



Performing Arts and Theories of Knowledge: poetic research on the scene in the light of Thomas Kuhn's ideas

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ABSTRACT – Performing Arts and Theories of Knowledge: poetic research on the scene in the light of Thomas Kuhn's ideas – This paper discusses the knowledge production in dance, as well as its dissemination. The distinctions between theories of knowledge and knowledge production are examined, seeking a commitment to the study of knowledge already produced in the field of dance and the involvement with the production of knowledge from the artistic practice.

Keywords: **Performing Arts. Epistemology. Thomas Kuhn. Theories of Knowledge.**

RÉSUMÉ – Arts de la Scène et Théories de la Connaissance: recherche poétique sur scène à la lumière de la pensée de Thomas Kuhn – Cet article problématise la production des savoirs en danse, ainsi que leur diffusion. Les distinctions entre théories de la connaissance et production de connaissances sont examinées, cherchant un engagement dans l'étude des connaissances déjà produites dans le domaine de la danse et l'implication dans la production de connaissances à partir de la pratique artistique.

Mots-clés: **Arts du Spectacle. Epistémologie. Thomas Kuhn. Théories de la Connaissance.**

RESUMO – Artes da Cena e Teorias de Conhecimento: pesquisas poéticas em cena à luz do pensamento de Thomas Kuhn – Este artigo problematiza a produção de conhecimento em dança, bem como sua difusão. Perscrutam-se as distinções entre teorias do conhecimento e produção de conhecimento, buscando um compromisso com o estudo de saberes já produzidos no campo da dança e o envolvimento com a produção de conhecimento a partir da prática artística.

Palavras-chave: **Artes da cena. Epistemologia. Thomas Kuhn. Teorias de Conhecimento.**

How do emotions arise? What purpose do they serve? What accounts for the distinctive feelings we experience? These questions have stimulated philosophers for centuries. More recently, these questions have inspired the curiosity of psychologists and cognitive scientists. But they are also questions that attract the attention of the ‘practitioners’ of emotion. Playwrights, novelists, poets, film directors, musicians, choreographers, comedians, and theatrical magicians all have a professional interest in what distinguishes delight from boredom (Huron, 2007, p. 1).

I walk through golden meadows looking for explanations for my indelible adventures in the art of becoming interested in knowledge. To know, from *cognoscere* – to learn to know, to seek to know, to recognize –, the world, the human, the knowledge itself. Rebecca Solnit (2016) once recounted that sophists were already famous wanderers who often taught in the woods where Aristotle’s school came to be installed, and wrote five hundred pages arguing about how old the history of walking is, about the perceived association between walking and thinking in the history of various thinkers, or about how Rousseau confessed: “I can only meditate when I walk. When still, I stop thinking; my mind only works by following my legs” (1953, apud Solnit, 2016).

It did not require much effort to convince me, an amateur walker who thinks when walking and moving, that walking awakens the imagination and that “[...] this imagination is a creator and creature of the spaces that it itself crosses on foot” (Solnit, 2016, p. 20). Meditating on my – still few – achievements as an artist-researcher, I quickly observe that what gives unity to all of them is the impulse to create artistically and, after making the work public, continue walking with my thoughts on it. I am not content with being on the scene or directing shows: I savor with greater wisdom the concepts that I can unfold from (and driven by) these creations. Enchanted by the ability to generate surprises and emotions from the practice of creating, I identify with the thought of David Huron (2007), when he observes that the ability to leverage a creation, taking it from the *status* of “uninteresting” to the *status* of “savorable”, may be arousing only now the interest of psychologists and neuroscientists, but has aroused for centuries the interest of philosophers and, in the case of artists, practically coincides with their practice. *Bhavas, rasas*¹. Emotions and flavors that artists are skilled at adding to their creations.

I wrote the article *Ator, dobrador de tempo* [Actor, time bender] (Andraus, 2018a) stimulated by a reflection on time and chronology of shows that unfolded from the experience of directing a work, *If you lost yourself*, with your chronology shuffled by the conditions imposed by Alzheimer's disease to those who develop the disease and also to those who live with this person. Reflection on time also stimulated by my incursions as a student of Indian Odissi dance, since 2012, and by the perception that what differentiates one dancer from another is their ability to sustain a gesture for one microsecond more (or less) than another dancer (Bonfitto; Andraus, 2014), a decision that can only be made during the very act of dancing. Reflection on time derived also – and still – from 15 years of incessant practice in the praying mantis *gongfu* system, which taught me that a split second is decisive when it comes to coming home injured or not.

I wonder if all the artistic productions derived from different research that I have been developing since 2001 in the field of intercultural studies in performing arts² would make any sense if I did not have the opportunity to have written that article, so many years later. My guess is no.

[...] more insidious forces are deployed against time, space and the will to walk, against the version of humanity that the act personifies. One of these forces is the occupation of what I imagine as 'the betweentime,' the time to walk between one place and another, to wander around. People complain that this time is a waste and reduce it, and what is left of it is filled with the music of the headphones and the conversations transmitted by cell phones. The very ability to appreciate this free time, the usefulness of what is of no use, seems to be disappearing, as well as the appreciation of exteriority, the act of leaving even what is familiar: conversations on the cell phone seem to serve as a shield against loneliness, silence and encounters with the unknown (Solnit, 2016, p. 12).

In a world that avoids meeting the unknown, how to generate and promote new ways of knowing? That most people who are out of the academy are not too fond of the habit of reading – particularly thick books – is no secret, just as it is no secret that art is a powerful way of *knowing*. Art, however, reveals its contents through symbols and requires the enjoyer's capacity for reception, which presupposes sensitivity and also the formation of this "sensitive" audience, as Barbosa and Cunha (2010) already observed.

The artist of the scene is somewhat reluctant to analyze works – including their own works –, sticking to the safe haven of their place “of being an artist”. However, what if he intertwines his artistic work with the elaboration of concepts derived from it, would he not have his role as a producer of knowledge resignified in a contemporary world so thirsty for depth and interconnections? This article, based on the *livre-docência* thesis I defended at the Universidade Estadual de Campinas in 2021³, seeks to answer this question. In the thesis, in analyzing Umberto Eco’s afterword to the book *The Name of the Rose*, I hypothesized that developing the ability to create dances helps to develop the ability to create texts and vice versa. The artist with university education, in particular, is expected to develop not only the ability to create art, but to be aware of the process, the set of choices he makes, despite the possible valuations that he or she, or others, may make of the work:

Reporting how it was written does not mean proving that it was written ‘well.’ Poe said that ‘one thing is the effect of the work and another is the knowledge of the process’. Kandinski or Klee, when they tell us how they paint, don’t tell us if one is better than the other. Michelangelo, when he tells us that sculpting means freeing the figure already inscribed in the stone from the surplus, is not saying that the Vatican *Pietà* is better than the Rondanini *Pietà*. Sometimes, the most luminous pages on artistic processes were written by smaller artists who produced modest effects, but knew how to reflect well on their own processes (Eco, 2019, p. 548).

People today receive partitioned doses of self-help and motivational stimuli that reach them through posts on social networks, that may even help to reflect for a few minutes, but would never correspond to the deepening that a long meditative walk or the appreciation of an artistic work would enable. If art returns, little by little, to the most secluded places, accessible only to those who know and always knew where to find it; if it is increasingly subtracted by the action of obscurantist movements that act on the world political scene and, especially, in Brazil, how can we, as artists, leverage the knowledge that abound in our own artistic creations and make it accessible through writing? How to decrypt art without reducing us to mere translators or analyzers of works? How to play with concepts by painting them in the scene and also romanizing their characters in written word?

This article discusses the issue of knowledge production in dance, as well as its dissemination. The distinctions between theories of knowledge and knowledge production are examined, seeking a commitment to the study of knowledge already produced in the field of dance and the involvement with the production of knowledge from the artistic practice, which requires time in creative practice labs. I am based on the assumption that the artistic work is, in itself, knowledge, and that books and articles published by artists-researchers always problematize, in some way, the issue of knowledge.

Work written, written work

The production of knowledge in performing arts has been gaining momentum with increasing intensity with the institutions of undergraduate and graduate courses in the area. A recurring debate concerns the understanding of the work of art itself as knowledge *versus* the textual production that can be built on art, which does not consist – and should not be expected to consist – in a translation of the work, but, perhaps, in a metaproduction that can even be itself also of a creative/artistic nature.

In order for art to gain the status of science, and to be assimilated in the academic universe, it is not uncommon for research artists to focus on authors from the fields of knowledge theory and epistemology, without mastery or even the desire to explore these fields in depth. And, in fact, not everyone has the need to do so. Today, research in the arts has greater autonomy to establish itself as an area of independent research and knowledge and not be restricted to quantitative scientific methods, nor to analytical methods or to the imposition of knowing and mastering authors in the area of philosophy to be able to understand and situate art as knowledge produced by man and as a reflection of their historicity – not least because this would mean always returning to the beginnings of the construction of Western thought and, to realize this, the artist-researcher would have to dedicate himself only to theoretical study. According to Hessen (1987, p. 21):

We cannot speak of a theory of knowledge, in the sense of an independent philosophical discipline, neither in Antiquity nor in the Middle Ages. In ancient philosophy we find numerous epistemological reflections, especially in

Plato and Aristotle. But epistemological investigations are still encompassed in metaphysical and psychological texts. The theory of knowledge, as an autonomous discipline, appears for the first time in the Modern Age. Philosopher John Locke should be considered as its founder. His fundamental work, *An essay concerning human understanding*, from 1690, systematically addresses the issues of the origin, essence and certainty of human knowledge.

The passage shows that situating the theory of knowledge in the historical context is already, in itself, a research problem for epistemologists. Revisiting authors from Antiquity and the Middle and Modern Ages to understand and contextualize from what historical moment one can think of theory of knowledge, and then conceptualize art as knowledge, constitutes relevant work in the fields of epistemology and philosophy of art and science, but not necessarily for the artist-researcher. However, the work of art carries in itself a cultural baggage and is, for this reason, a bearer and transmitter of knowledge, deserving emphasis in research developed contemporaneously in this field, which leads to think of an epistemology of dance built from the very artistic research – that carried out by artists-researchers.

Approximations between performance and philosophy have been sought by authors in this field, as does, for example, Feitosa (2020, p. 2): “Philosophy seems to have nothing to do with performance, as it is supposed to be abstract and theoretical. However, there is a performative dimension of philosophy, a *modus operandi* in its thinking, a certain way of acting that distinguishes it from other existing theories of the world”.

In developing the arguments to think of philosophy as performance, the author draws a distinction between the terms borders and limits, pointing out that, while the limits “prevent the passages”, the borders “manage them”, attributing to the latter, therefore, a more expansion-oriented character:

The border, unlike the limit, carries this strange ambiguity, of restricting us, but also of constituting us; of distinguishing us, but also of opening us to the world. Defending the borders is not to prevent the invasion of the foreigner, but to guarantee the conditions of possibility so that he, the foreigner, can arrive in the foreignness that is his own (Feitosa, 2020, p. 4).

The discussion raised by Feitosa is pertinent to this article because the author treats both terms as indicators of demarcation, and this is precisely

one of the main points debated by Thomas Kuhn, the author on whose thought this article focuses. Without the intention of ignoring authors closer to art, such as Theodor Adorno, Walter Benjamin or Umberto Eco – the latter carefully analyzed in the livre docência thesis (Andraus, in press) –, I choose to focus more on Thomas Kuhn precisely for his ideas centered on the issue of demarcation, and the reason for this choice is that the entire policy of fostering research in Brazil is, in practice – unfortunately for art and for artists – based on epistemic territorialities.

In 2002, during my master's studies, I had the opportunity to make my first contact with the work *The Structure of Scientific Revolutions*, by Thomas Kuhn (1962/2013), in the context of a discipline of research methodology in arts in which several authors were presented to students: Stanislav Grof, with the book *Beyond the Brain* (1987); Júlio Plaza, with the article *Art, Science, Research: Relations* (1997); Hilton Japiassu, with the book *Nascimento e Morte das Ciências Humanas* (1978); Abraham Moles, with the book *The scientific creation* (1971); Bruyne, Herman and Schoutheete, with the book *Dynamics of research in social sciences* (1977); Bryan Magee, with the book *As ideias de Popper* (1978); Jean Piaget, with the book *A situação das ciências do homem no sistema das ciências* (1970); Pierre Weil, with the book *Holística: uma nova visão e abordagem do real* (1990); Bertrand Russell, with the book *The ABC of Relativity* (1966); António Damásio, with the book *O mistério da consciência: do corpo e das emoções ao conhecimento de si* (2000); Gaston Bachelard, with the books *The epistemology* (1971), *The formation of the scientific spirit* (2002) and *The poetics of space* (2008); besides Thomas Kuhn himself (1962/2013). The latter aroused in me greater interest in the reflection on how a field of knowledge is born in the macro-context of a historical and sociological theory of the sciences, and is now, at another time – already as a professor at a public university –, an object of my interest for deepening a reflection on the recognition of the arts of the scene as a field of knowledge.

As a first hypothesis to be explored, I would speculate that the arts of the scene do not have the characteristic of normal science, in Kuhnian terminology, because several semantic incommensurabilities are noticed, which give us indications that there is no paradigm established, in fact, behind the developed research, but only tensions – characteristics of a pre-

paradigmatic phase. Translating, if each researcher needs to define based on which concepts or authors they will use terms such as *dramaturgy*, *dancedramaturgy*, *presence* or even *epistemology* (of dance, theater, the performing arts...), then, apparently, there is no paradigm, but only⁴ partial examples, which denote fragmented theoretical groups, which do not participate in a single and cohesive paradigm, as Kuhn prescribes when conceptualizing an area of knowledge in a normal science stage.

I began to investigate the relationships between the study of knowledge theory and the production of knowledge in performing arts, a field endowed with its own *epistemes* and methodologies originating from artistic practice. The books and articles published by research artists always problematize, in some way, the issue of knowledge. Particularly, I like to think that it is possible and pleasurable to reconcile artistic creation with writing about it, even if systematization comes *a posteriori*. But what writing, however, is it possible to speak of, when the field of knowledge in question is *the arts of the scene*? I consider the possibility of going through a trajectory of an essentially intuitive nature, however, instead of interrupting the process when reaching an artistic result, I choose to continue it, making it public later through writing – because this is what leads, after all, the artist-researcher to the scope of knowledge production in dance. Although a text will never accurately reflect the meanings of an artistic work – if it means, expresses or merely presents another discussion –, it still plays a crucial role as an enabler of epistemic construction, as it disseminates the knowledge generated by artistic productions.

Cattani (2002) conceptualizes art as *an act* and not as a *discourse*, suggesting a distinction between the work of art and any verbal elaboration that can be inferred from it. The author states that the work “[...] is an object, present in its physicality, independent of any and all discourse, including of the very artist” (Cattani, 2002, p. 37). Cattani understands that the work of art is to be seen, not to be read. The production of art must be done in parallel to the production of discourse, without both being confused, but it cannot be denied that it is necessary for the artist-researcher to know how to communicate in the two languages, artistic and verbal, because there is a lack of specialized institutions and publications, which increases the responsibility of the artist-researcher with regard to documentation.

According to Cattani, traditionally the work of art has been seen as subordinate to the word, having to be “translated” into verbal language. Cattani (2002, p. 42, our translation) argues that this view needs to be demystified to avoid two limit situations:

[...] on the one hand, the artist refusing to talk about his work, saying that it speaks for itself (which is a mistake in the contemporary world, in which verbal language permeates and even mediates the participation of art in the capitalist system); on the other hand, the artist becoming a critic or theorist of art: this occurs when he dissociates the two forms of thought, trying to translate or interpret one by the other.

Following the author’s line of thought, in my research career I have always tried to work with the two creations, artistic and textual, in an intertwined way, but, at the same time, without configuring the attempt of interpretation of one by the other. This has led me to reflect on the issue of knowledge production in dance, specifically because, on the one hand, the Arts area in the Coordination for the Improvement of Higher Education Personnel (CAPES) recognizes artistic production with equal value to bibliography – and the artist-researcher is required to have a balance between both – and, on the other hand, not all research fostering institutions award “points” to artistic production, which makes the artist-researcher someone pressured on two sides, two opposing tensions. Therefore, it is worth questioning which *epistemes* actually make sense for the area itself (in my view, both the artistic works and the writings that are created from them).

We have, on the one hand, a kind of knowledge about the performing arts produced within the scope of publications in books, articles, works in congresses, as well as dissertations and theses in various higher education institutions that have dance and theater courses; on the other hand, a range (perhaps greater) of shows – which are also produced knowledge –, and all this comes to constitute what could be understood as *examples*, in the performing arts, and perhaps are leading us, as an area of knowledge, to the rise of a *shared paradigm* (Kuhn, 2013). However, according to Kuhn’s thought, the existence of a shared paradigm is not enough to understand an area such as science. What I propose, in this article, is that performing arts is an area of knowledge on its way to becoming a scientific area. After overcoming the discussions between art and science that predominated in previ-

ous decades, and understanding the notion that one scientific area cannot impose its methodologies on another to recognize it or not as science, it is up to us, artists-researchers, to lose the fear of assuming ourselves as a scientific area, to lose the fear that this recognition will restrict us. After all, to have science is to have knowledge. We have science about the arts of the scene and we need to write more and more about them.

This initial reasoning led to the desire of examining Thomas Kuhn's work, specifically the *Structure of Scientific Revolutions*, in order to, in the light of this theoretical *corpus*, elaborate a reflection on how the movements of the main references of research in the performing arts in the country are.

The Structure of Scientific Revolutions: main ideas

Kuhn (1922-1996) began his career as a theoretical physicist and subsequently made the transition to the history of science, driven by the need to understand the development of scientific knowledge. In the preface to the fifth edition, science philosopher Ian Hacking explains that Kuhn was the first author to use the term paradigm in the usual, contemporary sense. When I read this information, I immediately started to think about how familiar the notion of paradigmatic rupture is to the artistic area – widely used, even, as artists identify with the idea of *breaking barriers* –, and so I intuited the importance of dedicating myself to the study of the author.

What drives Kuhn to leap from activity as a theoretical physicist to the activity as a historian of science? Knowing science is something that, as a rule, takes place within the current paradigms, while the history of science makes it possible to understand why the science in question is as it is. In the case of the performing arts, also, understanding which trajectories bring us to what we understand as contemporary dance or theater is fundamental for us to draw the very sense of contemporary that we employ. According to Bales (2008, p. 30),

In *The Structure of Scientific Revolutions*, Thomas Kuhn made a distinction between pre- and post-paradigmatic science and acknowledged that developments in science are often not incremental, but happen in sudden and relatively radical leaps. After the leaps, things take a new direction; there is a flood of activity as scientists absorb the new theory and readjust to it (1962, p. 12). The changes that led to Judson's (pre-paradigmatic) change formed the work developed for the experimentation that would follow. Merce Cun-

ningham asked questions about how dance could be presented and perceived, but continued a line started by early moderns in their processes of developing a cohesive technique and vocabulary (while recognizing sources ranging from ballet to computer programs). Other figures also contributed to the eventual change, such as Anna Halprin (the vocabulary is not at all central), Alwin Nikolais (the dancing body is one of several focal points) and Erick Hawkins, whose oriental infusion technique rejected previous premises about body tone and tension (Bales, 2008, p. 30).

Citing Melanie Bales, a dance researcher, provides important concepts from Kuhn – pre-paradigmatic, post-paradigmatic, evolution *versus* revolution – which I will discuss below. For example, she uses the term *paradigm* when explaining that the solutions of the Judson period to connect choreographic and performative aspects with the training issue are different enough to imply a significant change:

Each new generation since the advent of modern dance has tried in one way or another to connect the performative and choreographic aspects of the art of dance with training practices, but the Judson period produced a solution different enough to signify a paradigm shift. It was this particular generation that, instead of trying to establish a connection somehow from training to choreography, actually separated the two in a deconstructive process that changed that relationship forever. In addition, this process enabled dancers to eventually adopt the paradoxical view of technique as a critique of technique itself (Bales, 2008, p. 30).

The author then comes to the conclusion that modernity, in the case of dance, came to happen only in the period that we consider as postmodern, because, in modern dance, although there are ruptures in relation to classical dance, new structures are quickly created that are, according to the author, paradigmatic, avoiding the persistence of the crisis. The ruptures of the postmodern period still echo today in the different places of dance production (lack of definition of codes and languages, productions with non-dancers, among other characteristics) and define, to date, what we call *contemporary*.

Could we say that today we are experiencing the persistence of a crisis? If the crisis occurs, according to Kuhn, when anomalies accumulate to the point that the very theoretical body of that field of knowledge is called into question, and we do not have in the West (to date) a unique body of this type in the field of the performing arts (a theory of the performing arts),

would it be correct to call “crisis” the ruptures that modern dancers have made in relation to classical dance, or would they be more as tensions, characteristics of the pre-paradigmatic phase? Would we have a paradigm emerging in the arts of the scene? Although in my doctoral thesis I assumed that the Kuhnian terminologies used by Bales served to explain dance phenomena, in examining these notions today I think they lack a deepening in the study of Kuhn and his work⁵.

According to Kuhn, knowing the history of science helps to improve our view of the very science we study. In addition to examining the sciences – understood as such – he extended his analysis to the humanities and the arts, seeking to identify a structure through which other areas of knowledge are constituted. Oliveira (2005) analyzes the thought that led Kuhn to seek to understand how other areas of knowledge are established – which even helped him to develop the notion of scientific revolution:

[...] a relationship between scientific theories [...] would be like that between artistic styles. A relationship that suggests that the comparison between two scientific theories could be much more problematic than imagined, and thus the choice between two scientific theories could also be much more complicated; as complicated as choosing between two artistic styles or answering who is the best painter, whether Velázquez or Picasso (cubist). How to explain this situation? Is the case of Aristotle an isolated case in the history of science? Would that be a typical case? And what consequences could it have for the understanding of science, particularly for the explanation of scientific progress? Questions such as these are at the basis of Kuhn’s philosophy of science (Oliveira, 2005, p. 22, our translation).

It is noted that precisely the interdisciplinary view enabled Kuhn to understand that science also does not develop only in a linear and cumulative structure, as Oliveira (2005, p. 23, our translation) observes in the sequence:

The solution he found in Aristotle’s reading was a personal experience of something that, as he himself acknowledges, ‘most historians learn through examples in the course of their professional training’. What Kuhn means is that historians in general, including art historians, are already prepared to deal with a situation in which there are ruptures like these in their object of study, as in the case of different schools of philosophy and different styles in art. But the historian of science is (or was) unprepared. The reason for that is precisely the supposed difference between science and the other disci-

plines. Science would not have these rupture points as those of styles in art, but would present a progress, let's say, linear, as if from the beginning of the development of science all scientists had contributed to directly add an item to the same basket of scientific knowledge.

It is important to highlight that the art that appears in the writings of Kuhn (and also Oliveira) refers to the field of art history and not to the specific and characteristic *epistemes* of the arts of the scene as knowledge built in practice and that today, in 2022, also involve the engagement of their researchers in the sense of being academically located within the scope of universities, conducting research, publishing articles and concerned with recognizing themselves as participants in a specific field of knowledge.

Kuhn spent time studying fields with no apparent relationship to the history of science: Piaget (worlds of the growing child), Ludwick Fleck (need for a sociology of the scientific community), Gestalt (*the whole is not the same as the sum of the parts*), Whorf (effects of language on the conceptions of the world), and defended the idea that, sometimes, another area of knowledge comes to help solve the crisis of a certain area. Amid his studies, he conceptualized *paradigms*⁶ as universally recognized scientific achievements that, *for some time*, provide: [1] problems and [2] *model* solutions for a community of practitioners of a science. These achievements have two main characteristics:

- 1) are unprecedented enough to attract a group of supporters;
- 2) are open enough to leave problems to be solved.

Moreover, according to Kuhn, the training of the researcher of a normal science is basically based on the study of his field of knowledge *subject to the current paradigm*, and this is what prepares students to be future researchers – however, while preparing, also conditions them. Kuhn clarifies that the shared paradigm presupposes a commitment to the same rules and standards adopted by all, being a prerequisite, therefore, for the development of “normal science”.

When a paradigm triumphs, the divergences disappear momentarily: “[...] when, for the first time in the development of a science, an individual or group produces a synthesis capable of attracting the majority of science practitioners of the next generation, the older schools begin to gradually disappear” (Kuhn, 2013, p. 82, our translation).

Another important concept of the author is that of *normal science*, characterized as research firmly based on one or more past scientific achievements and involving recognition by the scientific community. In normal science, there is the notion of purpose; that is, science as a means of providing foundations for later practices. According to the author, pedagogical books present accepted theories and report successful applications – which are, therefore, models. And he presents, still in defining what he calls normal science, an analogy with the assembly of *puzzles*, claiming that this is what scientists do most of the time. The paradigm makes promises that normal science is dedicated to updating. “Normal science does not aim at novelty, but at clarifying the *status quo*” (Kuhn, 2013, p. 32, our translation). The tendency is to discover what is expected to be discovered. Ruptures happen when something goes astray – that is what Kuhn calls an anomaly.

According to Kuhn (2013), researchers who remain in one of the pre-paradigmatic conceptions are excluded from the profession, or their work is ignored by the rest of the community. A problem identified by him is that a new paradigm brings a newer and more rigid definition of the field of study, which clashes with the notion of anomaly, which occurs when the current paradigm contradicts the phenomenon under study. One or more anomalies, serious enough, can lead to a period of crisis and, later, to a new revolution, and so science is structured, with puzzle assemblies interspersed with revolutions. Scientific revolutions are therefore disruptions in so-called *normal science*. Not only do they exist, but they happen following a framework: “[Normal science] is truly cumulative, but a revolution destroys continuity. Many things that an older science did well can be forgotten when a new set of problems is posed by a new paradigm” (Kuhn, 2013, p. 42, our translation).

These main ideas led me to think about how the arts are constituted from disruptions and not so much from shared paradigms. Artists get to know each other’s works to the extent that personal contact itself promotes meetings, and not so much by the habit of studying what other researchers are doing or conducting literature reviews that exhaust topics of interest. This observation arose my interest in re-studying, in more detail, the work of Thomas Kuhn and conducting an epistemological reflection on the arts

of the scene, especially that arising from the knowledge produced in the praxis of creating artistic works.

On my journey, I turn right and come across a classmate, Prof. Dr. Daniela Gatti, talented choreographer, who invites me to partake her journey. We turned left together and met with another colleague, Prof. Dr. Jonatas Manzolli, from the Department of Music, who invites us to share his long-standing interdisciplinary intertwining between dance, music and technology, particularly interested in the artisanal way we do this type of sewing in dance and, specifically, as I did in the two scenic works he saw me present on a trip we made together to Cardiff University in June 2018, whose audience was predominantly composed of students of musical composition. In the midst of a mission of establishing institutional partnerships, we got to know each other better and understand – once again, in practice – what Kuhn says when he considers that, often, in the midst of endless demarcation processes, one area of knowledge comes, in visit to the other, to help it solve its own crises (with this, I intend to say that this article is also about interdisciplinarity within art itself).

The issue of the production of knowledge in performing arts, discussed at the beginning of this article, is a relevant problem to be investigated to the extent that it covers two perspectives: the first is the appreciation of artistic works as knowledge in themselves; the second is to stimulate in students the desire and ability to write about performing arts beyond the requirements of a *discipline* work, seeking approaches that effectively awaken the reader's sensitivity and interest. Although artists do not need – and the Arts area evidently does not want – to become part of *normal science*, in the sense of following rules and solving puzzles, I propose that the artist's writing is fundamental in the role of decrypting their own area and that, in the practice of artistic creation, they can be a solver of puzzles, even if he does it in creative manners. Eco (2019, p. 547, our translation) states:

Whoever writes (paints or sculpts or composes music) always knows what they do and how much it costs them. *They know they need to solve a problem.* It can happen that the starting information is obscure, driveful, obsessive, nothing more than a whim or a memory. Afterwards, however, the problem is solved at the desk, questioning the matter on which he works – matter that shows its own natural laws, but, at the same time, brings with it the

memory of the culture with which it is loaded (the echo of intertextuality) (emphasis added).

About this passage, in my thesis (Andraus, in press) I wrote:

[...] I also highlight the conceptualization of the artist as a problem solver through the technique and the incessant procedure of analyzing the matter on the desk. This passage can be associated with the thought of Thomas Kuhn (2013) about normal science as a *puzzle* assembly: according to Thomas Kuhn, science is what we do most of the time, with the ruptures relegated to the status of 'event,' of what will only eventually and from time to time happen, when the current paradigm is no longer consistent to deal with the anomalies, and which, together with the continuous development involved in the assembly of the *puzzles*, will shape the structure of the revolution (this, made of evolution and ruptures). I ask: after the creative rush – a moment of rupture and encounter with the Muse (NACHMANOV-ITCH, 1993) – would not the artist also, analogously, be a puzzle solver?

This reflection leads to the theme of the methodology of creation. Speaking of research methodology and knowledge production in the arts implies visiting two terms/expressions that are quite in vogue at the moment: one of them is the state-of-the-art methodology, which refers to the study of knowledge produced in a certain field, and the other is epistemology, a branch of philosophy linked to the theory(s) of knowledge, but the essential element for research in the arts, the one that differentiates it from other areas, is the methodology of creating.

State of the art, an expression that has been used to designate research of a bibliographic review nature, especially in the last 15 years (Ferreira, 2002), qualifies studies that seek, in the survey of other investigations in the same field of interest to the researcher, to form a mapping of the knowledge current in a period delimited by the author (e.g., in the last five years, in the last two decades, since the enactment of a certain law, among others). According to Ferreira (2002, p. 258, our translation),

Defined as bibliographic, they seem to have in common the challenge of mapping and discussing a certain academic production in different fields of knowledge, trying to answer which aspects and dimensions have been highlighted and favored in different times and places, in which ways and under what conditions certain master's dissertations, doctoral theses, publications in journals and communications in annals of congresses and seminars have been produced. They are also recognized for carrying out an inventory and

descriptive methodology of academic and scientific production on the theme that they seek to investigate, in the light of categories and facets that are characterized as such in each work and in the set of them, under which the phenomenon starts to be analyzed.

In the case of the performing arts, given the creative and embryonic nature of research – the *stricto sensu* graduate programs in this area can be considered recent – there are few researchers who make as an initial stage of their research a survey of the state of the art in their specific fields of interest, or even a literature review that intends to exhaust the theoretical references. The bibliographic survey stage always exists, but with a character more closely linked to the conceptual interests of that specific research than in the sense of becoming aware of the state of the art of the performing arts as an area.

It can be said of research on *the state of the art* that they are motivated by the concern to become aware of the totality of studies on a given field of knowledge in order to be able to propose something original. According to Ferreira (2002, p. 259, our translation),

Sustained and motivated by the challenge of knowing what has already been built and produced and then seeking what has not yet been done, of devoting more and more attention to a considerable number of research carried out that is difficult to access, of dealing with a certain knowledge that grows more and more quickly and of disseminating it to society, all these researchers have in common the methodological option, since they constitute research of survey and evaluation of knowledge on a given theme.

Analyzing from the epistemological point of view, neglecting the learning of the state of the art in the field in which one wishes to research implies a certain form of alienation, which needs to be avoided by the researcher of the performing arts. On the other hand, I question the extent to which the artist-researcher needs to carry out a supposedly rigorous investigation of the state of the art in his area, considering that much of the research in the arts is essentially about creation. Knowing the state of the art in a field of knowledge is essential to value and substantiate the very research; however, the way this procedure is performed in other areas – for example, researching in databases such as SciELO and PubMed, depending on the area in question – may not be the best way to ascertain the state of

the art in research on performing arts, since the productions of prominent researchers in the area are almost always not indexed.

The state-of-the-art methodology in dance research: how to investigate in research bases a knowledge that is built in practice

It seems to be a consensus, among artists-researchers, that a work – whether a show, painting, performance, installation or musical piece, among others – will never be fully enjoyed through writing. Nor is this the intention of many researchers in this field of knowledge. It is not uncommon for the results of master's and doctoral research in arts to consist of shows, or scores, which are combined with a dissertation that adopts, in many cases, alternative formats and/or literary genres such as narration, letter, dramaturgy and others.

Evidently, these alternative formats do not find space for repercussion in research bases of journals with specific guidelines established mainly by methodologies from other areas of knowledge, since artistic research almost always does not seek absolute answers, in addition to often stumbling on new questions that totally redirect their paths (and not just small deviations). As an example, it is not uncommon for a master's or doctoral student to change their own research theme/subject after entering the course. Not without methodological rigor, artists-researchers review their own methods whenever change becomes imperative. Or, as Lancri (2002, p. 18) rightly observes, in the book *O meio como ponto zero*, they start by the middle: “Here is what I say to every student who asks me this question. Where to begin? Quite simply *by the middle*. It is in the middle that it is convenient to enter into your subject. Where to start from? From the middle of a practice, a life, a knowledge, an ignorance”.

Research projects in performing arts often materialize long after the investigation has begun. If research, speaking in a general way and extendable to any areas, develops through creative drives, in the arts of the scene, in particular, obeying algorithmic rules of scientific rationality to the detriment of creation and the power of change is something that rarely occurs.

The state-of-the-art methodology, assuming an investigation of the publications produced on a given subject, especially when it values those indexed and legitimized by entities that do not represent all the knowledge

produced, can even be a barrier to creativity, in a certain sense. The representation of a truth through art deconstructs the idea of absolute truth, by assuming subjectivity as the core of the construction of knowledge and language as a limit for its expansion.

Demarcations and incentives for research in performing arts

A discussion of the Kuhnian concept of demarcation, to understand whether the arts of the scene, after all, is an area of knowledge that can be considered scientific, has relevance for different reasons, one of which is the issue of research funding. Research funding in Brazil is planned according to already *demarcated* areas of knowledge (I use the term demarcation according to the Kuhnian conception). In Brazil there is a centralized system, at the federal level, of postgraduate funding, managed by the Coordination for the Improvement of Higher Education Personnel (CAPES), an independent agency of the Ministry of Education. The allocation of resources is based on a rigorous evaluation system of graduate programs, which until 2012 occurred on a three-yearly basis and, from 2013 onwards, on a four-yearly basis. At CAPES, graduate programs are linked to large areas of knowledge: i. Exact and Earth Sciences, ii. Biological Sciences, iii. Engineering, iv. Health Sciences, v. Agricultural Sciences, vi. Applied Social Sciences, vii. Humanities and viii. Linguistics, Letters and Arts In the *Arts* axis, there are ten sub-areas: i. Fundamentals and Critique of the Arts, ii. Plastic Arts, iii. Music, iv. Dance, v. Theater, vi. Opera, vii. Photography, viii. Cinema, ix. Video Arts, x. Artistic Education. In times of budgetary cuts, the institution can prioritize some areas of knowledge to the detriment of others, as occurred, for example, between 2015 and 2016, when the resource distribution methodology included the concept of priorities (P1 and P2), as mentioned in the Official Letter Anped-033/2016, of the National Association of Graduate Studies and Research in Education, in which a reduction in resources in Human Sciences is observed: “The definition of priorities between the areas for the distribution of resources meant a decrease in the participation of resources in the area of human sciences from 15% of the total in 2015, to 5% of the total in 2016” (Em Ofício..., 2016). The area of Linguistics, Letters and Arts also suffered rigorous cuts in funding at the time.

There is an a *priori* division between what is and what is not science, already established for a long time, and I am aware that the art *versus* science discussion has already had its space, having been exhaustively carried out previously (for example, in the 1990s); the point is that currently we experience another conjuncture, as several undergraduate and graduate courses have been created since then, and that there are researchers interested in new forms of academic writing that cover the arts without disregarding the purpose of reliably transmitting concepts and information, transmitting knowledge.

Today, it is easy to make research content available on the *internet* through photos, videos and texts as never experienced in previous decades, and a new generation of students is entering higher education, less afraid to choose art as a profession and as a dignified and respectable research area. Then, if before we had few publications in performing arts, today we have not only a greater number of publications, but also authors debating semantics and interrelating concepts that, although not shared, perhaps indicate the desire for mutual recognition – would this be a paradigm under construction?

As a full-time professor dedicated to teaching and research in higher education, I do not conduct artistic works outside the University. In this sense, I always produce art in the context of university research, often starting in undergraduate or graduate courses, and after a certain time these processes become part of my research laboratories, where I develop all the part of scene direction. Thus, teaching and research are constantly aligned in my work as a professor, and this is the reality of many artists-researchers in the university context. However, regarding the subject of research funding, it seems that the arts, although having their *status* recognized as an area of knowledge, continue to face a tacit non-recognition of their science status. Hence the numerous opinions received by researchers in the area of Arts stating that their projects had their "merit recognized" by *ad hoc* advisors, specialists in the area, but "did not obtain priority" in the comparative analysis with projects from other areas (Humanities, even). Art still does not have the status of science even when framed in *Humanities*. The fact is that the arts really can be in a pre-paradigmatic phase – and not be science *in fact*. Should they, however, be

neglected, or should their research be obstructed by a systematic non-investment that prevents them from making *the leap*?

Final Considerations

It has become increasingly necessary to delve into conceptual questions about the structuring of knowledge in the field of performing arts considering conceptions of man and the world that underlie contemporary artistic productions and the understanding of the issue of knowledge as a problem of man in history. And, when dealing with the issue of knowledge, it is necessary to understand different currents of thought within the scope of knowledge theories not to restrict ways of doing art and research in this area, but, precisely, to understand that knowledge is not found only in texts. The view that the university has about knowledge is updated at all times and, in the contemporary context, it has not been limited to the text as a support and means of transmitting knowledge for a long time. In the area of arts, specifically, advances in the national and international context point to the understanding of the artistic work as a means of transmitting knowledge that goes beyond generations and that has the potential to trigger, in future moments, reflections on concepts summarily captured and eternalized by the work in the present. In short, the work of art must always be understood and contextualized in a historical sense.

Notes

- ¹ Albergaria (2017, p. 14) conceptualizes *Bhava* and *Rasa*, terminologies present in Indian dance, as “Feeling, emotion” and “Aesthetic taste, juice, liquid,” respectively.
- ² I coordinate, at the Universidade Estadual de Campinas, the research group *Intercultural Studies in Presential Arts*, which is currently dedicating itself to a partnership for artistic and artistic-academic research with researchers from the University of Pondicherry, India. Group page in the CNPq Research Groups Directory: <http://dgp.cnpq.br/dgp/espelhogrupo/659234>. Group channel on the YouTube platform: <https://www.youtube.com/channel/UC1OrZwmPxdemWJPDcfqxitw/videos>.
- ³ The thesis was adapted to be published as a book and is in press, expected to be published in 2022.

- ⁴ Augusto Andraus (2018, p. 106), in his study on Thomas Kuhn, conceptualizes examples as “concrete solutions of *puzzles* derived and left open by the paradigm.” *Puzzles* is the term used by Kuhn to refer to what scientists do most of the time in “normal science.” These concepts will be resumed later in the project.
- ⁵ In addition to *The Structure of Scientific Revolutions*, I am currently studying *The Copernican Revolution*, Kuhn's first book, and *The Road since Structure*, which presents a collection of articles that discuss the repercussions of the *Structure* itself.
- ⁶ The term *paradigm* is problematized in the philosophy of science. In addition to being a subject widely discussed by other authors in this area, in the afterword to *The Structure of Scientific Revolutions*, Kuhn himself responds to some criticisms regarding the use of this term, recognizing that some clarifications were necessary. However, this discussion is essentially philosophical, being situated outside the context of this article.

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