



Investigating the Actor's Dramaturgy: theatre anthropology and its scientific applications

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ABSTRACT – Investigating the Actor's Dramaturgy: theatre anthropology and its scientific applications – Since the birth of Odin Teatret, Eugenio Barba had in mind the quest into the techniques of the actor and their ongoing training to reach optimal levels of stage presence. As a result of such interest, the *International School of Theatre Anthropology* (ISTA) emerged in 1979, giving rise to Theatre Anthropology as a new discipline for the study of the fundamentals of acting. This article presents the analysis of the methodological approaches developed by Theatre Anthropology throughout these forty years and its possible connections with other fields of scientific knowledge, highlighting its historiographic, ethnoscenological and neuroscientific applications, for the study of the actor's pre-expressive principles and the dramaturgical strategies that configure their scenic *bios*.

Keywords: **Actor. Theatre Anthropology. Ethnoscenology. History. Neurosciences.**

RÉSUMÉ – Investiguer la Dramaturgie de l'Acteur: l'anthropologie théâtrale et ses applications scientifiques – Depuis la naissance de l'Odin Teatret, Eugenio Barba garda à l'esprit les recherches effectuées dans le domaine des techniques de l'acteur et de sa formation continue visant à le doter du niveau optimal de présence scénique. Semblable intérêt abouti, en 1979, à la création de la *International School of Theatre Anthropology* (ISTA), elle-même à l'origine de l'Anthropologie théâtrale en tant que nouvelle discipline mise au service de l'étude des fondements de la performance théâtrale. Le présent article propose une analyse des approches méthodologiques développées par l'Anthropologie théâtrale au cours de ces quarante dernières années, ainsi que leurs éventuelles connections avec d'autres domaines de la connaissance scientifique, en soulignant notamment leurs applications historiographiques, ethnoscénologiques et neuroscientifiques, ceci afin de procéder à l'étude des principes pré-expressifs de l'acteur, lesquels, conjointement avec les stratégies dramaturgiques de ce dernier, configurent son bios scénique.

Mots-clés: **Acteur. Anthropologie Théâtrale. Ethno-scénologie. Histoire. Neurosciences.**

RESUMEN – Investigar la Dramaturgia del Actor: la antropología teatral y sus aplicaciones científicas – Desde el nacimiento del Odin Teatret, Eugenio Barba tuvo presente la indagación en las técnicas del actor y en su entrenamiento continuo para alcanzar el nivel óptimo de presencia escénica. Fruto de dicho interés, surgió en 1979 la *International School of Theatre Anthropology* (ISTA), dando lugar a la Antropología Teatral como nueva disciplina para el estudio de los fundamentos de la actuación. En el presente artículo se plantea el análisis de los enfoques metodológicos desarrollados por la Antropología Teatral a lo largo de estos 40 años y sus posibles conexiones con otros campos del saber científico, destacando sus aplicaciones historiográficas, etnoescenológicas y neurocientíficas, para el estudio de los principios pre-expresivos del actor y las estrategias dramaturgias que configuran su *bios* escénico.

Palabras-clave: **Actor. Antropología Teatral. Etnoescenología. Historia. Neurociencias.**

Introduction

The actor is presented as one of the vertebral elements of all stage representation, but, despite this centrality, when analysing the creative process and the interpretation techniques the actor has used throughout the years, we find methodological difficulties.

When talking about the different methodological approaches that have been successively used throughout the 20th and beginning of the 21st centuries to study the actor's work, we observe a diversity of points of view, starting with the structuralist and semiotic approaches that since its start in the 1930s in the Prague Linguistic Circle gave rise to several analytical attempts to study the figure of the actor – attempts that range, as is the case, from Jan Mukarovsky's study (1973) on Charles Chaplin performance in the film *City Lights* –, through research carried from sociological, anthropological or ethnoscenological perspectives, all the way to the new paths that cognitive neuroscience currently offers.

Of all of them, we want to highlight how from the 1980s, there was a shift of methodological approaches applied to theatre studies stemming from the introduction of a new paradigm: *culture as performance* as opposed to *culture as text* developed by semiotics (Fischer-Lichte, 2004). This direction shift led to an interest in the analysis of artistic phenomena, ranging from socio-anthropological perspectives, where the scenic fact was not presented as a text with great thickness of meanings but as a dynamic reality or shared experience in continuous motion where the focus of interest was in its process, on how things work, more than in what they mean. The interest in the study methodologies related to the theories of culture resulted in new lines and disciplines of investigation of the scenic event such as Ethnoscenology, a discipline created by the psychologist Jean-Marie Pradier, the *Performance Studies*, stemming from the works of the anthropologist and stage director Richard Schechner, or the Theatre Anthropology, promoted by stage director Eugenio Barba.

This study aims to be an approach to the research on the creative process of the actor and its pedagogical foundations that has been carried out for forty years by Theatre Anthropology within the framework of the *International School of Theater Anthropology* (ISTA) and the applications or

connections that such analytical approach has promoted in other fields of scientific knowledge.

Theatre Anthropology as a field of study of stage acting

For Eugenio Barba, Theatre Anthropology is the study of the actor's pre-expressive stage behaviour that is found at the basis of the different genres, styles and roles, and in the personal or collective traditions. That is to say: "In an organized representation situation, the actor's physical and mental presence is modelled according to different principles from those in quotidian life. This extra-daily use of the body-mind is that what is called *technique*" (Barba, 2005, p. 25).

According to this definition, Theatre Anthropology is introduced as a study about and for the performer. We are dealing with what the Italian stage director calls *a pragmatic science* (Barba, 2005), which is useful for the scholar, since through it one can get to know the interpreter's creative process.

This new approach is distinguished and departs from the anthropology of performance or from the *Performance Studies*, because, unlike other anthropologies, Theatre Anthropology presents a new field of research: "[...] the study of the pre-expressive behaviour of the human being in a stage representation situation" (Barba, 2005, p. 26)

However, it is difficult to approach the study of Theatre Anthropology without taking the three cornerstones that sustain it into account: Eugenio Barba, the Odin Teatret and the ISTA. Theatre Anthropology is a consequence of Eugenio Barba's work with the Odin Teatret, a company that he has been directing from its foundation fifty-five years ago. The Odin Teatret was created in Oslo in 1964 with performers that had been rejected by the Norwegian National Academy of Theatre. Two years later, Odin Teatret moved to Holstebro, Denmark, and created the *Nordisk Teaterlaboratorium*. Barba, for his part, was an Italian stage director, born in Brindisi, who had just finished his apprenticeship cycle with Jerzy Grotowski¹ and he wanted to create an experimental group, a research body that was different from the commercial theatres that ruled the European scene.

One of the cornerstones of the Odin Teatret is acting training. This training began under the supervision of Barba himself, but soon it would be transformed into an individual training: each performer would end up developing their own instruction program². Barba, watching the work of his interpreters, started noticing similarities between the work that Western performers were doing and the work he had observed during his trips to the East³. From these observations came the seeds that sprouted in the ISTA project.

Eugenio Barba founded the ISTA in 1979. This school emerged during a historical period in which there was a great deal of interest in interculturalism between scholars and theatre people, from theorists coming from Anthropology like Richard Schechner, Victor Turner, Clifford Geertz, Erving Goffman, to those who came from the stage practice like Peter Brook, Jerzy Grotowski or Tadashi Suzuki. ISTA is presented in this context as an unusual school, without physical classrooms for students, as it is an itinerant school. The work is developed in public and private sessions that take place periodically somewhere in the world.

Moreover, the ISTA constitutes a multicultural network of artists and theatre scholars, since it has both a scientific body⁴ formed by different teachers and scientists, coming mainly from European universities, and an artistic body coming from different Eastern and Western scenic cultures: from the dance-theatre Topeng of Bali, the Noh Japanese theatre, the Afro-Brazilian dances of the *Orixás*, the Odissi dance and the Hindu Kathakali, to Étienne Decroux's corporal mime and Meyerhold's Biomechanics.

This itinerant school holds periodic sessions in which different subjects are addressed. There's a public work section where an open symposium about the subject to be dealt with is held, and a closed-door work section where practical classes and demonstrations are held. Fifteen sessions⁵ have been organized between 1980 and 2019. It is worth noting that during the first 19 years of the 21st Century only three ISTA sessions have been held.

ISTA objectives have focused on the search of transcultural or universal principles of acting, that would concentrate in the so-called pre-expressive level of the actor (Barba; Savarese, 2009), that is, everything that precedes individualized artistic expression according to the different

cultures or interpretative forms. According to Barba, we would talk about three levels in the actor's work or creative process:

1. The performer's personality, his sensitivity, artistic intelligence and social individuality that make each actor unique and unrepeatable.
2. The particularity of the scenic tradition and the historical-cultural context through which the unrepeatable personality of the performer is manifested.
3. The use of body-mind according to extra-daily techniques based on transcultural returning-principles. These recurring-principles constitute what Theatrical Anthropology defines as a field of pre-expressivity (Barba, 2005, p. 27).

The first two levels set the crossing from the actor's pre-expressive, or zero, level to the representation. The third one does not change and is under individualities and styles. It is the biological level, the *bios*, upon which the different techniques are based. The premise that sustains this level is the existence of energy, essentially the same in all human beings from a biological point of view.

ISTA meetings, composed by artists and theatre intellectuals, focus on discovering the operative principles of the pre-expressive level of the performer, through the interrelation or comparison of the different artistic techniques or genres of the performer from different Eastern and Western cultures. Therefore, the comparative method supposes an eminently empirical approach. The performer appears as an artisan who develops artistic techniques framed in a practical thought away from the laws that produce science or pure scientific thought.

After what has been here said about the objectives and approaches of Theater Anthropology as a discipline, questioning whether it is a science or not cannot be avoided. Eugenio Barba himself gives us the answer: it is a *pragmatic science*.

"In which directions can a Western actor bear towards to develop the material basis of his art?" (Barba, 1983, p. 93). That is the question to which Theatre Anthropology is trying to find an answer, however without searching for universal laws, but, according to Barba, useful indications: "It does not have the humility of a science but the ambition to identify the useful knowledge for the actor's work. It cannot discover 'laws', but study behavioural principles" (Barba, 1983, p. 93).

This search for transcultural principles starting from what is observable, that is, from the trainings and the incorporation of techniques according to the different interpretative traditions, has as a goal the usage of knowledge that is useful for the actor's work. That is certainly a hardly acceptable definition in the eyes of the orthodox academic sciences.

Even so, Ferdinando Taviani, one of the professors belonging to the ISTA scientific body, considers the need to create a theatre science with its own principles. Tuned to this same purpose, ISTA tries in this same way to expose the problems of the creative process of the actor through actual lines of investigation that range from the principles of pre-expressiveness to the dramaturgical processes of the actor.

The Energetic Language: from the pre-expressive level to the actor's dramaturgy

Theatre Anthropology stems from a previous question: "Why, when I see two actors doing the same thing, one of them fascinates me, yet not the other?" (Watson, 2000, p. 57).

This *pragmatic science*, according to what has been stated, will be interested in how the performer can catch, capture or attract the attention of the audience, a physical and sensory attraction. That leads to a physiological and anatomical treatment of the actor's body, getting into the study of his stage presence. For Barba, it is evident that performers from different places, cultures and times use similar principles for their work that are found in the pre-expressive substrate of their art.

Pre-expressivity presents itself as a level of organization of the scenic *bios*, endowed with a coherence of its own, independent of the coherence of the subsequent level of organization, the one of sense. But "independent" does not mean here "deprived of relationships". Just as in the human body there is a molecular level of organization, a cellular level and a level of organization of the organs, Barba, applying to the stage situation this biological model of levels of organization, establishes three levels of organization:

1. The level of action, which corresponds to the living cell.
2. The level of action in relationship, not providing yet any meaning to the spectator.

3. The level of action within its context, the one of the whole, the evocative level, from which different functional values arise and, therefore, different meanings (Barba, 2005, p. 238).

These three levels correspond directly with three levels of organization or three dramaturgies of the spectacle: the *organic dramaturgy*, the *narrative dramaturgy* and the *evocative dramaturgy* (Barba, 2010). From its etymological key (*drama-ergein*), the concept of dramaturgy refers to the work of actions.

According to the scholar Marco De Marinis (1998), the basis of Theatre Anthropology is found in theatre-everyday life relationships, that is, between theatrical behaviour and cultural behaviour. Two different approaches would result from the analysis of these relationships: one which finds analogies and affinities that lead us to the performer, that uses as a basis the daily behaviour; and another which differentiates and separates what is theatrical from the daily life, and according to which the performer would use as a basis an extra-daily work, using movements that would lead him to build an artificial⁶ body-vocal structure. The first tendency is related to what Barba calls the *inculturation* process, the second to *acculturation*.

This last process is the core of Eastern acting traditions, such as the Noh theatre in Japan, the Odissi dance and the Kathakali theatre-dance in India or the Topeng theatre-dance in Bali, whose performers acquire a specific body-vocal codification, and of certain Western forms such as ballet or mime, especially the body mime promoted by Étienne Decroux, as well as codifying treatises of gestures and emotions⁷. All these styles and interpretative traditions will base their work on an artificial grammar of the body that would activate the performer's scenic presence through techniques that are present in the performer's life and that he would learn and train before he began to re-present or express (himself).

From this "zero level", the performer can be colonized or acculturated by the different styles or specific corporal techniques (Barba; Savarese, 2009). Barba calls this body activated by the performer the *dilated body* or *purposive body*, that is, a *body-in-life* (Barba, 1989).

The *dilated body* has as operative principles those belonging to the pre-expressive level. This amplified and irradiated body, physiologically and energetically speaking, is what fascinates and attracts the attention of the spectator when the performer moves within space through actions that not

only involve the physical but also the mental part (Dantas de Mariz, 2007). It is a psychophysical work that puts into operation the body-mind of the performer. The notion of a *dilated body* is directly related to the concept of *incorporated knowledge* of Danish anthropologist Kirsten Hastrup (1995), based on how culture is bodily absorbed, so that cultural knowledge is transmitted by means of the body, this being, according to Hastrup, a locus of *agency* or place of action.

The principles that function at the pre-expressive level either as operational level or dynamic operative level are based on the use of the performer's energetic language for the creation of the *body-in-life*. From ISTA's first session to the present, the following principles have been established:

– Balance alteration. The shift of the performer's normal balance and centre of gravity causes the weight to transform into energy.

– Opposition. It corresponds to the game of association between impulses and counter-impulses, defined by Barba as *sats*, starting from the opposition of the different parts of the body tensions, which he calls, in turn, *dance of oppositions*.

– Coherent incoherence. This principle is based on the use or excessive expenditure of energy in a performing situation.

– Simplification or omission. This principle proposes the removal or omission of some elements to give relevance to others, more significant in the performer's sequence of actions.

– Equivalence. Equivalence as a principle implies a recreation, by analogy, of a situation of reality. Consequently, recreating is redoing through action (Barba; Savarese, 2009).

The points above discussed allow us to conceive the dramatic construction of a performance and, more specifically, of the actor in terms of energetic rhythmology, that is, through the organization in time of the tonic variations of the actor's body. In this way, the controlled and dominated energy modulation will intervene in the attention processes of the viewer.

The performer's micro-dramaturgy would be given by the physical action, not by gesture or movement endowed of an incomplete sense. The physical action is understood as the minimal unit discernible by the viewer.

Each segment of the performer's gestural/vocal behaviour would be located between two successive energy variations. The work of the body-mind applied to the action would result in action sequences that would make up the *score*, a term used for the first time by Jerzy Grotowski (De Marinis, 1997).

The *score* is a precise structure that indicates an organic coherence on the part of the actor who executes it. But this external precision needs an organicity or internal coherence so we can talk about real action and an effect of reality can be created on stage. Behind the coherence of external action there is an equally coherent organization called *sub-score* constituted by "detailed images or technical rules, by stories and questions to oneself or rhythms, by dynamic models or situations, either lived or hypothetical" (Barba, 2005, p. 179). The *sub-score* would correspond to the actor's secret props and hidden paths related to the Stanislavski's concept named *subtext*.

What is considered organic is understood through the procedure of remaking nature through the actions of the interpreter, which are composed and recomposed by means of the *score* along with the *sub-score*. Such union results in the external and internal coherence that real action needs to give rise to the *organicity effect* (Barba; Savarese, 2009), that is, the reprocessing of spontaneity, which is the result of stage behaviour that stems from a tacit knowledge that endows the actor's body with incorporated knowledge.

Dialogues with Historiography

The approaches and principles of the Theatre Anthropology that have emerged from ISTA's sessions have given rise to applications in other scientific areas; it could be said that they have established a dialogue with other sciences of knowledge. As the first example, we can point out theatre historiography (Azzaroni, 1990; Guccini; Valenti, 1990; Taviani, 1984; 1990; Cruciani, 1992).

The historiographical applications have focused mainly on the reconstruction of techniques or codes of action of comedians from the past by studying their *energetic language*, being concerned about their body compositions from the study of their artificial body or contrasted body placement, which brands an extra-daily stage style. The material used for its analysis has been mainly iconographic sources and audio-visual materials.

Ferdinando Taviani considers theatrical actors as figures of an *energetic language* that shows through from the modelling of their bodies. They differ in this from the cinematographic actors, whose work is based on videotaped gazes. “Instead of the first or very first plane, in theatre there is then a relationship between actor and spectator, which can become intense or very intense when the actor’s presence and credibility are particularly strong” (Taviani, 1994, p. 99).

The Italian researcher advocates a circular relationship between figurative arts and acting arts. The issue is to understand what it is that we can see and analyse when we look at an image, about an actor’s action painted or sculpted by an artist. The figurative documents represent a starting point for the study of postures. In Eastern engravings, these postures would be intended to be pauses in the movement of the stage performer, as it is in some engravings the Japanese Kabuki actors. However, in the Western world, according to Taviani, the postures would not correspond to pauses for the actor on stage. Therefore, the painter who portrays the actor’s image on paper or on the canvas isolates in one instant one of the many steps of the actor’s dance. Starting from these premises when approaching the iconographic document as a source for the study of the technique of the interpreter, Taviani applies it to certain interpretative styles or encoded forms of the Western actor, as is the case of the *commedia dell’arte*.

About this, we highlight the study of Ferdinando Taviani along with Mirella Schino (1982) about the Italian actors of the *commedia dell’arte* from the second half of the 16th century, based on the series of 85 illustrations collected by Sieur Fossard, the King’s music regular and conservative of the National Museum of Stockholm, known as *Recueil Fossard*, belonging to the period between 1575 and 1589. Such work was broadened by Marco De Marinis’s (1998, p. 225-281) contributions, who speaks about two possible energy codes regarding these comedians from diverse iconographic materials: one is an energetic, vibrant and acrobatic code, corresponding to the second half of the 16th century, which would contrast with a second one, an elegant, refined and more aristocratic code, that would be dominant in the later period, during the 17th and 18th centuries, and relating to the settling of Italian comedians in France, where a performance based in contrasts would lead to an almost ballet-like smooth

style of Mannerist movements. Ferdinando Taviani maintains that the pre-expressive basis of this new type of stage behaviour of *dell'arte* actors would be the noble dance, and De Marinis goes so far as to propose the hypothesis of the *minuet* as the most popular dance amongst the European aristocracy and specially, in the Paris of the time.

The iconographic material of *dell'arte* comedians is carefully selected by both scholars to show the transformations experienced by their performance from the 16th to the 18th century. Paintings, engravings or drawings by the masters Jacques Callot, Claude Gillot or Antoine Watteau are rejected because they represent fantasy scenes or Neapolitan carnival dances and are not reliable sources, unlike the *Recueil Fossard* engravings, whose engraver shows that he modifies his style in relation with the subject's mutation and not with the work's author own stylistic characteristics. In these late 16th and early 17th century materials, the actor's work is manifested from a style of performance based on contrasts, oppositions, unnatural twists that cause physical body tensions. This leads Taviani to talk about an extra-daily stage behaviour in the case of the old and the *zanni* comic masks. On the contrary, the lovers keep an elegant and refined performance. From the second half of the 17th century, iconographic sources will note that this energetic performance will give way to another realistic-elegant one which would conform to the classicist canons of the French stages.

The same study guideline has been used for historiographic research on actors of the 18th and 19th century, such as Henry Irving or Antonio Morrocchesi and for new readings of the works by Vsevolod Meyerhold or Konstantin Stanislavski (Barba; Savarese, 2009). Amongst all of them, we can highlight the rigorously documented interpretations that Franco Ruffini has made about the Stanislavski system based on the review of the Russian master's texts, made from a Theatre Anthropology point of view (Ruffini, 2005), or the hypotheses established by Taviani on how the actor Antonio Morrocchesi worked from his declamation treatise published in 1832, *Lezioni di declamazione e d'arte teatrale*, where Morrocchesi included 40 lithographs representing 40 stage postures linked to parliaments of an Alfieri's tragedy repertoire (Barba; Savarese, 2009).

Regarding these guidelines when interpreting the iconographic sources found about the actor, it is also worth noting that there is some

disagreement amongst scholars about whether or not it might be dangerous to read into the past from the vision of an artist of the present, pointing out that one must be cautious when attempting to attribute body energy codes to images that belong to previous centuries.

Besides the reinterpretation of iconographic documents about the actor, Theatre Anthropology brings a new concept to the performing arts historiography field: that of the subterranean history of the theatre or the Subterranean Organic bridges.

It is interesting for the Theatre Anthropology to observe how links or bridges are established between the actors of different traditions and cultures. These bridges are based in the paradoxes of the techniques, resembling the paradoxes of the sea, that unites and separates at the same time (Barba, 2008). A tradition, in the scenic practice, can be understood as knowledge or technique. Tradition implies preservation and transmission of skills, behaviours and principles conforming a legacy or inheritance from the ancestors,⁸ to give rise to a shape. Consequently, when we speak about the acting traditions, we not only refer to Eastern ones, which have been transmitting for centuries, but we also include the Western ones. All of them represent technical knowledge acquired by the actor we see nowadays on stage and have colonized his body-mind. This colonization of the interpreter gives rise to what Eugenio Barba defines as *actor's professional identity* (Barba, 1996), which does not have to coincide with the actor's cultural identity.

Eugenio Barba conceives the actor's art as an iceberg of which we only appreciate its visible tip. The part that remains submerged from the spectator's perspective corresponds to the invisible work, the techniques that the interpreter incorporates through workouts throughout his training as an artist. Submerged knowledge corresponds to the underground area of stage interpretation. The Organic Subterranean bridges concern the history of the actor from the learning process point of view, and the transmission of the traditions understood as knowledge, techniques, skills or acquired methods that arise, develop, change and innovate, being these traditions the basis of the professional identities of the comedians. These techniques are the channels through which also values surface and travel over time (Masgrau, 1992), the ethical dimension of the stage practice.

Underground space, unlike work done on the surface of the styles, is presented as the territory of exchanges, where theatre experiences its multicultural unity, its organic complexity: “The foundations are not canteens or catacombs. They are Paradoxical Subterranean bridges, which allow the passage from one part to another of the theatre country, united, although materially dispersed in geographically distant places” (Barba, 2008, p. 219).

Dialogues with Life Sciences

Barba emphasizes the importance for him of having met with eminent scientists throughout his career, such as the physicist Niels Bohr, the biologist Henry Laborit or the psychologists Fridtjov Lehne and Peter Elsass (Sofia, 2015), as well as the inspiration he drew from seminars on performing practices and on life sciences organized by the psychologist Jean-Marie Pradier⁹ for ISTA’s first sessions. Pradier was a founding member of the Theatre Anthropology school, and creator and promoter of Ethnoscenology, a scientific discipline whose objective is focused on the study of *organized human performing behaviours* (OHPB). From this perspective, the stage work of the actor is studied from its neurobiological substrate and the cultural diversities of the interpretative practices (Pradier, 2001). The ethnoscenological approach proposes considering the scenic *bios* from the sciences of life, by taking its biological roots and cultural plasticity into account. Pradier distinguishes this discipline (Ethnoscenology) of Theatre Anthropology for its universal cultural dimension and its research methods, yet he considers that its *corpus* can encompass that of Theatre Anthropology (Pradier, 1997). Consequently, we can consider that both disciplines share clear connection points.

Pradier presents his biological theory of stage behaviour starting from specific modes of organization of the stage presence articulated from three main axes: the epiphanic and phanic system, the phallic dimension and the phatic dimension. The epiphanic system would correspond to the deep structure of behaviour, constituted by what is inherited and that is acquired biologically by the morphological plasticity of the human species, from which the phanic system would be manifested. We should put this together with the phallic dimension, related to the vital energy and connected to the impulses and primal instincts of both humans and animals, highlighting the

multi-sensory dimension of the actor's art and the sensory exchanges that occur in the bodies in a situation of representation. Finally, we would have the phatic dimension, which highlights the social or relationship modes that are established with others to configure socialization networks and ties (Pradier, 1998).

Pradier relates the neurobiological perspective of live spectacles to the ethological approach. This approach, which compares animal and human behaviour in search of universal foundations of behaviour, directly connects with living creatures' ritualization based on fixed behavioural patterns and instinctive actions (Pradier, 1995). Such conceptions exposed by Pradier are intertwined with those of other biologists and ethologists, such as Henry Laborit, Konrad Lorenz, Julian Huxley or Irenäus Eibl-Eibesfeldt.

Both animal and human worlds are affected by all kinds of ritualized behaviours, which are innate to the species and linked to the instinctive substrate, and which ethologists call innate motor patterns. These ritualized strategies are applicable to live performances, presenting the actor from his instinctive motivational substratum, which is put into operation by means of biological actions or movements that configure his interpretative score. Ritualized behaviour is a type of action that is instinctive and, at the same time, is structured and precise, that is, it combines organicity with precision, and the combination leads to effective physical action. These qualities are highlighted and studied by Theatre Anthropology.

For Pradier, the interrelation between animal and human behaviour can be observed in several characteristics of the actor's scenic body, such as: the total engagement of the individual, both emotionally, cognitively and somatically; active standby or the intention within the immobility related to the *sats*; the neat and precise action, without parasitic movements; the quick denouement of the action, which reminds us of the *jo-ha-kiu* sequence of the Japanese Noh actor, highlighted by Barba; or the action not stopped or inhibited at the moment of decision making (Pradier, 1998).

The connection between scenic behaviour and animal behaviour is also reflected in the thesis on *ritualized aggression* by Puerto Rican researcher Patricia Cardona (2000). Cardona, also a participant in the ISTA sessions, posits how the dramatic corporal expression for the elaboration of the mechanisms that today constitute the techniques of scenic training

would have started from the animal behaviour, awakening in the actor's body the skill and the precision. According to her theory, the interpreter's bodily and mental energies would feed on the impulses of survival transformed or channelled from extra-daily techniques. Consequently, the mastery in the handling of instinctual impulses and the precision in the execution of the actions to carry them out are found in the animal behaviour transferred to the actor's art.

For Cardona, the actor's dramaturgy is given by the conflict, the struggle of opposing forces. Conflict would constitute the root of the scenic *bios'* vitality and presence. Therefore, the aggression instinct would prevail over others for performance survival, being understood as *ritualized aggression* for the dramatic art and thus being the origin of the theatrical behaviour. The ritualized aggression would be organized from the impulses of the protagonists. Dramatic conflict elicits survival instincts, inducing in the actor a state of alert different from the daily one, as well as muscular energy control by means of which the actor increases his presence. According to this, the actor's extra-daily techniques would be connected to animal behaviour patterns and would seek natural impulses, states of tension and opposition, dynamics shifts and energetic qualities, or the precarious balance in suspension management in order to maintain the state of alert and keep the spectator's attention. As we can see, Cardona's thesis link biological and ethological thinking with the actor's stage behaviour, incorporating the knowledge of Theatre Anthropology into her line of research.

Both the works developed by Jean-Marie Pradier from the ethnoscenological perspective and Patricia Cardona's investigations are clear examples of how ISTA discoveries come into connection with the contributions offered by life sciences for the deep understanding of the biological and ethological organization levels of the actor's creative process.

Dialogues with Neurosciences

From the Theatre Anthropology perspective, the array of actions developed by the actor is a direct consequence of the interaction between his mental and physical activity, of the performer's body-mind, which is put into operation to carry out the dramaturgy.

Particularly for Barba, and for the performing pedagogy of the 20th century in general, the actor is presented as a *physical actions master*, building from them the so-called *second nature* of the performance, as Stanislavski (Whyman, 2008) pointed out. Therefore, the programming, planification and execution of the actions depend on premotor and motor processes. Moving from attention to intention and, later, to action, involves a dance that is activated from the body-mind. Current research developed by motor cognitive neuroscience of neurophysiology allow to differentiate a movement, a voluntary displacement of a body part in a physical space, a motor action, a movement. Current research in motor cognitive neuroscience or neurophysiology shows that it is possible to differentiate between a movement, a voluntary displacement of a body part in a physical space from motor act, a goal-directed movement, and from an action, or series of motor acts arranged with a precise intention that are made to achieve a goal (Sofia, 2015), thus agreeing with the works on physical action developed by the theory-practice scholars of the 20th Century scene from Stanislavski to Barba.

The discovery of mirror neurons in 1996 by the team of the researcher Giacomo Rizzolatti of the University of Parma has a clear impact on performing theories. These neurons allow us to understand other people's actions, intentions and emotions, and introduce also the neurological basis of the imitation of the actions of others process and, therefore, of the learning process. The application of the discovery of the specular correspondence system to the world of the actor allows us to understand how we can perceive the actions of others and how we imitate them not only by making an automatic copy, which would correspond to mimicry, but by understanding the intention of the observed action to reproduce it later, that is, to imitate it. We are, neurobiologically speaking, imitative beings (Rizzolatti; Sinigaglia, 2006).

Researcher Gabriele Sofia, applying the discovery of the specular correspondence system to the theatrical event, highlights how mirror neurons are only activated in response to actions motivated by a specific intention and goal, from which is derived that, in order to get the viewer to feel and understand the actor's intention on the scene, the actor must be able to perform real actions, that is, precise actions, that meet the requirements of attention, intention, action and reaction. In order to

demonstrate these theories, Sofia gives as an example the different trainings carried out by Odin Teatret actresses Julia Varley and Roberta Carreri (Sofia, 2010). Consequently, postulations developed by ISTA regarding the real action that constitute the actor's score have now an explanation from a neuroscientific perspective.

Within the motor scheme, the moments of perception, attention and intention are presented as fundamental for the action. Perception, as the latest neuroscience studies expose, is related to the motor process. Our perception of the environment is conditioned by our own motor patterns and by our modes of interaction with the environment around us, thus we could speak of *action potentialities* involved in the perceptual process (Sofia, 2015).

Attention, on the other hand, as researcher Vezio Ruggieri comments, is the tendency towards something and this fact elicits a micro-variation of corporal tensions that is directly related to the psychological tension (Ruggieri, 2001). Consequently, there is a tension component (*a-tension*) that involves a physical and motor adaptation to the object to which it is directed. The next step will be the intention, understood as a state of *in-tension* or, more specifically, an imaginative mental process characterized by a programmed tension. The intention involves the necessary tension to carry out an action that is goal oriented. From psychophysiology, this involves an imaginative process with a physical tension. This definition of intention connects us with the concept of impulse and counter-impulse, *sats*, advocated by ISTA.

The above-mentioned motor scheme highlights the game of body tensions, which is a fundamental concept in the pre-expressive principles exposed by Theatre Anthropology, as are the concepts of alteration of balance or opposition. The muscular system is presented as a structural element of motor activity and emotional process. Therefore, the acting work would be a consequence of controlling and juggling with the different tension variations worked through according to variables of frequency and intensity, causing a harmonic modulation at the eyes of the spectator and constituting the scenic presence of the performer.

On the other hand, the concepts of *sub-score*, *physical score* and *vocal score*, developed by Theatre Anthropology, have a connection with the

advances that are currently taking place with neuroscience studies related to internal action, physical action and vocal action.

Internal action would be related to the *sub-score*, since it responds to the creation and manipulation of mental images related to the simulation that the actor would be doing. Studies on motor cognition have shown how the mental simulation of an action or moving image without physically actually performing it, has a positive effect on the performance of the subsequent action (Smith; Kosslyn, 2008). It has been investigated how mental simulation uses the same neural procedures as does the real experience, and different experiments have concluded that after only imagining an action, there are physical changes, heart rate changes or changes in the breathing rhythm in the individuals who have imagined it, demonstrating that imagination is a psychophysiological process.

Regarding the score of vocal actions, we must point out that the discovery of mirror neurons in the Broca's area has instigated several neuroscientists' interest on the action, the word and the process of embodiment performed by the actor. The actor's voice is integrated into the action of the body, as Barba or Grotowski point out. Voice researchers such as Carmela Stillitano (2004) consider that, in order to configure a vocal teaching method, one must always start from studying about the body. For them, vocal action is linked to physical action.

In a current investigation on this subject carried out by the neurobiologist Silvia Spadacenta and the neuroscientist Giovanni Mirabella at the University of La Sapienza in Rome, the actors' embodied language is being studied. In the experiment, actors and actresses of important Italian groups participated, such as the Tascabile Theatre of Bergamo or the Ridotto Theatre of Bologna. Although the results of the experiments are partial, everything seems to indicate that the actor has a different ability to interpret the words he reads because he has developed certain abilities. Spadacenta confirmed from different experiments that, when we listen to an action verb, the region of the body involved in this action is activated in us, which indicates that our motor system allows us to understand the language (Sofía; Spadacenta; Falletti; Mirabella, 2012).

From the psychophysiological perspective, highlighted by researcher Vezio Ruggieri, the actor's prosodic game is understood as a constant

variation of tensions based on muscular dynamics and internal and external stimulation that is directly related to all the phases of the action (Ruggieri; Walter, 2015).

According to the above exposed, we can summarize that the vocal score created by the actor is the product of a mental and physical activity that allows its activation, both by internal induction, through the visualization of images, and by physiological induction from the modification of the expressive components of the voice or by reaction to external stimuli.

The internal action and the vocal action come together in the physical action at the time of building the interpretative score in front of the viewer; which is presented as an external product resulting from an internal elaboration process, that is, a constant modification of the body-mind that involves the activation of the peripheral nervous system (PNS) and the central nervous system (CNS).

The *organicity effect* highlighted by Theatre Anthropology would be, from a neuroscience advances perspective, presented as an effect of the unification of different cognitive, physiological and motor levels, establishing a circular feedback relationship, understanding the actor as a psychophysical entity.

Psychophysical performance, a basic principle of acting pedagogy, which has been studied from its pre-expressive principles, finds a neuroscientific substrate in post-cognitive theories models, which state that the different relationships and connections of the parties cause the emergence of an event that cannot be reduced to these parties and relationships. We are talking about emerging systems and enactive or embodied perspectives (Varela; Thompson; Rosch, 2005) labelled as *embodied cognition*¹⁰ (Bryon; Bishop; McLaughlin; Kaufman, 2018), that lead us to treating the actor's creative process from the sciences of complexity, considering the actor as an emerging system of a multiplicity of factors that interact between them (Sofía, 2015). From this perspective, the shaping of the actor is based on both horizontal and vertical, diachronic and synchronic interactions of the different levels of organization that make up his scenic *bios*. This is a view that opens new horizons in order to understand the levels of organization of the dramaturgy of the actor

proposed and studied by ISTA from the perspective of cognitive neuroscience.

Some Final Considerations Regarding Theatre Anthropology

As seen in the present study, the birth of the Theatre Anthropology and the ISTA promoted in the 1980s and 1990s a more than remarkable bibliography, where the epistemological, ontological and methodological study of the new *pragmatic science* was proposed, and applications of the emerging discipline were being sought in other areas of knowledge such as historiography or the sciences of life. During the initial years of the 21st century, research on the principles of the actor developed by ISTA is still taken into account in the new methodological horizons of the study of acting¹¹, such as the new orientations emerging from the field of neurosciences or cognitive sciences, without forgetting the perspectives born during the previous decades, such as ethnoscenology.

Even so, we believe that there are many unresolved issues in the approaches of Theatre Anthropology, which has aroused criticism of the work developed by Barba within the ISTA during all these years. We can point out a series of debatable aspects when proposing Theatre Anthropology as an analytical option for the study of the actor: the definition of *pragmatic science* is confusing and ambiguous; the pre-eminence of the pre-expressive level over other aspects that affect the performance entails that it will not delve into the study of other levels of the actor's work in a deeper way; the proposed method, which consists in the comparative study of the different techniques, needs more solid theoretical and scientific foundations; the relationship established between theatrical techniques and extra-daily techniques can be debatable, since not all extra-daily techniques are theatrical and not everything called theatrical has to be necessarily extra-daily; or the interaction between Eastern and Western techniques to find common principles causes controversy.

This last point regarding the relationship between East and West has raised debate and criticism, since voices such as those of Richard Schechner or Phillip Zarrilli (Watson, 2000) have considered that Barba speaks of the eastern actor lacking sociocultural and historical context, presenting decontextualized forms or scenic traditions. Schechner himself considers the

perspective proposed by the Theatre Anthropology unfair, since the Western acting techniques are judged from the Asian genres, proposing the ISTA as a platform from where Barba exposes and demonstrates his own opinions regarding the actor's art counting on the collaboration of Western and Asian colleagues.

Beyond these questionable approaches, Theatre Anthropology has created, throughout these 40 years, a technical and conceptual *corpus* of the rigorous actor, proposing the ISTA as a forum for study and debate on and for the performance, and getting to the point of specifying the interpreter work from operating transcultural principles that arise from the analysis of Eastern and Western interpretive techniques. The connection of the postulates of Theatre Anthropology with historiography, ethnoscenology, ethology and cognitive neuroscience opens up new study perspectives, promoting a multidisciplinary and enriching vision that helps now and will help in the future to better understand the complexity of the actor's work through the research of its technical, pedagogical and scientific foundations: an interdisciplinary path full of possibilities for future inquiries.

Notes

- ¹ Previously, in 1955, he had studied at the University of Oslo, where he arrived from Italy after studying at the military academy and, in 1960, with a UNESCO scholarship, he studied theater at the Warsaw school in Poland. After six months, he dropped school and started traveling around the country. On one of his trips, he found the *Teatr 13 Rzedow*, directed by Grotowski, he saw Grotowski's performances and was completely captivated. Several months later, he met Grotowski at a bar in Krakow. As a result of that chance encounter, Grotowski invited him to participate in his laboratory. Barba will reflect in different writings this stage of his learning (Barba, 2000).
- ² The Odin Teatret bases its work on the acting trainings, which are more connected with the biomechanics of Meyerhold, the training of Tadashi Suzuki or the dramatic corporal mime of Étienne Decroux than with the psychological realism of the first stage of the Stanislavski System, Sanford Meisner or Lee Strasberg, placing himself in the tradition of European physical theater. Barba not only absorbs from Eastern sources, which are an essential reference for his research on the actor's work, but also gathers influences from his teacher Jerzy Grotowski and his famous training from the *negative way* in

his Poor Theater, working the organic impulses that give rise to action by eliminating the psychophysical resistances or blocks of the interpreter (Watson, 2000).

- ³ The influence of the Eastern masters and the acting techniques of the interpretative traditions of the East will be fundamental for Eugenio Barba in the view of the actor's creative process and in the configuration of the operating principles of Theatre Anthropology. In a recent publication, the director of Odin Teatret has gone deeper in the importance of these techniques in his artistic and pedagogical work (Barba, 2017).
- ⁴ ISTA has collaborated with European university professors such as Nicola Savarese, Franco Ruffini, Marco De Marinis, Jean-Marie Pradier, Fabrizio Cruciani, Ferdinando Taviani, Ugo Volli, Patrice Pavis, Lluís Masgrau and Marta Schino.
- ⁵ The first ISTA session was held in Bonn, Germany, between October 1 and October 31, 1980 with the monographic theme: *Anthropological Theatre*. It was followed by the following sessions: 2nd – Volterra and Pontedera, Italy, from August 5 to October 7, 1981: *Pre-expressivity/improvisation*; 3rd – Blois and Malakoff, France, from April 12 to 26, 1985: *Dialogues between cultures*; 4th – Holstebro, Denmark, from September 17 to 22, 1986: *The female role*; 5th – Salento, Italy, from 1 to 14 September, 1987: *The actor's tradition and the identity of the spectator*; 6th – Bologna, Italy, from June 28 to July 18, 1990: *Acting techniques and historiography*; 7th – Brecon-Cardiff, United Kingdom, from April 4 to 11, 1992: *East and West. Score and sub-score*; 8th – Londrina, Brazil, from 11 to 21 August, 1994: *Tradition and traditions founders*; 9th – Umea, Sweden, from 9 to 21 May, 1995: *Form and information*; 10th – Copenhagen, Denmark, from May 3 to 12, 1996: *The bios of the actor*; 11th – Montemor o-Novo, Portugal, from September 14 to 25, 1998: *O-Effect*; 12th – Bielefeld, Germany, from 1 to 10 September, 2000: *Dramaturgy: Action, structure, coherence*; 13th – Seville, Spain, from October 15 to 25, 2004: *Flow: rhythm, organicity, energy*; 14th – Wrocław, Poland, from 1 to the 15 of April, 2005: *Improvisation: memory, repetition, discontinuity*; and 15th – Albino, Italy, from April 7 to 17, 2016: *The knowledge of the actor: Personal paths, techniques and views*. It is interesting to note that only one session of the ISTA took place outside European territory: the one held in Londrina, Brazil. It would not be difficult to understand this location, since the Odin Teatret, throughout its professional career, has had a strong connection with the Ibero-American countries and has exerted a great influence on them.

- ⁶ For the corporal techniques, Barba resorts to the anthropologist Marcel Mauss' well-known work on body techniques. This author gives numerous examples of human activities pointing out that all corporal technique is determined by society. Barba picks up from Mauss the notion of daily body, conditioned by culture, to introduce the opposition between daily situation and situation of representation or extra-daily, emphasizing that, in the situation of representation, there is a body technique totally different from the own daily situation (Barba; Savarese, 2009).
- ⁷ Like, for example, the declamation treaties of the 18th and 19th centuries, such as that of Francesco Riccoboni, Johan J. Engel, Aaron Hill, Antonio Morrochesi or, in the Spanish case, Vicente Joaquín Bastús y Carrera, Fermín Eduardo Zeglirscosac or Andrés Prieto, among others. In addition, we can also highlight the treatises of pseudoscience, such as physiognomics, which studies this gestural coding; is the case of the treaties of Gian Battista della Porta or Johan Kaspar Lavater.
- ⁸ This term is also used by Barba to speak of the scene reformers as *ancestors-reformers* (Barba, 2004) who, through their investigations, created the Western traditions of the 20th century from solitude and revolt, from their individual view and the breakdown of the models that reigned at that time, in order to build new values for the scene that included everything from acting techniques to a new way of understanding theatre and life; they also proposed the conception of a new actor as a new man before a new society.
- ⁹ In 1984, 1989 and 1991, Jean-Marie Pradier organized in France international seminars on performance practices and life sciences in which Eugenio Barba, Henry Laborit, Susana Bloch and John Emigh, among others, participated. Pradier and Alina Obidniak organized in the Polish city of Karpacz, in 1979, an international colloquium on the scientific aspects of the theatre in which Eugenio Barba participated. The topics discussed in this colloquium had great influence on ISTA first editions, held in Bonn and Volterra.
- ¹⁰ The notion of *embodied cognition* is framed in the so-called new cognitive science or post-cognitivist cognitive theories, which propose an alternative to classical cognitivism, focusing on models that substitute the notion of *representation* of the environment in previous models for the notion of *embodied action*, defending the reciprocal connection between body and mind. This gives importance to the sensory-motor part of the human being and its relational condition with the environment as a source of cognitive processes, and overcoming the existing contraposition between perception and action.

Authors such as Francisco J. Varela and his enactive theory; Alva Noë and his research on perception and action; George Lakoff and Mark Johnson and their theories about the metaphors of daily life; or Antonio Damasio and his neuroscientific studies on emotions are clear examples of that perspective regarding cognitive study.

- ¹¹ The theoretical works of Eugenio Barba and Odin Teatret have continued being published in the first 19 years of the 21st century, and so have critical studies about the company. Regarding Theatre Anthropology, it is important to highlight the reeditions and translations into other languages still being made of the emblematic Dictionary of Theatre Anthropology written by Eugenio Barba with Nicola Savarese, published for the first time in 1983. It should be noted that, recently, the two authors have written a new work, this time a reflection on the actor, *I cinque continenti del teatro. Fatti e leggende della cultura materiale dell'attore* (Barba; Savarese, 2017). In this case, we find a work that is mainly focused on the culture of the actor rather than on the technique.

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