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# New Visions of Organicism on the British Stage

**Liliane Campos**

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# New Visions of Organicism on the British Stage

**Liliane Campos**

Over the past twenty-five years, British playwrights and directors have frequently been inspired by the natural and physical sciences. While the early 1990s saw science carefully explained in the drama of ideas of Tom Stoppard or Michael Frayn, more recent writing and devising has also introduced scientific ideas without having characters discuss them at length. Yet whether or not they choose to expose these ideas didactically, these contemporary artists use science as a source of structuring concepts and metaphors, turning the language of particle physics, evolution or mathematics into ways of speaking about human experience.

This paper examines ways in which these scientific references to the natural world tend to suggest hidden coherence and connections in dramatic works. These connections can be a theme in the face of fragmented human experience, but also a formal trait in cases where the shape of the play is itself discontinuous. The suggestion of coherence through images drawn from the natural world then plays a metaphorical role, implying that such coherence also underlies fragmented dramatic forms or narratives. In Theatre de Complicite's *Mnemonic* (1999), a theatre piece about human memory in which a tree leaf provides a structuring image for the multiple fragments woven together by the company, organic form thus produces a sense of underlying organicism<sup>1</sup>. But a sense of structuring coherence can also be derived from non-organic forms, such as constellations, sub-atomic particles, or even models of turbulence. In fact the physical world provides contemporary artists with organicist images that often do not derive from organisms, and the filter of science plays a key role in this process.

I begin by exploring the idea that conflicting desires for instability and coherence are the reason for which contemporary theatre artists are attracted to these sciences. This leads me to examine two cases in which a discontinuous theatrical form is given continuity by the natural world, but crucially by a scientific view of this world. Both are devised pieces created collectively by a company: we will see that collaborative approaches provide the most striking examples of these organicist impulses working within non-linear dramatic structures, as they tend to work from more fragmented forms than contemporary playwrights.

<sup>1</sup> Complicite, *Mnemonic*, London, Methuen, 1999.

# Science as a source of hidden coherence

Metaphorical references to science in contemporary drama tend to draw from areas of research that combine a sense of irregularity, unpredictability or uncertainty with a promise of underlying coherence or connectedness. In recent British theatre, the most frequent sources of conceptual and formal inspiration are chaos mathematics, which model the behaviour of unpredictable systems such as turbulence and weather patterns ; particle physics, in particular string theory, quantum physics and Heisenberg's uncertainty principle ; and evolutionary biology, with its overarching framework yet relatively unpredictable developments<sup>2</sup>. The figurative trend is particularly strong when the borrowed material belongs to physics or to the behaviour of systems within the biological sciences, yet neurology is also a favourite, perhaps because it is often perceived as combining a sense of mystery with the observation of systematic behaviour<sup>3</sup>.

This interest in sciences which combine the assertion of uncertainty with the promise of system can be read as a response to the crisis of both narrative and dramatic forms. Although conventional approaches to plot have not been deconstructed as strongly in British drama as in continental 20<sup>th</sup> – century theatre, linearity is frequently destabilized by contemporary writing. Historical or biographical narratives are frequently diffracted into postmodern uncertainties and alternative truths. If we take the example of Tom Stoppard, whose drama constantly plays with such instabilities, scientific references provide him with a model for an epistemology in which alternative versions of reality are equally true, as in the case of quantum physics in his spy-thriller *Hapgood*, or where patterns emerge from uncertainty and disorder, as in the case of chaos mathematics in his historical *whodunit*, *Arcadia*. In contemporary dramatic forms, we also observe postmodern instability and splintering, yet this is more common in devised theatre created by companies than in playwrights' drama. Narrative coherence and structure are then questioned on both levels : that of narratives within the play and that of dramatic form itself.

Such discontinuity follows a long tradition of fragmentation which finds its origins in Brecht and Piscator's rejection of Aristotelian organicism, and their influence on British devised theatre in the work of companies such as Joan Littlewood's

<sup>2</sup> For chaos mathematics see Tom Stoppard's *Arcadia* (1993, in *Plays 5*, London, Faber & Faber, 1999), Complicite's *Mnemonic* and Charlotte Jone's *Humble Boy* (2001, in *Plays: 1*, London, Faber & Faber, 2004) ; for particle physics see Tom Stoppard's *Hapgood* (1988, in *Plays5*, London, Faber & Faber, 1999), Michael Frayn's *Copenhagen* (London, Methuen, 1998) and Nick Payne's *Constellations* (London, Faber & Faber, 2012) ; for evolutionary theory, Timberlake Wertenbaker's *After Darwin* (1998, in *Plays2*, London, Faber & Faber, 2002) and David Greig's *Outlying Islands* (London, Faber & Faber, 2002).

<sup>3</sup> See for instance Complicite's *Mnemonic*, Bryony Lavery's *Frozen* (2002, in *Plays : 1*, London, Faber & Faber, 2007) and Paul Broks and Mick Gordon's *On Ego* (London, Oberon, 2005).

Theatre Workshop<sup>4</sup>. While Aristotle emphasized that the action of tragedy must be a whole and resemble a living organism in its unity, completeness and orderly arrangement of parts<sup>5</sup>, Brecht's "epic" theatre led the way for much 20<sup>th</sup> – century theatre in resisting such organicist approaches to form. When he compared the new theatre to a "planetarium", in which the spectators could observe human behaviour as they would observe planetary systems, Brecht was not only rejecting the "merry-go-round" theatre of emotional involvement: he was also shifting the figurative language for theatrical form away from Aristotle's biological metaphor to the distanced observation he found in physics and astronomy<sup>6</sup>. Yet both these metaphors suggest that the structure of theatre should be similar to that of a natural system: while Aristotle appeals to the living form, Brecht turns to the laws of planetary movement, or rather their representation in a mechanical construction. The figurative use of science by contemporary British artists lies somewhere between these two extremes of organicism and its rejection: although they do not return to the rigid formism of Aristotelian tragedy, in which the order of the parts is determined by the whole and cannot be disrupted, their scientific metaphors hint at the possibility of integrating parts into a more connected whole, thereby answering formal discontinuity with a limited, sometimes contradictory sense of organicism. The two companies presented in this paper illustrate these contradictions, as their use of science both supports and compensates their fragmented dramatic forms.

## **"Interconnectedness" in *Neutrino*(2002) and *Tangle* (2006) by Unlimited Theatre**

Based in Leeds and directed by Jon Spooner, Unlimited Theatre has collaborated with a professor in quantum information theory at Leeds University on three theatre projects since 2002. According to Spooner, the attraction of this field lay in the idea of "interconnectedness" and of seeing the "quantum particle physics view of the world" as one in which we are "connected on a very profound physical level to everyone and everyone else"<sup>7</sup>.

In *Neutrino* (2002), a series of chance encounters on a train alternate with a scientific-sounding lecture about neutrino particles. The explicit references to

<sup>4</sup> As for instance *Oh, what a lovely war !* by the theatre workshop, Charles Cilton and the members of the original cast, London, Methuen, 1965.

<sup>5</sup> See Aristotle, *Poetics*, XXIII (Aristotle, *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes, Princeton UP, 1984).

<sup>6</sup> See Bertolt Brecht, *The Messingkauf Dialogues*, trans. John Willett, London, Methuen, 1965.

<sup>7</sup> Jon Spooner, interview with the author, 21/04/09.

physics remain largely parodic, as the lecture provides a counterpoint to the action and becomes increasingly fanciful. The text parodies popular physics books, in a running commentary on both the universe and the dramatic action for which it provides pseudo-explanations, as for instance in a description of rail travel in which “*the sympathetic resonance between the high-voltage wires above and the friction of the wheels on the tracks below [...] drags anger from the soul at a sub-atomic level and traps it in the rails*”<sup>8</sup>. *Neutrino* thus plays with the idea of hidden connections between human drama and the natural world, but its effect is mainly a comical one, satirizing popular science writing. However the company's next piece inspired by science, *Tangle* (2006), uses particle physics as a key metaphor for the different strands of the plot. Quantum “entanglement”, a state in which two particles behave identically no matter what distance separates them, becomes a metaphor for the relation between two of the main characters, a young scientist searching for her lost brother and an American private detective searching for the missing uncle of one of his clients. This metaphorical perception of quantum physics is encouraged by the anthropomorphic terms through which entanglement is presented :

Hamish: ...This is an atom called Hamish. Now, Hamish is waiting at a teleportation station... We need to scan Hamish for all the information he contains, but some of that information is just too delicate to read. When we scan Hamish, some of his information will be destroyed. But we can circumnavigate this minor problem if we use two other particles. Now let's call them Dave and Rodney. Now, Dave and Rodney are entangled. That means they behave in exactly the same way no matter how much distance we put between them. It's bizarre to think about but it's absolutely true... Even Einstein was reduced to calling it “spooky action at a distance”.... So we send Dave to be with Hamish while we scan, and we send Rodney to the receiving station...<sup>9</sup>

If atoms can become characters and perform in a drama, then dramatic characters may also behave like atoms. Although the different plot lines rarely interact and often simply coexist on stage, we soon come to realise that the private detective may be the scientist's long-lost brother, and this hypothesis is confirmed by their visible entanglement. At key points in the drama, their physical and verbal actions mirror each other, suggesting to the audience that they are behaving like entangled particles, although they themselves cannot observe this connection.

Unlimited's work combines eclectic sources, mixing high and low culture, science and science-fiction, choreography and text. *Tangle's* representation of science is informed as much by comic books and characters from children's literature – such as Elisabeth Beresford's *Wombles* – as it is by highly-specialized research. Hamish

<sup>8</sup> Unlimited theatre, *Neutrino*, DVD, Workshop Theatre, Leeds, 2002.

<sup>9</sup> Unlimited theatre, *Tangle*, DVD, West Yorkshire Playhouse, Leeds, 2006.

behaves like a mad scientist while delivering up-to-date information on current research in quantum information theory. Scientific ideas are thus merely one element in a mixed bag of cultural material whose heterogeneity is far from constituting an organic whole. Yet the figurative role of science gives it a key position in the different discourses that collide in the play. Whereas the enquiries that are juxtaposed within the drama do not lead to resolution, the underlying image of entanglement emphasizes hidden connections, and the discreet cohering of the different plot lines. Fragmentariness, it suggests, is only an illusion.

## **Organicist “patterns” in *Mnemonic*(1999) and *A Disappearing Number* (2008) by Complicite**

Simon McBurney’s Theatre de Complicite, more recently known as simply Complicite, has become famous for its inventive combination of physical theatre and stage technology. Perhaps the most recurrent theme in their work is the loss of historical and cultural continuities in modern existence, the severing of links between the dead and the living. Their performance style mirrors these ruptures with frequent breaks in plot lines and by dividing stage space into parallel sets of characters from different stories and times, who coexist physically yet do not interact. Yet the company’s work is driven by a desire to connect and reforge these missing links between the present and the past. Since the late 1990s, one of the forms these connections have taken are analogical references to science, which have become frequent in the company’s devised pieces and in McBurney’s writing, as a source of structuring images for modes of acting and dramatic form.

Neurology, chaos mathematics and number theory are at the heart of two recent pieces, both of which set scientific concepts to work against a splintered dramatic form. In *Mnemonic*, neurological processes provide a key image for the dynamics of performance ; in *A Disappearing Number*, mathematics and string theory introduce a sense of hidden symmetries and coherence. As McBurney points out in his introductory note to *Mnemonic*, the appeal of neurology is that it provides an organic simile for the constant reshaping and connecting of devised performance : “We no longer live in a world of the single tale. So the shards of stories we have put together, some longer some shorter, collide here in the theatre, reflecting, repeating, and revolving like the act of memory itself”<sup>10</sup>. *Mnemonic* is a show about lost origins : its two plot lines juxtapose the discovery of a Neolithic man in the Alps

<sup>10</sup> Simon McBurney, “Mnemonic”, in Complicite, *Mnemonic*, London, Methuen, 1999.

with the story of a young Englishwoman searching for her father in Eastern Europe. Individual memory is superimposed with historical trauma and the violence of European history, in a rapid whirlwind of snippets of scene in different locations and times. The show began with a lecture about the biochemistry of memory and its reliance on processes of fragmentation and connection :

Simon... Modern theories of memory revolve around the idea of fragmentation. Different elements are, apparently, stored in different areas of the brain. And it is not so much the cells that are important in the act of memory, but the connections between the cells, the synapses, the synaptic connections. And these connections are being made and remade. Constantly. [...] Even as I am talking to you part of your brain is changing. You are literally developing new connections between the neurons. They are being fabricated even as I speak. It's a process called sprouting. Think of that ; you are all madly sprouting as I stand here, the biochemical ferment going on between the cells is unimaginable. [...] It's like the weather, completely unpredictable...<sup>11</sup>

In this somewhat didactic passage, McBurney introduced the key images of natural processes that will be repeated throughout the show : patterns of turbulence, neurological processes and natural growth in the reference to "sprouting". At the end of this prologue, the audience was asked to remove a leaf from bags taped to their seats, and to feel its veins, imagining their resemblance to a human body or the delta of a river, and finally to the tree of memory and genealogy linking all of humanity together.

Natural processes thus provide *Complicite* with key images of discontinuous continuity : one of their main rhetorical functions is to invite the audience to play an active part in perceiving underlying patterns and bringing coherence to the performance. In *Mnemonic* the key analogies remain organic : the neuronal connections of the human brain and the veins of the tree leaf are structuring images for the audience's gaze on the show and on the past. In *A Disappearing Number*, science no longer provides organic images, yet here too its function is to integrate the various storylines and temporalities that coexist on stage : the friendship between two mathematicians, G. H. Hardy and Srinivasa Ramanujan, in the early 20<sup>th</sup> century, and the mourning of a contemporary character Al, whose wife Ruth, also a mathematician, has died unexpectedly. Here too, references to mathematics and physics suggest both fragmentation and hidden structures both in the world and implicitly in the dramatic form. Ramanujan's work on prime numbers and on concepts such as *partition* or *decomposition* informs the scenography and the actors' positioning on stage. In the following excerpt, decomposition is

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<sup>11</sup> *Mnemonic*, 3-4.

presented as both a process of disintegration and a discovery of underlying structure :

*The sounds of far-off gunfire as the company begin to walk amongst the books. Astands.* Ruth In biology, decomposition is the reduction of a formerly living organism into simpler forms of matter, such as phosphate of calcium or calcium carbonate – chalk. In mathematics, decomposition operates similarly by the reduction of a number to the multiplicative products of its prime. [...] Aninda 24, for example, can be reduced to  $2 \times 2 \times 2 \times 3$  or  $2^3 \times 3$ . So prime numbers are the bones of mathematics. Everything is built on them. [...] Ruth(Voice-over.)  $2^3 \times 3^2 \times 5 \times 7 \times 11 \times 13 \times 97$  equals 34, 954, 920.

*Music and gunfire and the company knock over books.*

[...] 34, 954, 920. The number of dead, wounded and missing in the First World War<sup>12</sup>.

Here the massacre of the First World War is viewed through the prism of numbers, and although the theme is decomposition and destruction, mathematics are presented as a ghostly organism, through which connections can be glimpsed between the “bones” of reality, of the drama and of the human body. The show concludes with a contemporary perspective on Ramanujan’s work and his contribution to string theory :

Al... Are you saying that this math is helping to form a unified vision of the universe? Aninda Yes, it is the holy grail of physics to find a single coherent explanation for the biggest and smallest elements of our universe. To identify the structures which bind everything together<sup>13</sup>.

Mathematics are presented as one answer to humanity’s yearning for a “unified vision”, and although the show is composed of a multitude of short scenes juxtaposing different countries, cultures and times, it leaves the audience with the impression that science may indeed be a key that “binds everything together”. According to Stephen Pepper, and the classification he proposes in *World Hypotheses: A Study in Evidence*, organicism is defined by the belief that parts are dependent on a whole which conditions them according to an inherent coherence. Apparently isolated or fragmented elements can thus be shown to be predetermined by a system. For the organicist, “[a] datum is a fragment with a nexus which leads to a contradiction that is resolved by integration” ; he “hopes to show that there really are not, never were, and never will be any real fragments or fragmentariness in the universe”<sup>14</sup>. Following this definition, we can argue that

<sup>12</sup> Complicite, *A Disappearing Number*, London, Oberon, p. 72-74.

<sup>13</sup> *A Disappearing Number*, 86-87.

<sup>14</sup> Stephen Pepper, *World Hypotheses : A Study in Evidence*, Berkeley : University of California Press, 1942, p. 303-304.



scientific descriptions of the world mediate the lingering temptation of organicism in Complicite's fragmented performances. Yet this is no longer the organic organicism of Aristotle, whose rule was that no part of the whole could be displaced without upsetting the whole ; indeed Complicite's fragments are often displaced or modified during the run of their shows.

In her introduction to *Darwin's Plots*, Gillian Beer asks what "new forms for storytelling" are being unleashed from scientific work, wondering whether "new grammars for narrative" will replace Propp's analogy with morphology<sup>15</sup>. In the shows presented in this paper, science may not have provided completely new dramatic grammars, yet it is a figurative source of form which invites the audience to read meaningful relations into the apparently discontinuous. It is a tool for paradoxically postmodernist dramatic forms, which seek to anchor their fragments in the coherence of scientific understanding.

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<sup>15</sup> Gillian Beer, *Darwin's Plots, Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, Cambridge, CUP, 2000, XXVIII.

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## AUTEUR

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