

"Fortuitous Wit": Dialogue and Epistemology in Tom Stoppard's *Arcadia*

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1. An Introduction to *Arcadia*

Tom Stoppard's *Arcadia*, which was first performed and published in 1993, is a play of ideas. It is also a play *about* ideas, in particular about the processes that generate them. The location of the play suits the topic. *Arcadia* is set in a schoolroom, to be more precise, in the schoolroom of Sidley Park, the country estate of an aristocratic family in Derbyshire. While the setting is very stable in one sense (all of the seven scenes take place in the schoolroom), it is highly unstable in another. The play travels back and forth between the early nineteenth and the late twentieth century. In this, *Arcadia* is like a number of recent historical novels such as A.S. Byatt's *Possession* (1990) or Guy Vanderhaeghe's *The Englishman's Boy* (1996); it contains two alternating plots, one of which is set in the past, while the other is set in the present. A major concern in the second plot is the reconstruction of the first; thus the play shows some of the characteristics of the mystery or detective genre.

The twentieth-century plot line of *Arcadia* features three researchers. Valentine, a mathematician and member of the Croom family who own Sidley Park, devises models that describe the fluctuations in animal populations. He is currently using the game books inherited from his ancestors to work on grouse. Hannah, a visiting freelance writer, is interested in the history of the garden in the eighteenth and early nineteenth centuries. The garden underwent the usual changes: from a formal Italian design with trees cut into geometric shapes, to an English landscape created by Capability Brown, and finally to a picturesque and Gothic wilderness. Hannah is particularly intrigued by a mysterious

lunatic who inhabited a hermitage that was a feature of the Gothic stage of the garden. The third researcher is Bernard, a lecturer in English Literature, who wishes to make a name for himself by proving a sensational theory. He believes that on a visit to the Croom family, Lord Byron killed a minor poet by the name of Ezra Chater in a duel after panning his work and seducing his wife.

Bernard's theory is not entirely wrong. The plot set in the early nineteenth century does include a turbulent visit that Byron pays to the Croom family. The visitor gets involved with no less than two women, among them Chater's wife, and her husband issues a challenge. However, Byron is not the man to whom the challenge is addressed; he is not a major character in this play. His part is that of the "red herring," as Rajeev Patke has put it¹ (in fact, he never makes it onto the stage). Stoppard repeats in *Arcadia* what he did in *Travesties* and *Rosencrantz and Guildenstern*, where he assigned minor roles to James Joyce and Hamlet, while moving Henry Carr, Rosencrantz and Guildenstern to centre stage. In *Arcadia*, the story that merits reconstruction is not about Byron but about his friend Septimus Hodge, who works as a tutor for the Crooms, and about Septimus' pupil Thomasina, the teenage daughter of the family. Thomasina is a genius who anticipates scientific discoveries that were made much later in the history of science as we know it, for instance fractal geometry or the second law of thermodynamics. However, her life and her intellectual career are cut short when she dies in a fire at the age of sixteen. As a result of the death of his pupil, Septimus goes mad and spends the rest of his days in the hermitage. He is the lunatic that Hannah, the garden historian, is interested in.

The thematic pattern that underlies and connects the two plots is described in the following passage from an article by 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. The play, in order to

discuss these concepts, uses the theory of gardening and the conflict between classicism and romanticism as well as recent developments in chaos theory and thermodynamics and thereby becomes an example of isomorphisms of thought in the two cultures.²

As Antor states, the play is based on a cluster of binary oppositions, whose common denominator may be described as order versus chaos or regularity versus irregularity. These oppositions cut across the arts-sciences divide, informing both the history of culture and of science. *Arcadia* suggests a parallel between the changes in the garden from the formal Italian to the Gothic style and the changes in science from a Newtonian paradigm, which treats nature as predictable clockwork, to a post-Newtonian paradigm, in which chaos theory and the second law of thermodynamics introduce the notions of randomness and disorder. Antor gives a thorough analysis of the oppositions indicated here; his remarks on the motifs of music and noise, which are associated with these oppositions, are particularly instructive. However, I disagree with his reading in one respect, and I should like to make this disagreement the point of departure of my argument.

2. "Semantic Entropy" or "Fortuitous Wit"?

In analysing the binary oppositions of the play, Antor touches upon the misunderstandings that the dialogue is beset with. He argues that these misunderstandings reflect the sceptical or poststructuralist tendency of the play, the tendency that is opposed to order, truth and meaning:

The principles of disorder and entropy also seem to gain ground in the conversation the characters have in the play. Time and again, there is noise in the sense of communication being hampered by such factors as polysemy or varying frames of reference that lead to a kind of semantic entropy and to misunderstandings between the persons involved, such as when, in the first scene, Captain Brice refers to Mrs Chater's affair with Septimus (350).

In my view, it is misleading to describe the misunderstandings of the play as "semantic entropy." Instead of disrupting or dissolving meaning, they create it. The dialogue mentioned by Antor is a case in point. It

takes place when Lady Croom, Captain Brice and the landscape architect Mr Noakes enter the schoolroom, where Septimus has been talking to Ezra Chater. Lady Croom and Captain Brice take Mr Noakes to task for the Gothic innovations that he has proposed for the garden, while Septimus and Chater think they are talking about an entirely different matter. This error is due to a peculiar concatenation of events. Mr Noakes has observed Septimus and Mrs Chater making love in the gazebo, of all places, and he has told the news to Mr Chater, who has issued a challenge to Septimus. However, with a mixture of flattery and bravado, Septimus has talked Chater out of the idea of fighting a duel. Enter the group around Lady Croom, whose talk about the garden is understood by both Septimus and Chater as referring to the sexual encounter in the gazebo:

Lady Croom: Oh, no! Not the gazebo! [...] Mr Noakes! What is this I hear?

Brice: Not only the gazebo, but the boat-house, the Chinese bridge, the shrubbery—

Chater: By God, sir! Not possible!

Brice: Mr Noakes will have it so.

Septimus: Mr Noakes, this is monstrous!

Lady Croom: I am glad to hear it from *you*, Mr Hodge.

[...]

Brice: Is Sidley Park to be an Englishman's garden or the haunt of Corsican brigands?

Septimus: Let us not hyperbolize, sir.

Brice: It is rape, sir!

Noakes: (*Defending himself*) It is the modern style.

Chater: (*Under the same misapprehension as Septimus*) Regrettable, of course, but so it is. [...]

Lady Croom: Mr Chater, you show too much submission. Mr Hodge, I appeal to you.

Septimus: Madam, I regret the gazebo, I sincerely regret the gazebo—and the boat-house up to a point—but the Chinese bridge, fantasy!—and the shrubbery I reject with contempt! Mr Chater!—would you take the word of a jumped-up jobbing gardener who sees carnal embrace in every nook and cranny of the landscip?³

Almost every sentence here can be interpreted both in terms of sexuality and of landscape gardening. As in the famous china scene from Wycherley's *Country Wife*, a *double entendre* is sustained over several

minutes. To complicate matters even further, Thomasina enters in the middle of the scene, with the apposite question, "What is the topic?", on her lips. Although her knowledge of sexual intercourse is very recent (in fact, Septimus told her only a few minutes before this scene), she is the only one to realize that the adults around her are talking about different subjects. When she points this out to Septimus, new confusions ensue. These are again based on misunderstandings, but also on the Stop-pardian technique of characters not answering each other and pursuing different ideas, thus creating a pattern of alternating and overlaying topics. Lady Croom and Captain Brice are scandalized by Thomasina's premature knowledge of sexuality and want to find out where she obtained it, while Thomasina mischievously thwarts their efforts by sticking to the topic of landscape gardening, in which she is assisted by the benighted Noakes who has not realized that the conversation has taken a new direction.

Thomasina: Septimus, they are not speaking of carnal embrace, are you, Mama?

Lady Croom: Certainly not. What do you know of carnal embrace?

Thomasina: Everything, thanks to Septimus. In my opinion, Mr Noakes's scheme for the garden is perfect. It is a Salvator!

Lady Croom: What does she mean?

Noakes: (*Answering the wrong question*) Salvator Rosa, your ladyship, the painter. He is indeed the very exemplar of the picturesque style.

Brice: Hodge, what is this?

Septimus: She speaks from innocence not from experience.

Brice: You call it innocence? Has he ruined you, child? (*Pause.*)

Septimus: Answer your uncle!

Thomasina: (*To Septimus*) How is a ruined child different from a ruined castle?

Septimus: On such questions I defer to Mr Noakes.

Noakes: (*Out of his depth*) A ruined castle is picturesque, certainly.

Septimus: That is the main difference. (*To Brice*) I teach the classical authors, Captain Brice. If I do not elucidate their meaning, who will?

Brice: As her tutor, you have a duty to keep her in ignorance.

Lady Croom: Do not dabble in paradox, Edward, it puts you in danger of fortuitous wit (10 f.).

The sheer fun and ingenuity of the two passages just quoted should preclude a description in terms of "semantic entropy." But even if we disregard fun and ingenuity, the fact remains that the misunderstand-

ings and the pursuit of different topics do not dissolve meaning but help to create it. They establish a connection between sexuality and the garden that is crucial to the thematic structure of *Arcadia*. Thomasina opens the play with the question "Septimus, what is carnal embrace?" (an expression she has overheard without understanding it); among the things that she discovers in the course of the play are the facts of life. Thus the garden of Sidley Park is an Arcadia where exciting but hazardous discoveries can be made, an Eden where knowledge may be gained at the price of innocence.⁴ The link between sexuality and the garden is also important because there are similar *double entendres* linking sexuality and science. One of these is Valentine's definition of sexuality: "The attraction that Newton left out. All the way back to the apple in the garden" (74). This pun links sexuality with the legendary fall of the apple that inspired Newton's discovery of gravity (while also alluding to another Fall in the Garden of Eden). If we take Valentine's *double entendre* and the ones about the garden of Sidley Park together, sexuality works as a bridge that establishes the analogy between the history of the garden and the history of science pointed out by Antor. It is a metaphor that stands for the irregular, anti-determinist forces in both of these histories.

What I have tried to show for the dialogue about Noakes' plans and carnal embrace is generally valid for the first scene. Thought and communication are beset with all sorts of accidents: misunderstandings, failure to listen, pursuit of different topics, interruptions, evasions, slips of the tongue. Paradoxically, these accidents create meaning and insight. Even the opening sentence is already an interruption of this sort. Septimus has given Thomasina a rather demanding assignment, the proof of Fermat's Last Theorem, which he hopes will keep her busy and allow him some time to read Chater's poem, *The Couch of Eros*, which he has been commissioned to review. However, Thomasina is distracted by the memory of a phrase that she overheard (by yet another communication accident), and interrupts her tutor with the question "Septimus, what is carnal embrace?" Septimus avoids a straight answer. He gives a literal definition—"Carnal embrace is the throwing of one's arms around a side of beef"—and expatiates on the etymology of "carnal," concluding his

evasions with the melancholy remark “We had *caro* in our Gallic Wars [...]. I am sorry that the seed fell on stony ground” (1-2).⁵ Thomasina misinterprets Septimus’ biblical allusion in a way that counters Septimus’ evasions and keeps the sexual topic alive: “That was the sin of Onan, wasn’t it?” When Thomasina informs Septimus that she “heard Jellaby telling cook that Mrs Chater was discovered in carnal embrace in the gazebo” the tutor commits a revealing slip of the tongue:

Septimus: (Pause) Really? With whom, did Jellaby happen to say? (Thomasina considers this with a puzzled frown.)

Thomasina: What do you mean, with whom?

Septimus: With what? Exactly so. The idea is absurd (2).

Thomasina is quick to notice that Septimus’ slip of the tongue hints at a truth that he wants to hide from her, and eventually she persuades him to give her a more accurate account of carnal embrace. A little later, the butler arrives with a note from Chater, which contains the challenge to Septimus. This interruption establishes the pattern for the rest of the scene; tutor and pupil keep getting interrupted from the outside, first by Chater himself, then by the group around Lady Croom. Thus little progress is made on the assigned work, but the interruptions do not result in disorder and confusion. Instead, they lead to crucial discoveries on Thomasina’s part. She learns what carnal embrace is, that it addles the brain, that Septimus shared it with Mrs Chater, and that Septimus is in love with her mother; as I will show below, she also has a first inkling of the second law of thermodynamics or the principle of entropy. “That is enough education for today” (14), as Septimus aptly comments at the end of the scene.

The interruptions of Thomasina’s lesson do not cause pedagogical or cognitive entropy. They result in worthwhile lessons and insights, just as the misunderstandings that characterize the dialogue create interesting and relevant meanings. Antor’s failure to account for this paradox indicates what I take to be a problem in his treatment of the binary oppositions of the play. He describes the relationship between the opposed principles as antagonistic; meaning and insight have to be created *in the face of* disorder and irregularity. In my view, we should also allow for the

cooperation of the opposed principles. This cooperation is suggested in an episode in which Valentine explains chaos theory and fractal geometry to Hannah.⁶ The explanation follows her question whether it is possible to plot the shape of an apple leaf by iterating an algorithm (the technique that he uses in modelling animal populations):

If you knew the algorithm and fed it back say ten thousand times, each time there'd be a dot somewhere on the screen. You'd never know where to expect the next dot. But gradually you'd start to see this shape, because every dot will be inside the shape of this leaf. It wouldn't be a leaf, it would be a mathematical object. But yes. The unpredictable and the predetermined unfold together to make everything the way it is. It's how nature creates itself, on every scale, the snowflake and the snowstorm (47).

What is true of snowflakes, snowstorms and the images on Valentine's computer screen is also true of creative thought in *Arcadia*. In this play, meanings are found and discoveries are made when "the unpredictable and the predetermined *unfold together*," when a random or chaotic element finds its way into a rational, goal-oriented pursuit. The double-layered dialogue about Noakes' Gothic innovations, which furnishes an example of this cooperation of the opposed principles, also provides us with a phrase that describes it. When Lady Croom tells her brother not to dabble in "fortuitous wit," she coins a phrase that captures not merely Captain Brice's unintentional paradox ("As her tutor, you have a duty to keep her in ignorance"), but more generally the workings of intellectual discovery in *Arcadia*.

3. Intellectual Discovery in Koestler and Stoppard

To provide the foregoing analysis of the first scene of *Arcadia* with a theoretical framework, I should like to make a brief digression into the psychology of creative thought, which is based on Arthur Koestler's interdisciplinary classic, *The Act of Creation*. Koestler argues that truly innovative ideas in the arts and the sciences are based on what he calls bisociation, the linking of two matrices that have not been connected so far (matrix is a generic term embracing theories, methods, fields of asso-

ciation, routines with set rules, etc.). A famous example of bisociation is the legendary Eureka incident. Faced with the task of establishing the volume of a crown, Archimedes tries to solve the problem within the matrix of his geometrical knowledge, using measurement and calculation. But the highly irregular shape of the crown defies all his attempts along these lines. Then one day when Archimedes enters his bath and sees the water level rise he suddenly recognizes that his own body is just as irregularly shaped as the crown, and that the volume of the water displaced by human bodies or crowns can be measured quite easily: Eureka! The crucial element in this discovery is the bridging of the gulf between two matrices that are worlds apart in Archimedes' mind: solving a mathematical problem with his intellect on the one hand; indulging in a pleasurable routine for the comfort of his body on the other.

According to Koestler and numerous scientists quoted by him, the bisociation that characterizes truly innovative ideas does not result from planned, rational, and rule-governed thinking. This kind of thinking will solve the problems that lie within the scope of an already established matrix, but it will not take the bisociative leap that connects this matrix with a different one. Bisociation depends on "thinking aside," on the regression (or progression) to less disciplined modes of thinking: playing around with sounds or shapes, using visual images instead of verbal concepts, following the associative and non-logical ways of dreams or daydreams. It also depends on chance encounters and on the openness to recognize the solution of a problem when it comes from an unexpected direction, as in the case of Archimedes in his bath. Sometimes it even comes about as the result of an accident, a phenomenon that Koestler describes as "discovery by misadventure." The history of science knows many experiments that were spoilt through inadvertancy or other causes but yielded new insights because the experimenters had the genius to perceive the meaning of the mess they had made.⁷

The workings of intellectual discovery in Stoppard's *Arcadia* correspond in many ways to Koestler's theory. Some instances of this have already been pointed out: the misunderstandings, interruptions and slips of the tongue that, in the first scene, contribute to the "fortuitous wit" of

Stoppard's dialogue and to Thomasina's discoveries about sexuality. A further instance, which concerns a genuinely scientific discovery, also occurs in the first scene. The butler who interrupts the lesson to hand Chater's challenge to Septimus also tells Thomasina that there will be rice pudding for dinner. Thomasina immediately turns this pudding into food for thought. She has a first intuition of the second law of thermodynamics, the tendency of closed systems to develop towards greater entropy, in other words, towards less organized states:

Thomasina: When you stir rice pudding, Septimus, the spoonful of jam spreads itself round making red trails like the picture of a meteor in my astronomical atlas. But if you stir backward, the jam will not come together again. Indeed, the pudding does not notice and continues to turn pink just as before. Do you think this is odd?

Septimus: No.

Thomasina: Well, I do. You cannot stir things apart (4-5).

Thomasina has the gift for "thinking aside" and for drawing inspiration from visual images. Like Archimedes, she can extricate the everyday activity of eating dessert from its usual context and bisociate it with abstract physical problems.

Koestler's ideas may also be applied to the research conducted by Bernard and Hannah. When they first meet each other, both have fully-fledged theories about what happened at Sidley Park in the early nineteenth century. These theories reflect their different personalities. Hannah, who is rational and reserved, regards the development from the formal Italian to the Gothic garden as a "decline from thinking to feeling" and the lunatic in the hermitage as a symbol of the "whole Romantic sham" (27). Bernard, who is ambitious, flamboyant and without scruples, creates Byron in his own image: a man that ridicules a literary rival in the press, seduces his wife and shoots him dead in a duel. However, the way in which the two characters go about testing and proving their theories is different. Bernard searches the library "like a bloodhound" (44), hunting down documents favourable to his ideas with impressive energy and speed. His attitude is summed up in his confident statement "We can find it!" (50), referring to the evidence that will sup-

port his theory. On a similar occasion Hannah is talking about evidence which will prove her suspicion that the lunatic is Septimus. But in contrast to Bernard, she adds the proviso "*if only* I can find it" (66, my italics). Another characteristic moment occurs in the final scene. Having been caught in carnal embrace with Chloë in the hermitage, Bernard makes a hasty exit and treats Chloë rather callously. Hannah, who witnesses this, calls him "bastard," only to receive a sharp rebuke from Chloë herself:

Chloë: And you mind your own business! What do you know about anything?

Hannah: Nothing.

Chloë: (to Bernard) It was worth it, though, wasn't it?

[...]

Hannah: (An echo) Nothing (95).

Surely, the echo of Hannah's answer carries beyond the immediate context. It expresses a Socratic awareness of her ignorance, which is entirely lacking in Bernard's intellectual temperament.

What is even more important than Hannah's healthy scepticism about her own ideas, is her capability of "thinking aside." An important piece of evidence is a portfolio with Thomasina's lesson book and other items. These indicate that Thomasina was a mathematical genius way ahead of her time, and they also contain a clue to Septimus' later career as a lunatic in the hermitage. It is the bloodhound Bernard who chances upon this portfolio, but since it does not smell of Byron the rake or Byron the duelist, he passes it on to Hannah without paying any attention to it. At first sight, the portfolio has as little to do with Hannah's interests as it has with Bernard's, but somehow she senses its importance. In addition to thinking aside, she also talks aside, as it were, asking the scientist Valentine to explain the mathematical significance of Thomasina's scribbles. This again distinguishes her from Bernard, who is far from seeking any interdisciplinary cooperation. In the squabble resulting from the trial lecture in which he presents his theory, he ridicules Valentine's grouse project and embarks on a polemic against the sciences in general (61-62).

In quizzing Valentine about Thomasina's work, Hannah has to overcome considerable resistance. "Not a schoolgirl living in a country house

in Derbyshire in eighteen-something!" (47), Valentine exclaims at one point, quite understandably rejecting the idea that Thomasina could have anticipated the mathematical techniques he uses in his work on animal populations. Elsewhere he remarks, "there's an order things can't happen in. You can't open a door till there's a house" (79). The play is very good at depicting the forces that prevent the bisociative leap. It shows the gravitational pull that is exerted by habit, routine and prejudice, keeping people's thoughts within the range of a familiar matrix. Hannah's mathematical ignorance is a blessing in disguise; her lack of knowledge entails a lack of prejudice that enables her to ask the right questions. Eventually she succeeds in making Valentine think aside as well. When his own research project on the grouse population fails, he realizes the relevance of one of Thomasina's projects and completes it on his computer.

What clinches Hannah's guess that Septimus is the lunatic is a drawing by Thomasina. This is the piece of evidence of which Hannah says "if only I can find it." And *find it* she does not. It is given to her. In the final moment of the play, Valentine's brother Gus enters the scene, awkwardly thrusting an old folio with the drawing at Hannah. Gus is the third in a series of men (after Valentine and Bernard) who contribute evidence or ideas to her work because they are attracted to her. But Gus is also rather different from the other two. He is a bit of a lunatic and a hermit (he stopped speaking at the age of five), and he is a teenage prodigy like Thomasina, an heir to the genius that runs in the family. Thus the final piece of evidence is not found; it arrives out of the blue, as a present from a character who represents both lunacy and genius, and who is motivated by the "attraction that Newton left out." A more striking depiction of the element of chance, of non-rational thought, of thinking or looking aside in intellectual discovery is hardly imaginable.

4. *Arcadia* and Scepticism

Having discussed the workings of intellectual discovery in *Arcadia*, I should like to return once more to Antor who also touches upon episte-

mological questions in his reading: "No matter where we look in the play, we time and again come across a scepticism with regard to our attempts at understanding the world and an awareness of the precarious status of the patterns we create in order to explain what we perceive" (348). Admittedly, Antor does not overlook the passages that give a more optimistic account of the search for truth and meaning. In fact, he sees the play as a debate between scepticism on the one hand and the belief in truth and meaning on the other. Other critics have been less sceptical in their claims about the scepticism of the play. Thus Guy Stern writes that in *Arcadia* Stoppard "outdistances even all his previous deconstructions of reality [...]. [T]hree recondite researchers prove before our eyes that the past is unreconstructable, reading its records, intuiting its spirit, or trying to quantify it via modern mathematics inevitably leads to major distortions."⁸ Peter Paul Schnierer's reading of the play combines epistemological scepticism with an argument about the evasiveness of the pastoral genre: the Arcadias created by this genre are utopias that necessarily remain elusive. According to Schnierer, Stoppard highlights this elusiveness in his treatment of Byron:

Access to Byron is only within textuality, and thus requires an interpretation of signs. Any such interpretation can and will go wrong. [...] By maintaining, even emphasizing, Byron's absence, Stoppard turns him into a screen for our projections. He dramatizes not just absence, but the principal impossibility of presence. Once permanent absence is established, and with it the certainty that no more authoritative versions of reality can intrude henceforth, the absence becomes capable of being pastoralized.⁹

After what I have said about "fortuitous wit" and intellectual discovery in *Arcadia*, it should come as no surprise that I disagree with the claims about the play's scepticism, at least the unqualified ones made by Stern and Schnierer. Schnierer's essay is entertaining and persuasively written, but, with all due respect, he seems to be repeating something like Bernard's mistake in focusing on Byron. Furthermore, it appears to me that the *Arcadia* of the play is not located in an elusive elsewhere, but right before the audience's eyes: in the schoolroom shared by Thomasina and Septimus. This is Thomasina's room of her own, a privileged and

protected environment in which she can pursue her intellectual interests and make her discoveries in the company of a gifted and sympathetic teacher.

One feature of the play that runs counter to scepticism is the way in which the two plots alternate, thus providing the audience with the information that the characters in the twentieth-century plot are desperate to obtain. While these characters are asking questions, making guesses and pulling each other's hypotheses to pieces, the audience are in the know. This concerns major questions such as who challenged whom to fight a duel, and also minor questions such as who shot a hare. In his trial lecture Bernard triumphantly cites an entry from a game book, which is crucial to his argument as it proves that Byron spent some time at Sidley Park: "April 10th 1809—forenoon. High cloud, dry, and sun between times, wind southeasterly. Self—Augustus—Lord Byron. Fourteen pigeon, one hare (Lord B.)" (54). At this point, the audience have already heard Septimus say that his friend is a poor shot (13), and their doubts about Byron's marksmanship are confirmed in a later scene when the Augustus mentioned in the game-book entry, Thomasina's brother, refers to the hunting episode: "Lord Byron?!—he claimed my hare, although my shot was the earlier! He said I missed by a hare's breadth" (79). Thus the audience learn that Byron did not shoot the hare just as he did not shoot a fellow poet in a duel.

The outcome of the research or detective plot also precludes scepticism. The researchers may be plunged in comparative uncertainty, lagging behind the audience, but eventually they succeed in catching up, in falsifying or verifying their theories. This plot contrasts Bernard's theory, which is wrong, with Hannah's theory, which is right, and both are *proved* to be so in the course of the play. "[T]he play is an affirmation," as John Fleming writes, "that despite all the indeterminacy, people can use their intellect and intuition to gain knowledge[.]"¹⁰ As I pointed out above, the final moment of *Arcadia* is about the discovery of the missing piece of evidence that establishes the truth of Hannah's theory. A sceptical play would end on a different note.

Thus far, I have tried to disprove the claim that *Arcadia* is a sceptical play by showing that it does allow for a reconstruction of the past, and that it does distinguish between true and false theories. This refutation is valid, I hope, as far as it goes, but a different argument also needs to be made in discussing the alleged scepticism of *Arcadia*. In my view, the play is not primarily a reflection on the possibility or impossibility of truth. Stoppard is less interested in truth than in how it is found or missed; he is less interested in the result of research than in its process.¹¹ The play's attitude towards this process is not sceptical at all. Whatever the truth of its results, research appears as an intensely captivating and exhilarating activity (which is, I suspect, one reason for the popularity of the play with scholars, including those who maintain its scepticism). For all his selfishness, even Bernard helps to communicate this attitude; one cannot help admiring the skill, the energy and the exuberance with which he searches proof for his wrong-headed theory. There are three speeches in the play that express a profound commitment to the activity of research regardless of its results. The first of these is made by Septimus who describes the history of the arts and the sciences as a long march, which individuals join for a little while, shedding and picking up intellectual equipment (38-39). In a similar speech, Hannah argues that it "is wanting to know that makes us matter," that it is not the answers in the back of the book that count but the process of searching for them (75-76). As Antor aptly comments, to Hannah "it is the journey that matters, not the arrival" (352). Valentine's speech follows his remarks on the interaction of the unpredictable and the predetermined quoted above:

It makes me so happy. To be at the beginning again, knowing almost nothing. [...] The ordinary-sized stuff which is our lives, the things people write poetry about—clouds—daffodils—waterfalls—and what happens in a cup of coffee when the cream goes in—these things are full of mystery, as mysterious to us as the heavens were to the Greeks. [...] We can't even predict the next drip from a dripping tap when it gets irregular. Each drip sets up the conditions for the next, the smallest variation blows prediction apart [...]. The future is disorder. A door like this has cracked open five or six times since we got up on our hind legs. It's the best possible time to be alive, when almost everything you thought you knew is wrong (47-48).

Again, there is an intense commitment to research regardless of the truth of its results (almost in inverse proportion to the truth of its results). The awareness that the knowledge he has acquired is largely wrong does not plunge Valentine into Pyrrhonic gloom; it fills him with joy and excitement. The acknowledgement of irregularity, unpredictability, and disorder does not lead to scepticism. On the contrary, it opens the door to a new research paradigm that creates fresh possibilities and opportunities.

As a postscript to this essay, I should like to point out a postscript that the history of science has added to *Arcadia*. As I mentioned above, the assignment that Thomasina is working on in the first scene is the proof of Fermat's Last Theorem (which states that there are no whole-number solutions for the equation $x^n + y^n = z^n$, with n being greater than 2). The French mathematician Pierre de Fermat, who first stated this theorem in the early seventeenth century, wrote in the margin of a mathematical treatise that he had found a proof for it, which, however, he could not write down as the margin was too narrow. This proof eluded mathematicians until Thomasina's time and, in fact, until the time when Stoppard wrote the play. When Septimus tells Thomasina about the note that Fermat wrote in the margin, she jumps to a rather hasty conclusion: "There is no proof, Septimus. The thing that is perfectly obvious is that the note in the margin was a joke to make you all mad" (6). Despite making light of Fermat's claim here, she later echoes it when she scribbles a note in a maths primer that refers to her discovery of plotting irregular shapes by iterating algorithms: "This margin being too mean for my purpose, the reader must look elsewhere for the New Geometry of Irregular Forms discovered by Thomasina Coverly" (43). This remark is more than a mere joke—in fact, it is the joke that makes Septimus mad; as a lunatic in the hermitage, he will cover thousands of pages with the iterations of Thomasina's algorithm.¹² Thomasina's remark is also the statement that catches Hannah's interest and leads to the rediscovery and the completion of Thomasina's theories by Valentine. Fermat's remark, too, finally turned out to be more than a mere joke. Only two months after *Arcadia* opened at the National Theatre in April 1993, the

Cambridge-born Andrew Wiles gave a lecture in his home town that contained a proof of Fermat's Last Theorem.¹³

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NOTES

¹Patke's remark was made in the discussion that followed my presentation of an earlier version of this paper at the Halberstadt Conference, "The Poetics of Conversation in Twentieth-Century Literature and Criticism," in August 2001. I should like to thank the participants of the conference for their comments on my paper.

²"The Arts, the Sciences, and the Making of Meaning: Tom Stoppard's *Arcadia* as a Post-Structuralist Play," *Anglia* 116 (1998): 326-54, 328-29.

³*Arcadia* (London: Faber and Faber, 1993) 9-10. All further references will be to this edition.

⁴A somewhat different reading of the dialogue about the gazebo is given by Theres Fischer-Seidel, who argues that it introduces the most important theme of the play, which in her view is the relationship of life to art, and art to art; see "Chaos Theory, Landscape Gardening, and Tom Stoppard's Dramatology of Coincidence in *Arcadia*," *Emerging Structures in Interdisciplinary Perspective*, ed. Rudi Keller and Karl Menges (Tübingen: Francke, 1997) 93-114, 98. For a comprehensive typology of puns and related devices in Stoppard's early plays, see Heidrun-Edda Weikert, *Tom Stoppards Dramen: Untersuchungen zu Sprache und Dialog* (Tübingen: Narr, 1982) 63-127.

⁵Hersh Zeifman spots a somewhat recondite but ultimately plausible pun in this speech. The title of Hannah's recent book is also *Caro* (an abbreviation of the name of Byron's lover Caroline Lamb). Zeifman's discussion of Hannah shows how, in the course of the play, her classical preference for rule and reason and her rejection of love, including its carnal variants, are challenged and modified. See "The Comedy of Eros: Stoppard in Love," *The Cambridge Companion to Tom Stoppard*, ed. Katherine E. Kelly (Cambridge: CUP, 2001) 185-200, 190-91.

⁶Several critics have discussed the treatment of chaos theory in *Arcadia*; see in particular Bernhard Reitz "Beyond Newton's Universe—Science and Art in Tom Stoppard's *Arcadia*," in Reitz (ed.), *Contemporary Drama in English*, 3 vols. (Trier: WVT, 1996) 3: 165-77; Prapassaree and Jeffrey Kramer, "Stoppard's *Arcadia*: Research, Time, Loss," *Modern Drama* 40 (1997): 1-10; Lucy Melbourne, "'Plotting the Apple of Knowledge': Tom Stoppard's *Arcadia* as Iterated Theatrical Algorithm," *Modern Drama* 41 (1998): 557-72; Susanne Vees-Gulani, "Hidden Order in the 'Stoppard Set': Chaos Theory in the Content and Structure of Tom Stoppard's *Arcadia*," *Modern Drama* 42 (1999): 411-26. Prapassaree and J. Kramer make the interesting observation that the play echoes the so-called butterfly effect (i.e. a minimal cause like a butterfly flapping its wings producing a maximum effect like a storm). In *Arcadia* the butterfly

flaps its wings when Lady Croom casually picks up Septimus' copy of Chater's *Couch of Eros* to give it to Byron; this is the event which, two centuries later, results in Bernard's spectacular misconstruction of the past. Reitz' essay differs from other readings of the play in that it sounds a rare note of disapproval. Most critics have commented in appreciative or enthusiastic terms on *Arcadia*; Reitz argues that it is like a lecture, requiring a passive rather than an active audience.

⁷*The Act of Creation* (London: Penguin, 1989; 1st ed. 1964); for the concept of bi-sociation, see 35-38 and *passim*, for "discovery by misadventure," 192-96.

⁸"Romantic vs. Postmodern Reality: An Examination of Tom Stoppard's *Arcadia*," *Contemporary Drama in English*, ed. Bernhard Reitz, 3 vols. (Trier: WVT, 1996) 3: 155-64, 155. Doris Mader also diagnoses a fair amount of scepticism in Stoppard's plays; however, she sees it qualified by a plea for a consensual construction of reality, and by an awareness of the necessity of moral commitment. Given the focus on epistemological issues in this book-length study, it is surprising that Mader chooses not to discuss *Arcadia*. See *Wirklichkeitsillusion und Wirklichkeitserkenntnis: Eine themen- und strukturanalytische Untersuchung ausgewählter großer Bühnendramen Tom Stoppards* (Heidelberg: Winter, 2000).

⁹"In *Arcadia* Nemo: 'The Pastoral of Romanticism,'" *Biofictions: The Rewriting of Romantic Lives in Contemporary Fiction and Drama*, ed. Werner Huber and Martin Middeke (Woodbridge: Camden House, 1999) 152-61, 159-60.

¹⁰*Stoppard's Theatre: Finding Order amid Chaos* (Austin: University of Texas Press, 2001) 200.

¹¹I have tried to make a similar point in an essay on two recent metahistorical novels, Carol Shields's *Swann* and Margaret Atwood's *Alias Grace*; in my view, Shields and Atwood are less interested in the truth or falsehood of historical reconstruction than in its effects on people's lives. Their concerns are not epistemological but pragmatic. See "How to Do Things with History: Researching Lives in Carol Shields' *Swann* and Margaret Atwood's *Alias Grace*," *The Journal of Commonwealth Literature* 35 (2000): 71-85.

¹²This is only part of his work; he also tries to disprove Thomasina's anticipation of the second law of thermodynamics and its pessimistic implication that "the Newtonian Universe must cease and grow cold" (93); see Paul Edwards, "Science in *Hapgood* and *Arcadia*," *The Cambridge Companion to Tom Stoppard* 171-84, 182.

¹³To be precise, the first version of the proof delivered by Wiles turned out to contain a gap; it took some additional work and the cooperation of another mathematician until the proof was finally completed and published in 1995. For an accessible account of Fermat's Last Theorem and Wiles' proof, see Simon Singh, *Fermat's Enigma: The Epic Quest to Solve the World's Greatest Mathematical Problem* (New York: Doubleday, 1998).