.facebook.com/events/2023030601358705/>> for the program.

⁹ See <<https://www.comunidadeculturaarte.com/4-o-aniversario-das-tercas-de-poesia-clandestina/>> for the program.

¹⁰ See <http://cehum.ilch.uminho.pt/intimacy/static/programme_en.pdf> for the program.

1. *On Screen;*
2. *Undressing Fragility;*
3. *Showing Strength;*
4. *Claiming Visibility.*

These *Sub-Images* come from several landscapes: the first has a person behind a screen, mutilating her/his/their imagery to convey attention seeking. The second is about what is behind the screen, when it is turned off. The third is about the strength that lies behind the apparent fragility of a naked and lonely body. The final *Sub-Image* is about a manifesto, I am reclaiming visibility for my fragility as strength.

Each *Sub-Image* is an *almost continuous function* and, in each *Sub-Image*, the *Dynamics* are made of several functions, *almost converging* to what is perceived by each member of the audience and a function of *almost convergent* functions is *almost converging* something that can be commonly perceived by all the members in the audience: a landscape, a breathing, an atmosphere, a sound, an experience.

The *Dynamics* inside the first *Sub-Image* are constructed under states of apathy, focused on image formulating and hidden despair, with a semi-awake body. Inside the second *Sub-Image*, the *Dynamics* are developed through isolated movement, staccato and with different textures, broken-robot inspired. Inside the third *Sub-Image*, I continue a personal movement research on poses, on image construction assumed as research. In the final *Sub-Image*, the *Dynamics* are where performative action emerges as endurance and manifesto.

I realized that the main challenge I had in this performance art piece was to work on transitions between *Sub-Images* and their *Dynamics*. I struggled between ideas of ‘in and out’ of non-character *personas*, ideas of smoothness and softening boundaries, allowing functions to be continuous everywhere, converging in known and safe places. In the end, accepting discontinuous points as part of everyday life, its performativeness becomes the object and subject, generating a research on *limbs* – or *neighborhoods* – of these points also labelled *cuts*. I accept the end of each landscape, I share the dramaturgical struggle with it, and I work on finding new landscapes to flow, with new *limbs* of new *cuts* to discover.

7. Final comments

Performance art is an interesting artistic practice/field to map, due to its openness and its contextual dependence. The conventional idea of a present body in performance art is also being dismantled through new ways and formats to display it, pushing the boundaries of its pertinence. I personally navigate within performance art context through concepts of *in between intersectional spaces* and *intersectional matrix*, with a relational model, inspired by mathematical concepts from mathematical analysis, to use as a researcher and as an artist.

In previous performance art pieces, I used the relational model to generate material and create a performance art piece. In other words, I used it as a methodology

in artistic practice. In *Building Strength*, I decided to use this relational model as a researcher, after the creation process ended, since I am still struggling with a model's dependence on its contextual use. It is different to use this model as a methodology to create and as a model to connect with a final artistic object, in the sense that I have to be aware and consider my own perspectives, feeling, thoughts; or, following Daniel N. Stern, my own *intersubjective matrix*. As such, even if this model can be applied to research on performance art pieces and even if I use it also to construct some of my own performance art pieces, I was the only person to apply it. I believe that the next step, which can be seen as a challenge, is to open it to others to apply. Only then we can discuss its pertinence outside of my own practice and research.

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