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Through a Scientific Lens

At the 'origins' of theatre anthropology

Abstract: This article is based on the broad network of interests established by Eugenio Barba in the first decade of ISTA with the world of science: a fertile, lively relationship with figures inside and outside the world of theatre. With the contribution of archival documents preserved in the Odin Teatret Archives, the article focuses on certain artistic and intellectual episodes that exemplify the relational dialectics of interpenetration, exercised in two opposing tensions (one of approach outwards, the other of attraction inwards), implemented by Barba in a vast knowledge-seeking project, unprecedented in the history of the theatre. It was also based on these premises that Barba promoted the concept of theatre anthropology as a plural, interdisciplinary and intercultural living discipline: a discipline founded on the study of human beings and the history of cultures, combining a purely humanistic approach with new research from the so-called hard sciences. The impact and wide range of interaction of theatre anthropology as a new subject in the field of knowledge subsequently gave rise, over following decades, to ample literature hosting a lively and constructive debate.

Keywords: Theatre historiography; Cognitive sciences; Odin Teatret Archives; Social psychology

In a 1986 article titled “Theatre Anthropology”, which appeared in the Italian journal *Teatro e Storia*,¹ Franco Ruffini considered the new field of theatre anthropology studies within research aimed at investigating the origins of theatre, understood, the author said, not only in the strictly historical sense of the word, but also in the “philosophical” one.² Within this perspective, an expansion of understanding developed along lines of research covering the arts throughout the 20th century. In theatre, too, with a new awareness, it was held that consciousness and knowledge should broaden to give expression to what until then had been unexpressed. Theatre anthropology, as a new discipline, placed the actor’s work at the centre of its attention, by means of a dual analysis that, in Eugenio Barba’s view, takes place both in pre-representative processes and in relation to the perception of spectators. Underlying this discipline was first and foremost an empirical, practical approach, based on the body, able to lay down new principles of authenticity and open up a whole array of question marks.

1. Ruffini 1986, 3-23. Ruffini’s article “Theatre anthropology” was also published in English in the first issue of the *Journal of Theatre Anthropology* (Ruffini 2021, 71-83).

2. Ruffini 1986, 3; Ruffini 2021, 71.



A historiographical framework for the “problem” of origins was suggested by Fabrizio Cruciani in some illuminating articles published starting from 1989 onwards in *Teatro e Storia*.³ If theatre is a set of relational dialectics, according to Cruciani, then so too is the thinking about the theatre. If every new theatre is, historically, a re-founding of the history of theatres, retrieving its own dimension of idea and “place of possibilities”,⁴ then historiography should be a search for the movements and processes within which these reforming instances are developed. It is not, therefore, a question of developing a rigidly rule-bound historiography, experienced as “alibi”, “refuge”, or “explanatory principle”,⁵ but rather a living and plural discipline, a “body-in-life”⁶ centred on a dialectical relationship. For Cruciani, in theatre, dialectics is not a way of knowing, but is its very substance.

As a concrete example, Cruciani addressed the idea of “*tradition de la naissance*”⁷ by Jacques Copeau, who had outlined the possibility of a rediscovery, “of new life”, of the theatre of Molière. It is interesting to note that starting from the late 1915, as Aliverti has written, “the idea of improvisation, in Copeau, moved from literature (the plot determines the action) to pedagogy, centred on the actor’s body (the body and the action determine the plot)”.⁸ Facing an already strongly felt cultural loss in European theatre, Copeau formulated, thereafter, the need for a rediscovery that could only take place “within us, to respond to a need, to an inner aspiration [...]. One must reject all that is artificial and scholastic, all bibliophile forms of knowledge”.⁹ According to Copeau, as Cruciani highlighted, to preserve the “tradition of an artist” it was necessary to seek “the tradition of his creative path”.¹⁰ It was therefore a question of “investigating the movement that presided over the work”,¹¹ restoring “to tradition (to the past) its present, that is, to restore it as its place of possibilities and choices”.¹² In 1983 Cruciani published his study on *Teatro nel Rinascimento. Roma 1450-1550*, inviting readers “not

3. See Cruciani 1989, 3-17 and Cruciani, 1993, 3-11. Unless otherwise indicated, the translation of the original texts is my own.

4. Cruciani 1989, 3.

5. Cruciani 1993, 10.

6. Years later, Barba would adopt the term “Living Archive” for the Odin Teatret Archives, as Mirella Schino recalled (Schino 2014, 415-23); on the same subject, Annelis Kuhlmann considers the archive as a place not only for preserving the past but also for building the future (Kuhlmann 2013, 105-20).

7. Cruciani 1989, 3-17. The article was recently mentioned by Raimondo Guarino in his recent contribution on theatre in the Renaissance (Guarino 2020, 426-27). About the “tradition de la naissance”, and for some possible ambiguities in Copeau, see also Aliverti 1997, 90.

8. Aliverti 2009, 35.

9. Copeau 2009 (1916), 161 (also quoted in Consolini 2018, 245).

10. Cruciani 1995, 246 (also quoted in Schino 2003, xviii).

11. Cruciani 1989, 11; while it is interesting to observe that in the interview collected by G. Berr in 1922, Copeau (1976, 73-74) spoke literally, not metaphorically, about the need “to resurrect the movement in which the play had been performed” (“Pour ressusciter le mouvement dans lequel la pièce avait été représentée, il m’a paru bon de concevoir une disposition scénique qui engendrât forcément le mouvement”).

12. Cruciani 1989, 13.

to base one's knowledge on the certainties accumulated by historiography, undisputed interpretations that have become truth", but "to restore to the hypotheses their level of possibility".¹³ It was thus necessary to clear away the obvious, the acquired meanings, and to regain a sense of effervescence and renewal.

At the same time Cruciani warned against possible misunderstanding deriving from the use of notions such as birth and origin, where birth, for example, was not for him a question of origins. Speaking of the "origin" of Renaissance theatre was in itself an ambiguity leading to errors, since "what we call origin, in culture, is a simplifying abstraction".¹⁴ Besides, the Third Theatre was already configured, in the intentions of Eugenio Barba, as a search for a "dual identity", manifested in the fourth 'reflection' delivered by him at the *Rencuentro Ayacucho* '88: "The Third Theatre's search is for identity. An identity with two faces: one looking to our specific historical, social, and cultural context; the other to the professional that unifies us, despite different languages, traditions and origins. The work in the profession is what allows us to develop our differences. The goal of these meetings is to compare these differences".¹⁵

1. Voyage dans les hemisphères

In the artistic and intellectual movement that preceded and accompanied the beginnings of theatre anthropology guided by Barba, the sciences played a conspicuous role, examined from a dual perspective. On the one hand, there was a conscious attempt to found a new *scientia* of theatres, outlined by Nando Taviani in a 1990 article dedicated to the late Ryszard Cieslak on June 15 of that year: a science, that is, founded on the ability to "succeed in combining research into techniques with historical research, without merely accepting the loophole offered by a 'history of techniques'".¹⁶ On the other hand, there was an interest in science, through multiple directions, and in opposition to the strictly literal idea of 'science' from which Grotowski had already distanced himself in

13. Cruciani 1983, 7.

14. Cruciani 1989, 13 (see also Marotti 1992, xxxi).

15. Barba 2002, 219-20. De Marinis wrote that the "third identity" is for Barba the professional one, following the personal and the cultural identities (see also on this De Marinis 2012, 61). In some writings, for example in "The House with Two Doors", Barba has spoken of two poles: "Our identity is, on the one hand, individual, deriving from our biography, from the space and time in which we live. On the other hand, it must be a professional identity connecting us to the people of our profession beyond the limits of time and space. It is a question of two poles, each very different to the other, but one cannot exist without the other" (Barba 2014, 197-98).

16. Taviani 1990, 17; for the same passage, see Savarese 1992, 451 and Barba and De Marinis 1994, 239-57, where De Marinis' response is given to the long letter sent to him by Barba as his reading notes on the book *Mimo e teatro nel Novecento*, published in 1993. On Barba's definition of the idea of a "science of theatre", see also Schino's observations from the 2004 Aarhus conference: "[Barba] suggested looking at the most subtle and unstable of disciplines: 'theatre science' – the science that seeks to investigate principles that, if not eternal, are at least recurring in the fragile art of the theatre. [...] This science makes an attempt to systematise this art in formulas, theories and know-how that can be transmitted." (Schino 2020, 62).

1963, in his interview with Barba, later published in *Alla ricerca del teatro perduto*.¹⁷ For Barba too, theatre was a profession inspired by craftsmanship, and the primary source of learning remained the work of the actors, above all of those in his Odin Teatret.¹⁸ On the same subject, just before ending his considerations on *The Paper Canoe*, in 1992 Barba stated:

The drift of the exercises; their progressive and never definitive separation from the continent of rehearsals and performance; training as a score of actions, in relationship with a particular moment in the performer's research and experience; its personalization; all of this, and not Asian theatre, constitutes the historical context of the genesis of Theatre Anthropology.

It does not constitute, however, its only objective. Experience of the relative autonomy of exercises with respect to work on performance has led us to think of the pre-expressive as a separate level of organization. And this way of thinking leads elsewhere.¹⁹

In the early 1980s, Barba embarked on his voyage into the sciences accompanied by a network of leading correspondents, from whom he drew inspiration and useful information. A fundamental intermediary for him was Jean-Marie Pradier,²⁰ who, before ISTA Bonn (1-31 October 1980), had organised in 1979 in Karpacz the "Colloque sur les Aspects Scientifiques du Théâtre". This was also attended by Grotowski and enabled the brilliant encounter between Barba and Henri Laborit.²¹ From that experience Barba drew some important elements, including the "levels of organisation",²² found in the *Dictionary of Theatre Anthropology*, in the chapter on "the pre-expressive",²³ and

17. Barba 1965, 80. The text of the interview appeared in the journal *Sipario* in September 1963.

18. Barba 2019, 183 (first edition 1981).

19. Barba 1995, 111.

20. Barba has several times named as his key interlocutors Peter Elsass, professor of clinical psychology at the University of Copenhagen, and Jean-Marie Pradier, for studies in the psychological field and for the method of scientific research respectively: see Schino 2020, 61. Mirella Schino's testimony refers to what Barba said at a conference held in Aarhus in 2004, also of particular importance here for the details given regarding the "period of intense research" that he had undertaken between about 1979 and 1991 into the functioning of the human brain, scientific research and biology (Schino 2020, 62).

21. For a full account of the 1979 Karpacz colloquium, see Pradier 1995, 225-29 (in particular for the "levels of organisation", with reference to "systemic theory", see 228). The list of speakers participating in the session of 12-16 September 1979 is conserved in the folder used for this study. It contains the following names and titles: Prof. René G. Busnel, CNRS-INRA ("Réflexion sur certains aspects biologiques des danses"); prof. Henri Marie Laborit, Hôpital Boucicaud ("Le théâtre vu dans optique de la biologie des comportements"); prof. Abraham A. Moles, Université de Strasbourg ("Théorie des actes et espace théâtral"); prof. Jean-Marie O. Pradier, Université de Rabat ("Vers une nouvelle évaluation de l'Information suprasegmentale dans la communication parlée"); Alain Alexis Barsacq, IRCAM ("Espace de projection de l'IRCAM"). The texts of the lectures, in the same folder, are heavily underlined.

22. It is interesting to observe that in the abovementioned article on the "problems of historiography of performance", which appeared in *Teatro e Storia* in 1993, Cruciani also affirms that "a complex entity such as theatre, which is a system of relations and organisation of levels, requires complexity of knowledge: which is, in its substance, dialectic" (Cruciani 1993, 4).

23. Barba and Savarese 2006, 218: "When we see an organism alive in its totality, we know from anatomy, biology and physiology that this organism is organised on various levels. Just as there is

later used in the index of his book *On Directing and Dramaturgy*. But even before that encounter, Barba had experienced for himself that “spirit of Copenhagen” emanating from the Niels Bohr Institute²⁴, so much so that he decided to adopt Bohr’s motto *contraria sunt complementa* for his theatre.²⁵

Observing the wide range of readings undertaken by Barba in his forays into science, it could be said that he was embarking on a “journey into the hemispheres”: both across the globe, from northern to southern hemisphere, with numerous and continuous journeys into theatre cultures,²⁶ and by interesting himself in research into the hemispheres of the human brain. Indeed *Voyage dans les hémisphères* was the title of a September 1989 article studied by Barba, by Richard Delrieu, French pianist, composer and musicologist, member of the Laboratoire d’anthropologie of the University of Nice,²⁷ where Delrieu had graduated with a thesis on the relationship between brain function and musical practice.²⁸ Thanks to Delrieu’s article, Barba was able to delve into new areas of research relating to brain function that, in the wake of early 1970s studies carried out by Paul Donald MacLean, “suggest fascinating applications at the level of creation, of learning and above all of human exchanges”.²⁹ It is interesting to observe that in this article Barba’s attention fell precisely on a passage in which Delrieu summarised research by MacLean, creator of the triune brain theory, around three “fundamental stages” of the brain, the result of human evolution: the “reptilian” complex (more ancient and anatomically deep), the “limbic system” (more recent), and finally the cortex (dominant in the human species, also called “cold brain”, repository of symbolic and abstract functions).³⁰ This classification was dear to Barba, above all for his understanding of the dimension of the spectator, an essential figure whom he likes to address, speaking to the “indissoluble angel”, that is to his own *shadow*. Proof of the persistence of these interests, across disciplines, is found in the speech delivered by Barba on receiving the *honoris causa* degree conferred by the Academy for Performing Arts of Hong Kong on 7 July 2006.

a cellular level of organisation and a level of organisation of the organs, and of the various systems in the human body (nervous, arterial, etc.), so we must consider that the totality of a performer’s performance is also made up distinct levers of organisation.”

24. “*Kopenhagener Geist*”: expression adopted, as Pradier recalls, in 1930 by the German physicist Werner Heisenberg, corresponding not merely to an epistemological point of view, but to a certain notion of international collaboration (cf. Pradier 2013, 175).

25. On Bohr’s motto juxtaposed with the yin-yang symbol, see Kuhlmann and Ledger 2018, 159.

26. In one of the latest publications about ISTA, Julia Varley has recently narrated the importance and the continuity of Barba’s travels during the first years of ISTA: “In the first decade of ISTA, I remember that Eugenio Barba would travel every year to the Asian countries to meet and talk with the masters, observe their work day by day, and prepare with them the next ISTA session. He had got to know them previously in Europe or in Asia, establishing a personal relationship with each of them based on friendship and affinity.” (Varley 2017, 53-54).

27. Delrieu 1979, 69-80.

28. Later, between 1990 and 2010, Delrieu went on to do research and teach at the Japanese universities of Kobé, Nagoya and Kyoto, investigating in particular the relationship between Eastern and Western musical systems and language writing systems.

29. Delrieu 1979, 69.

30. Delrieu 1989, 69 (among other publications by the American scholar in those years, see MacLean 1973).

Angelanimal is the name of a spectator. Or better, a way of naming a facet of the complex set of intellectual, emotional, critical, rational and instinctive reactions that compose the collective noun 'spectator'. It is the name that I give to the animal hiding in the depth of my brain as well as to the indissoluble angel that hovers as a shadow in the empty space above or under it. People of science could perhaps attribute to Angelanimal a precise abode in the macrocosm of our skull, between the reptilian and the limbic brain.³¹

A craftsman, therefore, but not devoid of interest in multiple directions offstage that broaden knowledge of mankind and of art. Among other French texts, Barba carefully read a 1982 study by Canadian Derrick De Kerckhove entitled "Écriture, théâtre et neurologie", published in the journal *Études françaises* dedicated to the "Anatomie de l'écriture".³² In reading this article Barba dwelt in particular on the historical reconstruction of the process of the evolution of writing in the Greek language. A first, scantily documented archaic phase was followed by a second phase known as "boustrophedon" writing, widespread in the 6th century B.C. in Attica (*bustrofedón*: writing alternating from left to right and from right to left with the letters flipped over, like the path of oxen when ploughing, without interrupting the movement of the hand). About fifty years later, in Attica, this writing evolved into writing only from left to right, in the so-called *stoikedón* style (vertical and horizontal alignment of the letters, without spaces between words).

It is interesting to note that, in the context of this reconstruction, Barba was particularly interested in the process of "radical reorganisation" that led the Attic Greeks, in the small 'university city' of Athens, to deliberately adopt "the opposite direction from tradition",³³ compared to the Phoenician script that had been the model. Thus Barba underlined the hypothesis, considered as very plausible by De Kerckhove, that "the adoption by the Athenians of a uniform left-to-right script may correspond to a non-aesthetic but biologically determined selection of the direction favourable to the left hemisphere":³⁴ i.e. the hemisphere responsible for sequential analysis, a specialised function made necessary by the practice of writing in an area of the brain different from that in which spatial analysis takes place (the right hemisphere, "seat of non-verbal modes of representation, probably of images: visual, tactile, kinesthetic, auditory, etc.").³⁵ Historically, writing had established itself as "exploration and maximal exploitation of the principle of sequence and linearity".³⁶ Within this context, the theatre was studied by De Kerckhove as a "psychological model of literate consciousness":³⁷ from the alphabet, theatre derived the linear sequentiality and the ability to separate meanings

31. Barba and Savarese 2019, 294 (for the corresponding Italian text see Barba 2006, 21).

32. De Kerckhove 1982, 109-128. By the same author Barba also read a paper entitled "A Note on Psychotechnologies" (s.l.) and the article "A Theory of Greek Tragedy", which appeared in 1981 in the journal *Substance*.

33. De Kerchove 1982, 112.

34. De Kerchove 1982, 115.

35. Gallin 1974 quoted in De Kerckhove 1982, 124.

36. De Kerchove 1982, 116.

37. De Kerchove 1982, 117.

from each other for the benefit of the gaze. From the fragmentation of meanings came the passage from rhythmic organisation of the epic word to the appearance of a critical faculty as a result of separating the subject from the object (from the one who knows, to the thing known), opposite to the bardic process in which the auditorium was involved “in a single multisensory medium governed by the rhythmic *mimesis* characteristic of the recitation of epic poems”.³⁸

An echo of all this is perceived in Barba’s paragraph on “actions at work”, in the chapter on “dramaturgy” in the *Dictionary of Theatre Anthropology* (published in France in 1986 as *Anatomie de l’acteur*), where Barba overcomes the dichotomy of a theatre based on domination by text as against a theatre of *mise-en-scène*, no longer seen as contradiction but as complementarity. In fact Barba writes “the problem is not, therefore, the choice of one pole or another, the definition of one or another type of theatre. The problem is that of the balance between the *concatenation pole* and the *simultaneity pole*”.³⁹ Thus, an imbalance in the performance in favour of a text of only words leads to a loss of equilibrium in which prevails the “prevalence of linear relationships (the plot as concatenation). This will damage the plot understood as the weaving together of simultaneously present actions.”⁴⁰

When, years later, Barba created the performance *Mythos* (1998-2005), centred on the poetic texts of Henrik Nordbrandt, the characters represented were Oedipus, Medea, Cassandra and Daedalus (played by Julia Varley, who had initially worked on Clytemnestra)⁴¹ and Orpheus. It is interesting to note that the choice of Cassandra (entrusted in *Mythos* to Roberta Carreri), next to the initial one of Clytemnestra,⁴² finds a curious anticipation in Barba’s reading of the article by De Kerckhove, where he had paid particular attention to the opposing interpretation given to these two mythical figures. The clairvoyant oracle is in fact situated in the domain of multi-sensoriality and pre-verbal knowledge. Opposite Cassandra, “incarnation of tribal knowledge and the ancient condition of thought”⁴³ stands the figure of Clytemnestra, “incarnation of the visual and rationalist perception of the world, little affected by temptations or the

38. De Kerchove 1982, 118.

39. Barba and Savarese 2006, 67.

40. Barba and Savarese 2006, 67.

41. Julia Varley has narrated in detail her acting work in *Mythos* in the paragraph “Dramaturgy according to Daedalus” from her book *Notes from an Odin Actress. Stones of Water* (Varley 2010, 114-129). For Varley the same approach to dramaturgy proceeds along a path similar to that of Daedalus: “The path Daedalus was leading me into was seductive: at a distance it looked mysterious and it was easy to get lost once on it. I would be forced to defy closed roads, to turn back and start the journey all over again.” (Varley 2010, 115)

42. Regarding her decision to work on Daedalus, after abandoning the figure of Clytemnestra, see Varley 2010, 117: “When one of the actresses left the group, which changed the balance of the characters since there were now fewer females who had committed a crime, the director proposed that I should play Daedalus. I immediately recognised the possibility of flying like a bird and of translating the theme of the Greek myths into the world of ‘nature’ in which I was interested. I accepted.”

43. De Kerchove 1982, 127.

refuge of mythical interpretation”.⁴⁴ Clytemnestra and Cassandra are analysed by De Kerchove as two different and opposite “constituted cognitive models”⁴⁵, where the first embodies the *hypokritès* actor, in the late Hellenistic and already derogatory meaning of the term (no longer as “he/she who answers”, but rather as he who “juge en-dessous, qui réserve sa parole”).⁴⁶ If Cassandra “is possessed by language” (from the archaic *logos*), Clytemnestra “possesses language, [...] speaks by implication, says one thing and at the same time thinks another”.⁴⁷

Returning to the cognitive sphere, Clytemnestra’s dimension corresponds to the domain of the left hemisphere, responsible for linear and sequential analysis, while Cassandra thinks in “visual, tactile, kinaesthetic images”, does not reason by deduction and is “open to all ‘informative’ *stimuli* from the environment”.⁴⁸ In carrying out her clairvoyance, Cassandra embraces “time in its immobile entirety, without segmentation”⁴⁹: an immobility made evident also in spatial terms and which, in *Mythos*, is reflected in the physical score of Roberta Carreri, who recorded that the character had to act in a very small “*lebensraum*”.⁵⁰

But even more than for the purposes of performance, the hemispheric specialisation was among the interests cultivated by Barba for a broader understanding of the functioning of the actor as a human being. In this regard, it is worth remembering that Barba read the article *L’Homme neuronal* by Jean-Pierre Changeux, 1983. He focused in particular on the chapter on the “Theory of epigenesis for selective stabilization”,⁵¹ in which, starting from embryological theory, specialised functions such as language and writing were examined with reference to the hypothesis of selective stabilization.⁵² This

44. De Kerchove 1982, 121. In the book *The Five Continents of the Theatre*, in the chapter on “the fascination of public punishment”, there is an image of a Greek cup of 430 B.C. depicting the massacre of Cassandra at the hands of Clytemnestra (Barba and Savarese 2019, 386).

45. De Kerchove 1982, 120.

46. De Kerchove 1982, 122.

47. De Kerchove 1982, 123.

48. De Kerchove 1982, 123.

49. De Kerchove 1982, 123.

50. In one of her articles in *Teatro e Storia* Roberta Carreri says: “In *Mythos*, Cassandra is a character ‘apart’, an idiot (from the Greek *idiotes*, a private person, inexperienced, unfit for public office and communication). For the first part of the performance, Cassandra sits isolated in one of the ‘towers’ of the set. Her *Lebensraum* is very small. From there I must radiate my presence throughout the room, so I work on the implosion of energy. Eugenio has forbidden me to perform recognisable actions. My images are very precise and Cassandra realises them in her own way. Her interaction with the other characters is minimal, which gives me great freedom. But I could only exploit this great freedom of Cassandra’s when I found her nature: her physical dynamics” (Carreri 1998-1999, 256). On immobility, cf. also the chapter on balance in the *Dictionary of Theatre Anthropology*, where a quotation from Matisse states: “Immobility is not an obstacle to the feeling of movement. It is a movement set at a level which does not carry the spectator’s bodies along, but simply their minds.” (Barba and Savarese 2006, 39)

51. Changeux 1983, 301-30.

52. In the dissertation, Barba underlined what Changeux said regarding so-called “*situs inversus*” mutation: an uncommon condition, found in one in about ten thousand individuals, there was a mirror inversion not so much of specialisation in the cerebral hemispheres, but of the visceral organs.

dissertation was developed - and was thus read by Barba - in two paragraphs dedicated respectively to “cultural imprint” and to the concept that “learning means eliminating”. These resonated strongly with some fundamental themes of theatre anthropology, if one considers that, as Nicola Savarese recalled in 1983, “learning to eliminate” had already been the motto of the first two ISTAs.⁵³

According to neurobiologist Changeux it was possible to observe how the physical and social environment exerted a progressive “impregnation” on brain tissue. This was similar to Jakobson’s findings in linguistics in *Language of Children and Aphasia*. Before learning to speak the language of adults, the infant (like crickets and sparrows, according to further research) accumulated “an overabundance of wild sounds” far superior to the few syllables used later on, following the process of “crystallisation” of growth. It had, however, been demonstrated that through education it was possible to teach, “artificially, a notable diversification of song”,⁵⁴ going beyond the abilities favoured by culture.

So what role did culture and specialisation play? First of all, Barba underlined Changeux’s statement that “it is not possible to describe an organisation except to the extent that it reproduces itself from one individual to another”⁵⁵ noting in the margin: “*only in the pre-expressive*”.⁵⁶ With respect to the main traits established by genes, a significant variable was contributed – this was Changeux’s hypothesis – by the “theory of an epigenesis of neurons and synapses”, the result of complex processes, active from birth to puberty, over long periods critical for the development of the individual.⁵⁷ At stake was an intricate, profound process of simultaneous growth and epigenesis, developed over time, which difficult analysis suggested the existence “of a continuous increase in the order of the system following an instruction from the environment”.⁵⁸ According to this hypothesis, activity influenced the “arrangement of neurons and pre-existing connections with respect to interaction with the external world”.⁵⁹ This led to the conclusion that “to learn is to stabilise pre-established synaptic combinations; it also means *deleting* the others”.⁶⁰ The interest of these formulations, applied transversally to stage behaviour, appears evident in research carried out by theatre anthropology and later by ethnoscenology. If indeed for Grotowski “The actor is a man who works in public with his body, offering it publicly”,⁶¹ for “the biological theory of Barba”, as Claudio Meldolesi wrote, “the theatre does not progress linearly, but rather by neutral zones, within which this or that line of research can be established; transculturality is, therefore, the basis for becoming theatrical”;⁶² or for Pradier, as summarised by Marco

53. Savarese 1983, 89.

54. Changeux 1983, 321.

55. Changeux 1983, 321.

56. OTA, Barba, ISTA, b. 1, 263.

57. Changeux 1983, 327.

58. Changeux 1983, 329.

59. Changeux 1983, 329.

60. Changeux 1983, 329.

61. Barba 1965, 89.

62. Meldolesi 1993, 345.

De Marinis, stage behaviour is conceived “as the result of a *highly specialised elaboration of innate faculties and needs*, genetically determined, based on cultural learning”.⁶³

2. Social psychology, emotions as complex systems and communication

The links between performing arts, psychology and cognitive sciences became, at the beginning of the 1980s, the subject of a new line of studies, with which - as the archival evidence shows - Barba kept up to date. If Pradier had been his point of reference for scientific research, in the cognitive field it was Peter Elsass, professor of clinical psychology at the University of Copenhagen, who offered the opportunity for a timely and stimulating exchange.⁶⁴

Within this field, Barba read a 1985 article titled *The Psychology of Performing Arts*, by New Zealander Glenn Daniel Wilson of the University of Canterbury.⁶⁵ Here, Barba focused in particular on the fifth chapter, entitled “Social Processes in Theatre”.⁶⁶ Starting from the premise that drama is not only action, but action capable of arousing attention in the eye of the beholder, the chapter examined how three main categories, indicated by the scholar as part of the event on stage - creators, performers, spectators⁶⁷ - participate in this complex mechanism. Regardless of the type of interest that theatre aims to provide, whether more intellectual or more emotional, it remains, for Wilson, a form of social interaction, analysis of which could arrive at new understanding thanks to cognitive studies.

It is interesting to observe in retrospect the attention paid by Barba to the points in this article. One topic of striking interest is Wilson’s interesting observation, based on numerous experiments conducted with groups of children and adults, that learning is facilitated within large and non-restricted groups (“whatever the precise reason, large classes engender some kind of social energy that promotes performance”).⁶⁸ This circumstance, made possible both by the “contagious” effect of the attention of others, and by the maintaining of socially shared attitudes, is also of potential interest for meetings of group theatres and above all of ISTA, whose teaching could accommodate

63. De Marinis 2012, 93. De Marinis discussed Pradier’s theories with particular reference to his writings from the early 1990s (Pradier 1990, 86-98).

64. Among Peter Elsass’ works, I would mention his article “La presenza assoluta. Uno spazio terapeutico per il teatro e per la psicologia”, published in *Teatro e Storia* 2014 (Elsass 2014, 437-52).

65. Wilson 1985 (second edition 2002).

66. Wilson 1985, 55-67. The chapter contains discussions on crucial aspects such as “identification”, “audience feedback”, “timing and applause”, “social facilitation”, “emotional contagion”, “laughter contagion”, “social cough”, “compliance and claque”, and finally “prestige suggestions”.

67. Wilson’s practice as a baritone led him to analyse the performing arts starting from the functioning of the musical world, in which composers and performers are often separate figures. For him a performance has three components (creators, performers, spectators), while in the performing arts the essential condition for theatre to take place is considered to be two distinct groups (actors-spectators).

68. Wilson 1985, 61.

larger groups of people than was possible in laboratory theatre. For different reasons, relative to what were defined as “cognitive dissonance effects”,⁶⁹ Wilson reported the (uncontested) finding that maintenance of the user’s interest often appeared proportional to his expenditure of money, suggesting a curious parallel between theatre and psychotherapy (in both cases, one of the variables for patient satisfaction with treatment, or for that of spectators with a performance, seemed to be the amount of money invested).⁷⁰

Processes of “contagion” between actors and spectators, within the public itself, in the context of theatrical performance, were shown to be fundamental. Compared to what theatre has already acquired around the idea of contagion (from Stanislavski to Artaud, among the most important),⁷¹ Wilson brought a new, scientific-laboratory approach external to the stage. Following pioneering research on emotions and facial expressions by the American Paul Eckmann, Wilson noted in this regard the common tendency of individuals to mimic the emotional expressions of those close to them, with similar repercussions on the nervous system.⁷² In the specific case of laughter and the comic, for example, Wilson defined laughter as a “social process” and a “communication device”,⁷³ an analysis valid, too, for coughs commonly heard at the theatre (“social coughing”), symptomatic both of a sign of social disinhibition and a symptom of boredom. Research into the emotions, focus of analysis for new trends in biology at the end of the 1970s, offered stimulating reflections for the theatre. Barba’s acquaintance with Susana Bloch Arendt, whose 1989 article “Emotion ressentie, émotion recrée”⁷⁴ he read, falls within this context. From Arendt he also received in July of that year in Saintes another work on “Effect or patterns of basic emotions: a psychophysiological method for training actors”. In this case it was therefore a question of readings subsequent to what Barba had already identified in *The Secret Art of the Performer* regarding emotions: the actor’s task was to reconstitute, through an activation process of at least five levels, “the complexity of the emotion, and not a vague feeling”.⁷⁵

69. According to the definition adopted in a reference study for the field by Brehm and Cohen 1962, titled *Exploration in cognitive dissonance* and cited, among others, by Wilson.

70. Wilson 1985, 61-62.

71. For a concise, constructive discussion of the notion of contagion in the modern idea of theatre, see Perrelli 1993, 197 (“The challenge of so many oppositions [...] cannot be superficial spectacularisation; instead, it is all oriented towards ‘emotional contagion’, an expression of Stanislavski, which might have been said by Artaud. If we wanted to condense into a single concept the vast research of Eugenio Barba’s ISTA, we should recognise that it is a question of a euphoric ‘waste of energy’ able to connect the actor to the spectator”).

72. Wilson 1985, 62.

73. Wilson 1985, 63. Empirical evidence of “comic contagion” was also the observation that individuals rarely laugh at something they consider comic or funny when they are alone; or, the fear of an actor or comic writer that the public will not laugh (the so-called “stage flops”).

74. Bloch 1989, 68-75.

75. Barba and Savarese 2006, 114. Emotion is defined by Barba as “a complex pattern of reactions to a stimulus”, on five levels (“a subjective change”; “a series of cognitive evaluations”; “the manifestation of involuntary autonomous reactions”; “an impulse to react”; “the decision on how to behave”).

3. Interactional synchrony and kinaesthetic capacity

In the ISTA dossier of the Barba Collection at Odin Teatret Archives is a separate section covering the vast extent of Barba's readings around interactional synchrony and kinesics. It contains themes towards which Barba paid very great attention - important for the actor's work and for the spectator's perception, but also for the work of the director. They have impact across numerous areas, including the spheres of actions, balance, design of exercises, rhythm, and the relationship between actor and spectator. In the *Dictionary of Theatre Anthropology* this notion, presented alongside Rudolph Arnhem's theory on *Art and Visual Perception*, is introduced as "the inner perception through muscle sensitivity".⁷⁶ But Barba's study materials contained much more scientific literature on the subject and included abundant references to the latest studies published at that time.

These included a study published in 1981 in the *Journal of Nonverbal Behavior* by American scholars John B. Gatewood and Robert Rosenwein.⁷⁷ They particularly rejected the reduction of interactional synchrony, recently advanced in contemporary studies by McDowall,⁷⁸ to mere "noise", simply predictable within social interaction. Gatewood and Rosenwein's starting thesis was, instead, that non-verbal behaviour was an extremely complex process, result of stratified processes of temporal organisation of movement units relating to the body (*motions*). A unit of movement/behaviour was defined by recording time segments, observed by scholars with increasing numbers of frames per second. Passing from time to space, non-verbal behaviour was thus analysed in search of increasingly detailed "anatomical principles"⁷⁹: at the maximum level of this analysis (i.e. at the smallest observation point), was found the "process unit", understood as "a bundle of body parts which (empirically) change and sustain inertial states with one another for a given duration".⁸⁰

These units, acting simultaneously and with variable duration, gave rise to what had been called the "stream of behaviour".⁸¹ From the 1960s some scientific studies, carried out using new research methods, had already shown that human beings not only organise integration between speech and body movement according to a principle of

76. Barba and Savarese 2011, 83. Arnhem's quote cited in the *Dictionary of Theatre Anthropology* is taken from "The kinesthetic image of the body" in the chapter on "Movement" of the 1954 book *Art and visual Perception* (Arnhem 2005, 330-32). In another context, with reference to the "illusion of unified development" offered by historiography, Taviani, too, referred to Arnhem, and in particular to a quotation by the latter of a notion proposed by Albrecht von Haller, 17th-century Swiss naturalist: "Nature connects her species in a network, and not in a chain; men [however] can only follow a chain, since with words they cannot express several things simultaneously" (Taviani 2006, 50; the quote from Albertus Von Haller is contained in Arnhem's *Visual Thinking* of 1969).

77. Gatewood and Rosenwein were at the time affiliated to the Department of Social Relations at Lehigh University in the state of Pennsylvania, where they are now both emeritus professors. A handwritten note on the second page of the article indicates that it was intended for Wendy Leeds-Hurwitz, Director of the Center for Intercultural Dialogue and emeritus professor at the University of Wisconsin-Parkside.

78. McDowall 1978, 936-75.

79. Gatewood and Rosenwein 1981, 14.

80. Gatewood and Rosenwein 1981, 15.

81. Gatewood and Rosenwein 1981, 12.

self-synchrony, but that this process is also applied in the presence of other people, giving rise to forms of interactional synchrony. So in 1981, Gatewood and Rosenwein were extending to the body and movement what, in science, had already been commonly accepted for sound (in the field of sound, in fact, the discourse is based on a type of human interaction, result of auditory perceptual processes). Furthermore, the listener's kinesic behaviour seemed to correspond to the speaker's discourse, according to pervasive models of interaction based on interactional synchrony, as already discovered by Condon and Ogston.⁸² These findings opened up the way for new understandings of the communicative function of the phenomenon of kinesic behaviour, defined by Adam Kendon as an authentic "body language".⁸³ Starting from a synopsis of the specialised scientific debate, these were some of the elements on which Barba focused in his reading with greater attention, selecting the points that most interested him. Thus, he underlined the expression "dancing the other's dance" formulated by researchers to define that "mirror image"⁸⁴ which seemed to characterise the listener's kinesic behaviour with respect to that of the speaker, even if non-verbal.

Along the same lines was his reading of another article from 1974 by William S. Condon and Louis W. Sander on the synchrony between the movement of infants and the speech of adults, thanks to processes observable from the earliest days after birth. Within this work Barba found confirmation of what was argued in the previous article on so-called "units of behaviour")⁸⁵ and the interaction between movement of the body and act of speech (observable both in speaker and listener), involving several parts of the body simultaneously, even when receiving. Similar phenomena, not perceptible under normal communication conditions, were normally acted out by individuals in unconscious ways, but could be understood and analysed at laboratory level through "microkinesic segmentation".⁸⁶ One surprising thing that emerged from this type of analysis was the observation that, in newborns, the correspondence between speaking and movement was manifested on occasions when the child was already in motion, and much less easily from a state of immobility. This type of research revealed how the individual, from infancy, performs movements according to precise movement patterns shared with organisation of the speech structures typical of his own culture, before embarking on an authentic unconscious apprenticeship made up of sociobiological entrainment processes in millions of repetitions of linguistic forms, which ultimately lead him to his own capacity of expression and communication. The demonstrated existence of a synchrony between the behaviour of adults and the movement of children ultimately suggested - this was the authors' conclusion - that the bond between human beings should be studied as an expression of participation that is not individual but collective in shared forms of organisation. This consideration, aside from the fact itself,

82. See Gatewood and Rosenwein 1981, 13 (reference is to Condon and Ogston 1966, 342).

83. Gatewood and Rosenwein 1981, 17. The authors build on Adam Kendon's early studies on coordination of movement in interactional synchrony (Kendon 1970, 101-125).

84. Gatewood and Rosenwein 1981, 18.

85. Condon and Sander 1974, 99.

86. Condon and Sander 1974, 100.

resulted in Barba's typical marginal note: "the 'link' between spectator and actor!"⁸⁷

Barba was an attentive reader of all these articles and more, which I have briefly discussed. With openness of interests and with keen curiosity, as we have seen, he did not hesitate to delve into scientific and specialist dissertations, in sectors apparently distant from theatre, but whose points of interest he could nevertheless determine and trace with keen observation.

4. Conclusion

Science, conscience, and knowledge: in Barba's unitary, non-specialist project of knowledge, on which he constructs theatre anthropology as an open building, multiple cultural instances and dialectical processes coexist, along diverse, sometimes unexpected, directions. In this sense, theatre anthropology offers evidence of the fact that theatre can be considered through sectorial associations, but without losing sight of the intrinsically plural cultural unity that underlies it. Barba's books constitute the landing points of a continuous, underlying process of knowledge. Within such a research path, Cruciani's warning reminds the risks of a concept for which "in the name of results, reasons are lost": in other words, losing sight of the conditions of necessity and urgency within which the paths have developed. In the fertile and vital path traced by ISTA, the archival heritage and theoretical research do not disavow craftsmanship but highlight its broad value, even beyond theatre, rejecting attempts at compartmentalisation. It is no coincidence that in his book *The Paper Canoe*, Barba founded theatre anthropology not as advice on ethics, but as a premise for them:⁸⁸ the theatre, analysed with an openness of interest towards the sciences, remains for him a human process and, ultimately, "transcendence".⁸⁹ Since every action is transcendence, when it is not mere repetition or false movement, truth is always sought in the beyond, art touches the eternal and is itself the sentiment of the sublime: it is therefore a transcendence within experience, a transcendence which is like a progress and which can be investigated through multiple approaches. Art and life,⁹⁰ for their part, are like climbing up a staircase, in which each step is both the previous step and the next one. Each step is a pause and a next step - the shape of the lower step and the material of the next one. ■

Translated by Julia Hamilton Campbell

87. Condon e Sander 1974, 101.

88. Barba 1993, 39.

89. Barba 2014, 21.

90. Cf. Barba 2010, xvi: "There is an ancient saying: *ars longa, vita brevis*. The idea that life is short depends on how we see it. That our attachment to art is long-lived is something we cannot change. And to work just for the beauty of theatre is not worthwhile".

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