

TOM STOPPARD'S *ARCADIA* AND THE QUEST FOR KNOWLEDGE

Mariem Souissi¹

ABSTRACT

The present paper brings attention to the importance of humanities in shaping a better world. Human sciences are a reliable means of order without which the human thinking might be even more disorderly than it is. The problem is to keep it in motion, to prevent the dominant realms of scientific thought of damaging the emotional attributes of human lives. Another problem is to make it yield to the critical crises of the modern austere world. Tom Stoppard's *Arcadia* reveals that it is only in the equation of love, that order can be found. The line between emotion and reason has been mirrored in the relationship between Thomasina and Septimus and arises out of the human emotions between the other characters especially Hannah and Bernard. The waltz scene engages the reader in an implicit dialogue between science and humanities. It comes to symbolize the healing effect of arts. Just right before her tragic death Thomasina dances with Septimus in a dance which proves that science and mathematics without love and humanities may lead to the tragic ending of the universe.

And, as the play shows it, the final scene of waltz intertwines the past and the present. It alternates between the pastoral past of romanticism and emotions and the present of technological progress to show us that knowledge is only complete when emotions and reason are matched. Accordingly, the future of chaotic behaviour in this ambiguous world, is not a random reality, it results from that conflict between reason and emotion. The victory of emotion at the end of the play (the final dance between characters) proves that human sciences, ranging from music, poetry, drama, paintings etc, have been always in motion and thanks to them one's humanity is fulfilled . Arts and emotions illuminate and heal the suffocating patterns underlying the chaotic human life. As a "science play" entwined with a unique love story, Tom Stoppard's *Arcadia* intends to highlight the fact that the peculiar nature of the human self can be only mirrored in the realm of the artistic thought. Needless to say, that even the power of scientific thinking can be truly achieved through active human sciences. In this respect, this paper will examine and highlight the duality of reason and emotions in Tom Stoppard's *Arcadia*. It will shed lights on their ultimate relation to the

¹ Sousse, Tunisia 4041, mariemsouissi@hotmail.fr

mobility of humanities reflected in the themes and language of the play. To deal with these ideas in a thorough way, I will analyze the play in the light of a thematic study.

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INTRODUCTION

The line between reason and emotion allows us to reconstruct our cognitive knowledge and convert a flawless reasoning process. The people, who lose that connection between the emotional sides of knowledge and the strong indications of the brain, often find themselves unable to sort out the truth of things. *Arcadia* by Tom Stoppard serves as an homology that articulates the ramification which arises out of the connection between sciences and humanities. Humanities, then, are a useful tool for any quest of knowledge. Indeed, Tom Stoppard makes it clear that no matter which scientific technique is applied, only an emotional dealing with the subject matter could unveil its hidden and ambiguous realities. *Arcadia* is a play about knowledge and how the quest for knowledge cannot be achieved, unless one can make a connection between sciences and emotions. It plays a crucial role in “the theme of knowledge. In addition to acting as a symbol of knowledge, it allows Stoppard to identify a different view of knowledge, but one which is in keeping with the scientific debate of the play” (Purse, 151). For him, if knowledge does not fit into the scientific realm, it is not knowledge. Indeed, a thematic study of the play proves that.

In addition to that, for Tom Stoppard “the world of knowledge is about people, ‘why does scientific progress matter more than personalities,’ he demands. A great poet is always timely. A great philosopher is an urgent need. There is no rush for Isaac Newton” (Purse 151). The realm of truths cannot be reached without poetry, arts, music, philosophy and writings. Thereafter, Thomasina, the heroine of the play, finds an enormous difficulty to come out with a spectacular equation as far as the existence of God is concerned. As she runs through the mental attributes of the Newtonian theory, she dismisses the humanitarian sides of the scientific knowledge. This duplicates the process by which Septimus, her Tutor, answers her question about carnal love. Septimus knows that his student does not believe in emotions and intuition when knowledge is concerned, that’s why his answer was at first very ridiculous and absurdly literal.

THOMASINA: Septimus, what is carnal embrace?

SEPTIMUS: Carnal embrace is the practice of throwing one's arms around a side of

beef. (1.1)

This answer did not convince Thomasina, that's why she asked for more explanation. This tells us a lot about Thomasina as well as Septimus. Septimus has a sense of humour and he deeply knows that an absurd answer will arise Thomasina's emotional objection. As the conversation develops Septimus sense of humour and sexy talk develop to give Thomasina a convincing answer. Sex becomes his central subject which arises the disgust of Thomasina and underlines her rigidity. By going completely off scientific intelligence, Septimus becomes less smart when things are related to his beloved. This proves that there should be equilibrium between scientific equations and emotional attributes, no one should exceed the other, and otherwise the truth will be shattered. Septimus loses his smartness when it comes to Thomasina. Septimus tendency to take Thomasina's questions with too much emotion blinds him to what a truth is

THOMASINA: No marks?! Did you not like my rabbit equation?

SEPTIMUS: I saw no resemblance to a rabbit.

THOMASINA: It eats its own progeny.

SEPTIMUS: (Pause) I did not see that. (2.1)

Because her focus is the making of knowledge rather than the making of art, Thomasina is so rigid when it comes to emotions. She thinks that knowledge should be purely scientific and this is actually what leads to her tragic death.

Connections between scientific knowledge and literature take many forms. In *Arcadia*, Tom Stoppard uses the chaos theory and relates it to some pieces of artistic works. The uses of chaos within the literary field unveil the importance of humanities in the quest for knowledge. In fact, "chaos theory does not represent the first attempt to use science to study literature, but it enjoyed a tremendous vogue during the 1990s" (kellert, 20). *Arcadia*'s structure is a chaotic one. The scenes in the plays alternate between two periods of time, the early nineteenth century and the present day. The critic John Fleming points out that the scenes are "a non-linear system- they alternate between the early nineteenth century and the present day. The last scene intermingles both time periods" (qtd in Purse 143). Fleming asked Stoppard about this choice of structure and Stoppard argued that "the play mimics the way an algorithm goes through bifurcations into chaos" (143). In a very fathomable way the structure of the play duplicates

the scientific theory of chaos. As if Stoppard wanted to say that science and literature are the two facets of the same coin, the “coin” of knowledge. In keeping with the chaos theory in the last scene proves that “within chaos there are elements of order” (143). This order flourishes when scientific knowledge meets the literary and the artistic spheres.

Stoppard is aware of this observation; old and new science should be equally understood through a literary explanation. Thomasina’s anticipation of the law of thermodynamics failed because she was unable to use art to clarify the ambiguity between these sciences. In other words, knowledge is not merely a scientific emblem. In *Arcadia*, Knowledge takes many forms and means various things. In the play “there are three elements of research being undertaken: Valentine is researching the grouse records in the game books, Hannah is looking through ‘Lady Croom’s garden books’ in order to identify the hermit who lived in the garden; and Bernard is trying to prove his theory that Byron killed Chater in a duel at Sidley Park, the outcome of which, then, forced him to leave England in a hurry. Rather like chaos theory itself research is about recovering information from fields of data” (149). The truth of things should be looked for, through an eclectic research which combines the scientific as well as the literary and even the religious or the spiritual. Bernard cannot prove that Byron killed Chater basing his research on numbers or dates only; he had to dig behind the roots of the quarrel between Chater and his wife. When the additional or rather the accidental materials are excluded from any research or quest of knowledge, information even if they are scientifically proven restrain any production of authentic conclusions. Any act of research “particularly historical research [...] is an act of bifurcation between the present and the past” (149). It is worth mentioning that nothing can be as efficient as literature in uncovering the often ambiguous relation between the past and the present. Bernard “has found a book with three letters in it (Past) which leads him to formulate a theory (Present) which requires further corroboration in the form of a letter Lady Croom has written to her husband (Past) which causes Bernard to need proof (present) of Byron’s presence at Sidely Park” (150). Stoppard points out that there is a ‘good’ knowledge and a ‘bad’ knowledge and, thus, a bad knowledge is the one that ignores the essential components of authentic information.

In the final scene it becomes clear that chaos emanates from an inappropriate use of knowledge, especially when it comes to sexual desire. In the previous scenes, Bernard seduced Hannah into sex in London. Valentine, too, was eager

to have a sexual intercourse with Hannah. Thomasina “kisses Septimus full on the mouth that her feelings have gone far beyond the respect a pupil should have for her tutor” (Purse 147). All of these sexual attractions boosted that chaotic ending. These attractions are metaphorically the elements of the chaos theory and the ultimate cause behind Thomasina’s tragic death burned in the heat. In fact sex is “both the metaphor for the heat that is lost but it also turns out to be the element-the butterfly effect- which undermines the determinism of the Newtonian process” (147).

Tom Stoppard resorts to sexuality in order to undermine the Newtonian explanation of determinism. There are numerous instances in the play which underline the humanitarian side of any scientific theory. In other words, the observation of the characters’ sexuality sheds light on the fact that a new explanation is required as far as the Newtonian theory is concerned. Actually, “heat was the first thing which didn’t work that way. Not like Newton. [...]Sex turns out to be the butterfly effect” (148) that abolishes any sort of determinism. It is according to the smallest instances of the butterfly effect that heat works in the play. In the final scene, Thomasina enters the stage carrying a candlestick which reminds the reader that she dies in a fire the night before her seventeenth birthday. In addition, “the great library of Alexandria is burned, as are the hermit’s papers upon his death, Septimus letters which were to be opened in the event of his death and Byron’s letter in front of Lady Croom. The heat from Noakes’ engine is real, too, although its dissipation only reinforces the metaphor behind the second law of thermodynamics” (149). In a clever way, the play suggests that in a world which lingers on the Newtonian theory to decipher the codes of any knowledge, desire and sexuality proves that a butterfly effect can change a whole set of information.

In the first scene, Septimus teaches Thomasina about the Newtonian Physics, particularly, the heat death implicit in Newton. Thomasina’s observations and questions are ahead of her time as she does not stick to the simplistic predictable laws of physics and tries to use her wit to explain things differently. The young Thomasina is clearly a genius mathematician who does not notice any predictable order to the universe and hence does not agree with the Newtonian theory. She argues that “in Newton’s universe, equations can run in either direction-forward or back. But there is one equation that runs only one way: heat turns cold. The same thing is happening everywhere, all the time: it’s called the second law of thermodynamics” (Gale 22). Many years after her tragic death, Han-

nah finds her notebooks and asks Valentine to explain Thomasina's equations to her. Valentine is a mathematician too, and he is highly aware of Thomasina's cleverness. He explains that "when Thomasina was doing maths it had been the same maths for a couple of thousands years, classical, and then for a century after Thomasina. Then maths left the real world behind, just like modern art, really" (22). Thomasina was ahead of her age and offered the real world of maths a revolutionary equation that combines the efficiency of science and the critical observation of humanities. If Thomasina was not a bibliophile who gives an unparallel importance to reading, she wouldn't have that incredible wit.

It is worth mentioning that Septimus was thrilled by her discoveries and that might be the only reason why he fell in love with her. How can we understand the universe? With a new kind of maths which takes into consideration the new dynamic systems of the real world. This is the conclusion; one can get from the witty observations of Thomasina. The reader realises that "she didn't have the maths, not remotely. She saw what things meant, way ahead, like seeing a picture [...] and she knew that if she was right she could help us escape from the trap laid by Newton-of a predictable determined universe shorn of free will and doomed to freeze; with the day-to-day unpredictability of chaos theory determinism leaves the road at every turn" (22). Thomasina succeeded in producing an equation that tugs at the heart as well as the mind, thus, she was able to be ahead of her time.

As the actions of the plays rebounds back and forth in time, Stoppard expounds beautifully the relation between truth and history. In fact, "the difference between historical truth and historical accuracy becomes evident throughout *Arcadia*" (Baker 221). According to Tom Stoppard, historical truth is not concerned with whether events have really happened but it does insist on what could have been happened. Truths involve the authenticity and genuineness drawn from the conclusions one can formulate based on a given set of information. Whereas historical accuracy is highly concerned with "facts that are provable or verifiable with direct, irrefutable evidence" (Baker 222). Throughout the course of the play, we notice that historical accuracy is difficult to achieve, simply because it's hard to collect all the parts of evidence to judge events and facts. We never have the complete picture of things, there is always something missing. Indeed, "some of the pieces may be missing. Letters may have been burned-whereas, historical truth allows Hannah to deduce that Septimus was the hermit in the painting (*The Sidley Hermit*), even though, she cannot prove it" (222). In other

words, our scientific proven knowledge of history is limited and hence, one should resort to literature and arts to complete the missing pieces of the historical picture. Besides, each character in the play has a limited knowledge, knowledge limited by their experience, time, place and also “by their egos [that is why] the truth is always shifting, even in the present. This is because there is no one truth. In the end, attaining complete veracity is impossible because diverse planes or perspectives are dependent on the characters’” limitations and pride” (Baker 237).

Ultimately, scientific knowledge is proven helpless as far as history is concerned. In the play Bernard discovers two different essays to Byron and “his discovery of the lines he added to English Bards. While Bernard is proven wrong in his unsubstantiated claims about the Byron-Chater duel to the death, these ‘discoveries’ will likely outlive him and bring him notoriety” (238). The reader, thus, cannot be sure if this discovery will go beyond the dishonour revealed in one of Hannah’s letter and in which she refutes his Byron-Duel claims. In this respect, “Bernard’s mortification exemplifies the nature of historical truth and accuracy as presented by Tom Stoppard in *Arcadia* and perhaps indicates how much stock should or (should not) be placed in scholarship” (238). In history, we need artistic and human models to inspire us while studying a given fact. In this context, science cannot create an ordered society that believes itself to be free without these models.

By means of a postmodern reading of the play, the reader will be able to deduce that the society suffers from a failure of communication. This lack of communication creates an abstruse knowledge which is unable to answer the increasingly endless questions. In very general terms, *Arcadia* gives us a hint of how the three researchers in the play, do currently go back to the books of their ancestors to explain or communicate anything science was unable to clarify. The three researchers are; Valentine, a mathematician and a member of the Croom family; Hannah a visiting freelance writer and Bernard a lecturer in English Literature. The common point between the three of them is that their theories are based on a cluster of a binary opposition whose common catalyst may be described as “order versus chaos” and “literature versus science”. As a result, the thematic texture of the play which connects these characters is described in this passage from an article written by the drama critic Heinz Antor:

We intend to show here that Stoppard presents various modes of approaching reality and making it meaningful, both from the arts and from

the sciences, and that he depicts a general development from a pre-modern or, one might even say, a classical belief in regularity, order, finite linear teleology and the existence of well-structured patterns to a postmodern and post-structuralist scepticism about these things and an awareness of irregularity, chaos, non-linearity, infinity and unstructured patternlessness or complexity. (qtd in Niederhoff 44)

Arcadia parallels between the changes that the architecture of the garden went through and the changes in science. In this context, it is worth mentioning that in the play, the garden underwent a change from “a formal Italian design with trees cut into geometric shapes, to an English landscape created by Capability Brown, and finally to picturesque and Gothic wilderness” (42). This interesting change in the architecture unveils the disorderly traits of the new science. In other words, arts and literature should be intrigued by this change to establish an order within this disorder. Hannah, the “garden” Historian is intrigued by this mystery of architecture so that she starts digging deeply behind the story of the hermit and hermitage. In this respect, science and architecture could be a catalyst for innovations in history and arts. Actually, Septimus Hodge is the lunatic that Hannah is interested in. After the death of his pupil and beloved Thomasina, Septimus goes mad and spends the rest of his life in the hermitage. Indeed, the principles of order and disorder seem to gain ground in the dichotomy between science and art.

To conclude, the working of intellectual and scientific discoveries in Stoppard’s *Arcadia* suggests that within the current disorder of the modern world, one should pay attention to arts and humanities as a creator of order. Humanities, literature in particular, are what may point out the misunderstandings, the interruptions and the flaws of scientific discoveries. Surely, the echo of the literary answer carries beyond the immediate scientific context to meet the challenges of the human soul which is more difficult to understand than the mathematics equations of all times. It is true that Stoppard’s *Arcadia* has been considered as a play of science, but what is very interesting about it is the genius connection that Stoppard establishes between arts and science. He wanted to prove that without arts no scientific discovery is able to solve the complicated nature of the human being.

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