Chapter III

Fears of Entropy and Futility: A Case Study of *Waiting for Godot* and *Arcadia*
Complexity and Contextuality in *Waiting for Godot*: A Case Study

Samuel Barclay Beckett (April 13, 1906 - December 22, 1989) was an ‘Absurdist’ Irish playwright, novelist and poet. He studied French, Italian and English at Trinity College, Dublin from 1923 to 1927, and shortly thereafter took a teaching post in Paris. In 1930, Beckett returned to Trinity College as a lecturer, but left after less than two years, and began to travel throughout Europe. He also spent time in London, publishing his critical study of Proust there in 1931. In 1933, in the wake of his father’s death, he began two years of Jungian psychotherapy with Dr. Wilfred Bion, who in 1935 took him to hear Jung's third Tavistock lecture, an event which he would still recall many years later. In 1932 he worked on his first novel, *Dream of Fair to Middling Women*, but after many rejections from publishers he decided instead to split it into several smaller parts and retitled it *More Pricks Than Kicks*, and in 1933 it was published. In 1935 he worked on his novel *Murphy*, and in 1936 departed for extensive travels around Germany, during which time he filled several notebooks with lists of noteworthy artwork that he had seen, and also noted his distaste for the Nazi savagery which was then taking over the country. In 1937, he returned to Ireland briefly, but after a falling-out with his mother he decided to settle permanently in Paris.

He remained in France at the outbreak of World War II and following the 1940 occupation by Germany, Beckett joined the French Resistance, working as a courier. During the next two years, on several occasions he was almost caught by the Gestapo but in August of 1942 his unit was betrayed by a former Catholic priest and he and Suzanne fled south on foot to the safety of
the small village of Roussillon, in the Vaucluse département on the Provence Alpes Cote d'Azur region.

Beckett's best known novels are the series of three novels written in French (often referred to, against Beckett's explicit wishes, as "the Trilogy"): Molloy (1947; published in French in 1951; in English, partly translated by Patrick Bowles, in 1953), Malone Dies (1947-48; published in French 1951; in English, translated by the author, in 1956) and The Unnamable (1949-50; published in French 1953; in English, by the author, in 1957). Beckett is most famous for the play Waiting for Godot (published 1952, English translation published 1955), which opened to mainly bad reviews but slowly became so popular that it is still often performed today. Like most of his works after 1947, the play was first written in French (under the title En attendant Godot). Beckett is thus considered one of the great French "absurdist" playwrights of the twentieth century, along with Ionesco and Jean Genet. He translated his works into the English language himself, with the exception of some sections of Molloy. Another well-known play from the same period is Endgame. Beckett was awarded the Nobel Prize in literature in 1969.

From systems perspective, Waiting for Godot is a complex dramatic system by Samuel Beckett comprising two sub-systems, in which two characters/elements, Vladimir and Estragon, wait for a visitor named Godot. Godot's absence interwoven with several other meandering, symbolic thematic and stylistic patterns has made the dramatic system an 'open schema'. It was voted 'the most significant English play of the twentieth century'. It is subtitled (in English only) "a tragicomedy in two acts". This very idea of the amalgamation of the tragic and comic elements of life represents the paradox, the absurdity, and the resiliency of life that emerges...
within *Waiting for Godot*. Its premiere was held on 5 January 1953 in the Theatre de Babylone. The production was directed by Roger Blin, who also played the role of Pozzo.

The concept of waiting and debating one’s decision to wait for an elusive hope that may change one’s life has always appealed the readers /spectators and mankind in general. In the post-world war II world in which Beckett’s *Waiting for Godot* emerged, questions concerning the meaning of human existence, the reason behind the suffering, and the value of striving for transcendence were prevalent. Despite the ambiguity involved in Beckett’s dramatic system, audiences were drawn to the provocative questions the play evoked.

In the dramatic system the two sub-systems, further comprising several sub-sub-systems reinforce and support the plot which is structurally both parallel and circular. The two sub-systems, are made up of four identical sections as second sub-system ends in the same manner as first sub-system, but most importantly the structure is circular as action ends where it started. (Depicted in graph model Fig. 1)
“Let’s go- we can’t- why not- we are waiting for Godot, ah!”\(^1\) with this disconsolate utterance, Beckett takes the readers/spectators to the strange world of ‘Godot’, a mystery wrapped in enigma. Before any theoretical elucidation, it would be indispensable to take a perfunctory look at the dramatic system.

*Waiting for Godot* follows two days in the lives of a pair of men who divert themselves while waiting expectantly for someone named Godot to arrive. They claim him as an acquaintance but in fact hardly know him, admitting that they would not even recognize him if they were to see him. To occupy themselves, they eat, sleep, converse, argue, sing, play games, exercise, swap hats, and contemplate suicide — anything ‘to hold the terrible silence at bay.’

The dramatic system opens with the character Estragon struggling to remove his boot from his foot, who eventually gives up, muttering, "nothing to be done". His friend Vladimir takes up the thought and muses on it, the implication being that ‘nothing is a thing that has to be done’ and this pair is going to spend the rest of the day doing it. When Estragon finally succeeds in removing his boot, he looks and feels inside but finds nothing, just prior to this, Vladimir peers into his hat and this motif recurs throughout the play.

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The two discuss repentance, particularly in relation to the two thieves crucified alongside Jesus, and that only one of the Four Evangelists mentions that one of them was saved. This is the first of numerous Biblical references in the play, which may be linked to its putative central theme of the ‘quest for and reconciliation with God’, as well as salvation: "We're save!" they cry on more than one occasion when they feel that Godot may be near.

Vladimir expresses his frustration with Estragon's limited conversational skills: "Come on, Gogo, return the ball, can't you, once in a while?" Estragon struggles in this regard throughout the dramatic system, and Vladimir generally takes the lead in their dialogue and encounters with others. Vladimir is at times hostile towards his companion, but in general they are close, frequently embracing and supporting each other.

Estragon peers out into the audience and comments on the bleakness of his surroundings. He wants to depart but is told that they cannot because they must wait for Godot. They do not agree, however, on whether or not they are in the right place, or that this is the arranged day for their meeting with Godot; indeed, they are not even sure what day it is. Throughout the dramatic system the experienced time is attenuated, fractured or non-existent.

Estragon dozes off, but Vladimir is not interested in hearing about his dream. Estragon wants to hear an old joke about a brothel, which Vladimir starts but does not finish. He asks Estragon instead what else they might do to pass the time. Estragon suggests that they hang themselves, but they quickly abandon the idea when it seems that both might not die: this would leave one

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of them alone, not acceptable to them. They decide to do nothing: "It's safer," explains Estragon, before asking what Godot is going to do for them when he arrives. For once it is Vladimir who struggles to remember: "Oh ... nothing very definite," is the best that he can manage: When Estragon declares that he is hungry, Vladimir provides a carrot, most of which, and without much relish, the former eats. The diversion ends as it began with Estragon announcing that they still have nothing to do.

Their waiting is interrupted by Pozzo and his heavily-laden slave Lucky. "A terrible cry" from the wings heralds the initial entrance of Lucky, who has a rope tied around his neck. He crosses half the stage before his master appears holding the other end. Pozzo shouts at his slave and frequently calls him a "pig", but is civil towards the other two. They mistake him at first for Godot and do not recognize him, which irks him, but, while maintaining that the land that they are on is his, he acknowledges that "the road is free to all". Deciding to rest for a while, Pozzo enjoys a pre-packed meal of chicken and wine. After finishing, he casts the bones aside, and Estragon jumps at the chance to ask for them, much to Vladimir's embarrassment, but is told that they belong to Lucky. He must first, therefore, ask Lucky if he wants them. Estragon tries, but Lucky only hangs his head, refuses to answer. Taking this as a "no", Estragon claims the bones.

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5 Ibid., 20.
Vladimir during his conversation with Pozzo raises the issue of ill-treatment of slave, but his protestations are ignored. On being asked why Lucky does not put down his load, Pozzo explains that Lucky is attempting to mollify him to prevent him from selling him. At this, Lucky begins to cry. Pozzo provides a handkerchief, but, when Estragon tries to wipe his tears away, Lucky kicks him. Before leaving, Pozzo asks if he can do anything for them, in exchange for the consort that they have accorded him. Estragon tries to ask for some money, but Vladimir cuts him short, explaining that they are not beggars. They nevertheless accept an offer to have Lucky dance and think ‘aloud’.

The dance is clumsy and shuffling, and everyone is disappointed. Lucky's "think", induced by Vladimir's putting his hat on his head, is a lengthy and disjointed verbal stream of consciousness. The soliloquy begins relatively coherently but quickly dissolves into logorrhoea and only ends when Vladimir rips off Lucky's hat.

At the end of the first sub-system, a boy arrives, purporting to be a messenger sent from Godot, to advise the pair that he will not be coming that "evening but surely tomorrow." During Vladimir's interrogation of the boy, he asks if he came the day before, making it apparent that the two men have been waiting for an indefinite period and would continue to wait ad infinitum. After the boy departs, they decide to leave but make no attempt to do so.

The second sub-system opens with Vladimir singing a recursive, round about a dog which serves to illustrate the cyclical pattern of the dramatic system. Time in Vladimir's song is not a linear sequence, but an endlessly reiterated moment, the content of which is only one eternal event: death.
Once again Estragon maintains he spent the night in a ditch and was beaten – by "ten of them" this time – though once again he shows no sign of injury. Vladimir tries to talk to him about what appears to be a seasonal change in the tree and the proceedings of the day before, but he has only a vague recollection. Vladimir tries to get Estragon to remember Pozzo and Lucky but all he can recall are the bones and getting kicked. Vladimir notices Lucky's hat, and he decides to try it on. This leads to a frantic hat swapping scene. They play at imitating Pozzo and Lucky, but Estragon can barely remember having met them and simply does what Vladimir asks. They fire insults at each other and then make up. After that, they attempt some physical jerks which do not work out well, and even attempt a single yoga position, which fails miserably.

In the meanwhile, Pozzo and Lucky arrive, Pozzo is now blind and Lucky is dumb. The rope is now much shorter and Lucky – who has acquired a new hat – leads Pozzo, rather being driven by him. Pozzo has lost all notion of time, and assures them he cannot remember meeting them the day before, and that he does not expect to remember the current day's events when they are over.

Estragon sees an opportunity to extort more food or to take revenge on Lucky for kicking him. The issue is debated at length. Pozzo offers them money but Vladimir sees more worth in their entertainment value since they are compelled to wait to see if Godot arrives anyway.

Pozo, who in the first sub-system is a windbag, now appears to have gained some insight after blindness. His parting words – which Vladimir expands upon later – eloquently encapsulate the
brevity of human existence: "They give birth astride of a grave, the light gleams an instant, then it's night once more."6

Lucky and Pozzo depart. The same boy returns to inform them not to expect Godot today, but he would arrive the next day. The two again consider suicide but their rope, Estragon's belt, breaks in two when they tug on it. Estragon's trousers fall down, but he does not notice until Vladimir tells him to pull them up. They resolve to bring a more suitable piece and hang themselves the next day, if Godot fails to arrive. Again, they agree to leave but neither of them makes any move to go.

*Waiting for Godot* brought the theatre back to its metaphorical roots. It challenged and defeated a century of literal naturalism where a room was only considered a room even if it was presented with the fourth wall removed. *Waiting for Godot* provided an empty stage, a tree and two figures who waited and survived. The readers/spectators have to imagine the rest. The stage is a delineation of life passing through hope, despair, companionship and loneliness. In *Waiting for Godot* the stage is the place of fantasy. If Film is a simile, lifelike; theatre is metaphor, about life itself. On its first performance there were cheers, but there were also what are known as counter-cheers. On the line, "Nothing happens, nobody comes, nobody goes. It's awful"7, the director Roger Blin says he heard a very English voice saying loudly: "hear! hear!"

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7 Ibid., 38.
The dramatic system was an exploration of a new form of drama which was categorized as the ‘theatre of the absurd’ by Martin Esslin. In his *The Theatre of the Absurd* he explains the distinction between conventional plays and modern dramas. He insists, “The Theatre of the Absurd, however, can be seen as the reflection of what seems to be the attitude most genuinely representative of our own time”.

'The term Theatre of the Absurd' was coined by the critic Martin Esslin for the work of a number of playwrights, mostly written in the 1950s and 1960s. He borrowed the term from an essay by the French philosopher Albert Camus. In his 'Myth of Sisyphus', written in 1942, he first defined the human situation as basically meaningless and absurd. In Greek mythology Sisyphus was a king punished by being compelled to roll an immense boulder up a hill, only to watch it roll back down, and to repeat this throughout eternity. He also figures in Roman mythology. The word "sisyphean" means ‘endless and unavailing, as labor or a task’.

The 'absurd' playwrights Samuel Beckett, Arthur Adamov, Eugene Ionesco, Jean Genet, Harold Pinter and others all share the view that man is inhabiting a universe with which he is out of key. Its meaning is indecipherable and his place within it is devoid of purpose. He is bewildered, troubled and threatened.

The origin of the ‘Theatre of the Absurd’ is rooted in the avant-garde experiments in art of the 1920s and 1930s. It was also undoubtedly strongly influenced by the traumatic experience of the horrors of the Second World War, which shattered the established values, shook the

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validity of conventions, highlighted the precariousness of human life, its fundamental meaninglessness and arbitrariness. The trauma of living from 1945 under threat of nuclear annihilation also seems to have been an important factor in the rise of this new theatrical form in literature as it is a well known fact that art originates from only one source; a very potent source—experience.

At the same time, the Theatre of the Absurd also seems to have been a strong reaction to the disappearance of the religious and spiritual values from contemporary life. The Absurd Theatre can be seen as an attempt to restore the importance of myth and ritual to our age, by making man aware of the ultimate realities of his condition, by instilling in him again the lost sense of cosmic consciousness or in simple terms God consciousness. The Absurd Theatre hopes to achieve this by shocking man out of an existence that has become trite, mechanical and complacent. It symbolically demonstrates the absence of mystical experience which has made man’s condition miserable.

The Absurd Theatre of the 1950s and 1960s rejected realism in the theatre, and probed into the deepest conflicts within the human mind. They considered man metaphorically in a wordless language of shapes, light, movement and gesture. Theatre should aim at expressing what language is incapable of putting into words. Thus they experimented with a highly unusual, innovative form, directly aiming to startle the viewer, shaking him out of his comfortable, mechanical life of everyday concerns. In the meaningless and de-spiritualized post-Second-World-War world, artists felt that it was no longer possible to use traditional art forms and standards as they had ceased being convincing and lost their validity. The Theatre of
the Absurd openly rebels against conventional theatre form. Indeed, it is ‘anti-theatre’, surreal, illogical, conflict less and plot less.

The dramatic system *Waiting for Godot* subverts logic. In trying to burst the bounds of logic and traditional linguistic idiom it attempts to shatter the enclosing walls of the human condition itself. Our individual identity is defined by language, having a name is the source of our separateness. By being illogical, Beckett’s theatre negates rationalism because he feels that rationalist thought, like structured linguistic expression, only deals with the external aspects of things.

There is no dramatic conflict, in its traditional sense, in Beckett’s dramatic system. Dramatic conflicts, clashes of personalities and powers occur in a world where a rigid, accepted system of values exists. Such conflicts, however, lose their meaning in a situation where the establishment and outward reality have become meaningless. However frantically characters perform, this only underlines the fact that nothing happens to change their existence.

‘The Theatre of the Absurd’ is totally lyrical theatre which uses abstract scenic effects, many of which have been taken over and modified from the popular theatre arts: mime, ballet, acrobatics, conjuring, music-hall clowning. Much of its inspiration comes from silent film and comedy, as well as the tradition of verbal nonsense in early sound film (Laurel and Hardy, W C Fields, the Marx Brothers).

In *Waiting for Godot*, the actions of the two protagonists are overly dramatized and at times ridiculous, again adding to the comic effect as well as offering a visual to evoke emotions which
spectators/readers must feel. This contradictory combination of minimalism and exaggeration corresponds to the paradoxical concept of a ‘tragicomedy’ and sets the tone for paradox as a thematic element of the dramatic system. Estragon’s struggle with his boot and Vladimir’s fascination with the inside of his hat indicate the idiosyncratic attitude of the modern man and his obsession with ‘trivialities’. The two complain about life, philosophize about life, quibble back and forth, and speak aloud their own private thoughts with or without a response from the other. Their discussion of Godot, a debate over where they spent yesterday and the day before, reveal that the memories of the men are incredibly faulty and time is a difficult and fluctuating concept. They are not even entirely sure that they have returned to the same site and quibble over if they recognize the bog and whether the tree is a “willow” or merely a “bush” or a “shrub,” facts that would apparently reveal if they have gathered at the wrong location.

Beckett comments on the superficiality of the human relationships through the friendship of Estragon and Vladimir which is in a state of flux as well. On some occasions, Vladimir rejects Estragon’s affection, while at other times his behaviour is reversed. In sub-system I, Estragon lays his hand on Vladimir’s shoulder while Vladimir stiffens, and when Vladimir “softens” and embraces him, Estragon “recoils” and shouts, “You stink of garlic!”. Their tenderness toward each other never lasts for long.

Lucky breaks forth with a lengthy tirade about God and the suffering of mankind intermingled with philosophical jargon, which sends the three men into convulsions until they stop him. One
of the most spectacular but mystifying part of the dramatic system is Lucky’s speech in sub-system 1:

Given the existence as uttered forth in the public works of Puncher and Wattmann of a personal God quaquaquaquaa with white beard quaquaquequa outside time without extension who from the heights of divine apathia divine athambia divine aphasia loves us dearly with some exceptions for reasons unknown but time will tell and suffers like the divine Miranda with those who for reasons unknown but time will tell are plunged in torment plunged in fire whose fire flames if that continues and who can doubt it will fire the firmament that is to say blast hell to heaven so blue still and calm so calm with a calm which even though intermittent is better than nothing but not so fast and considering what is more that as a result of the labors left unfinished... 

Though it appears to be absurd, it abounds in lot of meaning. He speaks endlessly and clamorously. No one can figure out what he really means by those strange words. Words like “belcher, testew, cunard, or apathia” are hard to understand, but somehow it can be implied that he is talking about God or his existence or even mentions that God has white beard.

If one attempts to decipher its meaning on the basis of some of his words, it can be construed somewhat as:

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Acknowledging the existence of a personal God, one who exists outside time and who loves us dearly and who suffers with those who are plunged into torment, it is established beyond all doubt that man for reason unknown, has abandoned him, forgotten him.

It is just a very simple explanation for those who think Lucky’s thoughts and his utterances possess no meaning, thus never attempt to decode the monologue. Although a lot more can be extracted from Lucky’s monologue.

In *Waiting for Godot*, the tree is the only distinct piece of the setting. (It should be noted that even in the painting that inspired Beckett there is a big tree which features prominently.) There is also a Biblical reference; Jesus was crucified on a cross, but that cross is sometimes referred to as a "tree," in the dramatic system, as in, "Jesus was nailed to the tree." If Vladimir and Estragon’s contemplation about hanging themselves from the tree refers to the crucifixion but it also parodies the religious significance. If Jesus died for the sins of others, Vladimir and Estragon are dying for...nothing. Vladimir’s statement that he has been asked to wait for Godot by the tree seems to be reassuring as it shows that the men are in the right place. But Estragon’s statement again perplexes the spectators as he is not sure if this is the right tree. He is not even sure if this is a tree.

What baffles the readers is the random sprouting of leaves on the tree in between the first and the second sub-systems, which symbolizes regeneration – a hope, growth, life! And that doesn’t sound anything like *Waiting for Godot*, especially when one looks at how everything else degenerates as the dramatic system progresses from first sub-system to second sub-
system. (Pozzo’s going blind and Lucky mute, as well as Vladimir and Estragon’s increasing uncertainty and suffering).

The tree’s random blooming suggests that it is something of a tree of life. The tree’s sprouting leaves could be an ironic symbol pointing out that, far from fulfilled desires, hopes have been deferred – much like Vladimir’s ironic claim in the second sub-system that "things have changed here since yesterday" when, clearly, nothing at all has. Or it could be something else all together.

In the second sub-system also readers/spectators come across more discussions of their suffering, Godot, their relationship with each other, and their past. The haziness of time is made explicit in their conversations as they discuss what happened “yesterday,” yet it is so distant in their memories they cannot agree on details, and Pozzo reveals his exasperation at attempting to understand their “accursed time”.

Much of the debate surrounding Beckett’s dramatic system is connected to discerning which philosophical stance it most closely represents. A close reading reveals that it is difficult to read Godot without sensing philosophical undertones, even if there is debate about which philosophies they might be.
It would not be wrong to consider *Waiting for Godot* as a ‘philosophical parable’ which echoes nearly every school of thought since Plato. The dramatic system, is usually associated with Existentialism, the leading philosophy of the time when it was written. Through the wide dissemination of the postwar literary and philosophical output of Sartre and his associates—notably Simone de Beauvoir, Maurice Merleau-Ponty, and Albert Camus—existentialism got identified with a cultural movement that flourished in Europe in the 1940s and 1950s. Among the major philosophers identified as existentialists were Karl Jaspers, Martin Heidegger, and
Martin Buber in Germany, Jean Wahl and Gabriel Marcel in France, the Spaniards José Ortega Gasset and Miguel de Unamuno, and the Russians Nikolai Berdyaev and Lev Shestov. The nineteenth century philosophers, Søren Kierkegaard and Friedrich Nietzsche, came to be seen as precursors of the movement. Existentialism was as much a literary phenomenon as a philosophical one. Sartre's own ideas are better known through his fictional works such as *Nausea* and *No Exit* than through his more purely philosophical ones such as *Being and Nothingness* and *Critique of Dialectical Reason*. The postwar years witnessed the emergence of writers and artists like Dostoevsky, Ibsen, Kafka, Jean Genet, André Gide, André Malraux, Samuel Beckett, Knut Hamsun, Eugene Ionesco. Artists such as Alberto Giacometti and even Abstract Expressionists such as Jackson Pollock, Arshile Gorky, Willem de Kooning, and filmmakers Jean-Luc Godard and Ingmar Bergman were also existential in their approach.

What makes this current of inquiry distinct is not its concern with “existence” in general, but rather its claim that thinking about human existence requires new categories not found in the conceptual repertoire of ancient or modern thought. They emphasize that human beings cannot be understood as substances with fixed properties. The word "Existentialism" stands for one’s awareness of one’s ‘beingness’. It stands for a vital principal of life.

Existentialism does not deny the validity of the basic categories of physics, biology, psychology, and the other sciences (categories such as matter, causality, force, function, organism, development, motivation, and so on). It claims only that human beings cannot be fully understood in terms of them. Nor can such an understanding be gained by supplementing our scientific picture with a moral one. Categories of moral theory such as intention, blame,
responsibility, character, duty, virtue, and the like do capture important aspects of the human condition, but neither moral thinking (governed by the norms of the good and the right) nor scientific thinking (governed by the norm of truth) suffices.

All the themes popularly associated with existentialism—dread, boredom, alienation, the absurd, freedom, commitment, nothingness, and so on—find their philosophical significance in the context of the search for a new categorial framework, together with its governing norm. Waiting for Godot is an existentialist play in general, but more specifically Christian existentialism. Christian existentialism leads to God, whereas Atheistic Existentialism, based on the idea of Jean Paul Sartre and Martin Heidegger, believes that,’ man is alone in a godless universe.’

Today everyone is cognizant of the fact that man is striving for his survival and also to control the bridle of the pacing time. He is struggling to save his individuality, searching for his identity, and this very idea leads to the philosophy of existentialism.

One of the complexities of Waiting for Godot is that it is often difficult to identify the foundational thematic pattern. However, there are some discernible threads of theme in Waiting for Godot. First, the human condition is a dismal and distressful state. The derelict man struggles to live or rather exist in a hostile and uncaring world. A sense of stagnancy and bareness captivates man, and whenever he tries to assert himself, he is curbed. Vladimir and Estragon are blissfully and painfully oblivious of their own condition. They go about repeating their actions every day unmindful of the monotony and captivity. They also do not activate their
mind to question or brood over their own actions and the motives underlying their actions. The ‘compressed vacuum’ in their lives is constantly disregarded.

The parallel between God and Godot is not simply verbal (in the spelling and pronunciation of names), but also in the references to long white beards, shepherds, and supremacy. Godot has saving power; Godot has all the answers to questions that have not been asked and also not answered. Man does not have any understanding of his relationship with God, neither is he aware of the power of God, nor it seems he wants to understand.

The entire plot of the dramatic system flows with the hope of the arrival of the mysterious divine visitor Godot. Esslin says, when Alan Schneider, who directed the first American
production of the play, asked Beckett who or what does it mean by Godot, the answer was “If I knew, I would have said so in the play”. For some, Godot is everything, and for some, he is nothing. The identity of Godot is like listening to a blind man who is asked to describe an object or person. However, on the basis of whatever little description is given in the dramatic system, the possibility that Godot might represent “God” appears to be more convincing than any other association. The two protagonists hope that Godot will bring purpose and meaning into their lives. The impression one gets of Godot may well be of God, some prophet, a patriarchal figure, just as God is commonly conceived.

The tramps are frightened about Godot’s arrival as Esslin observes in The Theatre of the Absurd:

(Godot’s) coming is not a source of pure joy; it can also mean damnation. When Estragon, in the second act, believes Godot to be approaching, his first thought is, ‘I’m accused’. And as Vladimir triumphantly exclaims, ‘It’s Godot! At last! Let’s go and meet him’, Estragon runs away shouting, ‘I’m in hell!10

Godot’s mysteriousness makes the audience more and more curious and perplexed when attempting to predict who Godot is. Indeed, whoever Godot is, he is an important part of the tramps’ lives, perhaps the only hope of their lives. This is the reason that they waited so long

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and, according to Pozzo, Godot has a vital power over the tramps. Pozzo asks when the tramps are going to leave:

What happens in this case to your appointment...with this

Godet...Godot...Godin... anyhow you see who I mean, who has your future in his hands.¹¹

Fig. 5 Functions of Godot

Their fear when Pozzo and Lucky approach the stage, suggests religious awe because they are frightened and panic. Beckett describes the event:

Estragon drops the carrot. They remain motionless, then together make a sudden rush towards the wings. Estragon stop halfway, runs back, picks up the carrot, stuffs in his pocket, runs to rejoin Vladimir. Huddled together, shoulders hunched, cringing away from the menace, they wait.\(^{12}\)

The disagreement of Vladimir and Estragon over the vegetables is amusing and instills curiosity in the readers/spectators to unearth the hidden symbolism. "Funny," Estragon comments as he munches, "the more you eat, the worse it gets." Vladimir quickly disagrees, adding that, for him, it is "just the opposite."\(^{13}\) On the one hand, this could be a completely meaningless conversation, on the other hand, the carrot could be about the meaning of life. At further deeper plane it refers to difference in the way Vladimir and Estragon live their lives. While Vladimir and Estragon wait for Godot, they also wait for nightfall.


\(^{13}\) Ibid., 64.
The appearance of the moon in the sky metaphorically represents that night has come and Godot will not come. Estragon at one place comments that the moon is "pale for weariness [...] of climbing heaven and gazing on the likes of us." 14 Though the man remembers nothing of yesterday, he does in this moment seem to comprehend the endless repetition of his life. It is not the moon which is weary, it speaks of the predicament of man himself.

As the dramatic system unfolds and progresses, the readers/spectators witness neither any accomplishment, nor any loss within these two days, and come to realize that somehow the tramps’ sole intention is to meet Godot, and waiting is the action through which they want to

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accomplish their desire. They are hopeful that if Godot does not come “today” then he may come “tomorrow”, but it is again uncertain if “tomorrow” would ever come.

By experiencing the lives of Vladimir and Estragon in *Waiting for Godot*, readers/spectators are impelled to ask questions regarding the meaning of existence in general.

Here we can refer to Aristotelian concept of ‘Catharsis’, explained in his famous treatise *Poetics*, which means purgation; a noble function of tragedy. According to Aristotle, art in general operates on the principles of probability and possibility, telling us what may happen rather than what has happened. He views that tragedy evokes two powerful emotions—pity and fear. Pity for the characters suffering on the stage and fear that same calamity might befall us.

It is a common practice to apply works of literature to one’s own life. The ability to make these meaningful applications is what separates works of literature from the multitude of factual writing. It is not difficult to associate with the characters within Godot as Vladimir and Estragon work incredibly well as allegorical representations of mankind. The four characters, when taken together, portray universal man as he confronts the world we live in.
Considering the dualism in man, who confronts the material-spiritual conflict; mind pulls him downwards to material plane and spirit pulls him upwards to spiritual/higher plane. A brief reference here can be made to the principle of ‘quantum superposition’, one of the important principles of quantum Physics which states that a system can exist simultaneously in two orthogonal states. Quantum Physics shattered the unidimensional, deterministic view of the universe, highlighting uncertainty and indeterminacy which govern the dramatic system *Waiting of Godot*. Some view Vladimir and Estragon as the “Everyman” or “archetypes of all humanity”. Vladimir represents the spiritual/intellectual consciousness and Estragon the
physical/material consciousness aspects of man. Within the dramatic system itself, Vladimir refers to the two of them as “all mankind”\textsuperscript{15}.

Even if the two men can be viewed as one composite character representing humanity, one can perceive the two conflicting sides of one’s personality being demonstrated. Vladimir and Estragon can easily be viewed as one man ‘split in two’, existing in two states simultaneously. This connection between the two characters can be seen in any production of the play. In most

productions, the two men wear nearly identical outfits consisting of old dress pants, baggy jackets, scuffed shoes, and bowler hats to symbolically suggest the dualism in man.

The philosophy expounded in Waiting for Godot echoes Kierkegaard’s existential philosophy. Soren Kierkegaard (1813-1855), Danish philosopher, theologian, religious author is widely considered to be the first Existential philosopher. Much of his philosophical work deals with the issues of how one lives as an individual, giving priority to concrete reality over abstract thinking highlighting the importance of personal choice and commitment. He gives importance to faith than mere external scientific observation.

The dramatic system, Waiting for Godot, is a quest for a way to live in a modern world devoid of ethical and spiritual values. It is also a depiction, of course very metaphorically, of how a person passes through the three stages of consciousness described by Kierkegaard, whose philosophy gets reflected in the dramatic system.

According to Kierkegaard, the three stages are aesthetic, ethical, religious. He observed that many people spend most of all their lives in the aesthetic mode. In this mode a person lives as a slave to their senses. They are guided solely by the pleasure principle. There are strong chances during this stage a person may develop feelings of emptiness and meaninglessness—what we call today ‘angst’. The ‘angst’ assumes a positive turn when a person realizes that what he is doing is meaningless, as it is an opening that can lead towards a more meaningful way of life. The purpose of life in the aesthetic stage is to satisfy boredom.
The two protagonists demonstrate the extreme boredom that Kierkegaard satirically claims plagues mankind while they are concerned with the aesthetic realm. His observations are in actuality directed toward the inconsequential actions of those whose sole desire is simply to fill their lives with some sort of actions, though they have no ultimate purpose for which they are living.

Beckett and Kierkegaard, both preferred the use of devices like irony, humour, pseudonym, parody, and parables to draw the attention of the readers/spectators to realize the meaninglessness of life in a spiritually impoverished world.

During the journey of this life, time comes when person develops ethical consciousness.
Estragon: That’s enough. I’m tired.

Vladimir: You’d rather be stuck doing nothing?

Estragon: Yes... Can you not stay still?16

After a brief attempt at doing exercises with Vladimir, Estragon declares, “That’s enough. I’m tired” and again to Vladimir’s recommendation of doing deep breathing:

“I’m tired breathing”. 17

The impression given is not that Estragon is tired of doing deep breathing exercises but is tired of being alive. If one’s singular aim is to pursue pleasure and searches pleasure in this world, would collapse into despair and gloom as the world has little happiness to offer (both Kierkegaard and Beckett argue), the impending result is despair. Some of Estragon’s comments referring to his former life indicate this unsuccessful pursuit of happiness, such as when he comments about the maps of Holy Land that

I used to say, that’s where we’ll go for our honeymoon. We’ll swim.

We’ll be happy.18

The honeymoon and the happiness evidently did not occur.

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17 Ibid., 63.

18 Ibid., 14.
In the manner of Kierkegaard, Beckett too sardonically comments over this quest as well. Beckett and Kierkegaard, both value sacrifice much more than personal satisfaction.

When a person enters into the second stage of consciousness “ethical consciousness” he develops his personal system of morals and lives consistently adhering to these morals. Reason and duty take priority over emotion and beauty. But Kierkegaard observes that people living in this stage may also begin to feel bored and fed up of living so strictly and relapse into the aesthetic way of life. That is why Kierkegaard considers ‘religious consciousness’ as the highest and faith in God transcends the aesthetic and ethical standards.

Kierkegaard’s description of a prisoner in solitary confinement for life, managing to amuse himself by watching a spider, or schoolboys finding entertainment in the dripping of water during a teacher’s lengthy lesson corresponds to the two characters/elements finding diversion in tree and rock in the dramatic system. The ultimate goal of Kierkegaard and Beckett was to challenge people’s way of living or thinking, as they found the empty ways of life, absence of faith and responsibility disturbing.

Vladimir: This is becoming really insignificant.

Estragon: Not enough.

Silence.

Vladimir: What about trying them.

Estragon: I’ve tried everything.
Vladimir: No, I mean the boots.

Estragon: Would that be a good thing?

Vladimir: It’d pass the time. (Estragon hesitates.) I assure you, it’d be an occupation.

Estragon: A relaxation.

Vladimir: A recreation.

Estragon: A relaxation... We don’t manage too badly, eh Didi, between the two of us?... We always find something, eh Didi, to give us the impression we exist?19

While the dialogue between the two men is often quite serious, they perfectly project the frivolous lifestyle with their exaggerated comic actions.

Vladimir seems to reside more in the ethical sphere of consciousness while Estragon remains in the aesthetic or rather mundane material consciousness. Moral issues do not interest Estragon, who seeks materialistic gains or sensual gratification in practically everything. Vladimir reveals his concern with ethics in his interactions with the passers-by, Pozzo and his servant Lucky. While Estragon is longing for the chicken bones Pozzo is discarding, Vladimir is overwhelmed with outrage at Pozzo’s treatment of Lucky. His outburst that “It’s a scandal!” seems almost

involuntary, and his subsequent speech is said to be “stutteringly resolute”\textsuperscript{20}. His indignation overpowers his reluctance to reproach a stranger and he exclaims, if not eloquently, very earnestly than anywhere else in the play,

To treat a man... like

that... I think that... no... a human being... no... it’s a scandal\textsuperscript{21}

Additionally, Estragon is the more violent of the two, resorting to shaking the young messenger boy when he comes in place of Godot, while Vladimir carries on the majority of the actual conversation, to some extent acts rationally and does not become instinctive. Vladimir is also the more contemplative of the pair, the one to have insights into their situation. Estragon is too concerned with the physical to have any epiphanies. While Vladimir ponders, Estragon sleeps, while Vladimir looks into his hat, Estragon searches inside his boot, while Vladimir gives the impression of restlessness, Estragon desires to sleep. Though both the characters are concerned with occupying their time, their two personalities and outlooks on life differ drastically, with one being more frivolous than the other. Vladimir is consistently more hopeful than his counterpart – if barely – and seems to be the one who knows more about Godot and possibly even initiated their wait for him. Even this vague hope gives him more purpose to his existence than that of Estragon; he has a set goal in mind, while Estragon often forgets why he is even present at this particular time and place. The first mention of Godot comes from Vladimir, who tells Estragon that “He said [to wait] by the tree”. When Vladimir asks Estragon if


\textsuperscript{21} Ibid., 18.
he was there when they first met Godot, Estragon responds “I can’t have been listening”. When Vladimir simply refers to “he,” Estragon must always be reminded that this reference is to Godot. Vladimir reminds Estragon as well that Godot “didn’t say for sure he’d come”\textsuperscript{22} when his friend is angry that Godot has not yet shown. Estragon refers to him as “your man” and while Vladimir calls him “kind of an acquaintance,” Estragon states that “we hardly know him... Personally I wouldn’t even know him if I saw him”\textsuperscript{23}.

Whereas Vladimir has a purpose in his waiting, his friend is only biding his time and following the lead of his other half. His actions are, in a sense, completely arbitrary from moment to moment since they lack a unifying purpose.

In the dramatic system the aspect of time is quite symbolic and mysterious. The present does not seem to have a fixed beginning or end and the play seems to hold its audience in a kind of limbo. It would seem that we cannot control time, and the senselessness of time suggests that it is pointless to attempt to stop its passage. Time passes, we age, become sick, and one day we eventually die; the truth is that time stops us. Therefore, no matter how hard we try to succeed in our lives, all our achievements are buried with us as time survives unchanged “In an instant all will vanish and we’ll be alone once more, in the midst of nothingness”\textsuperscript{24}. This once again reminds the readers of the second law of thermodynamics. A possible solution would be


\textsuperscript{23} Ibid., 11.

treading on the path of eternity; spirituality to gain redemption, which could be represented by Godot.

The tramps’ excitement to meet the mysterious Godot may be a representation of man’s desire to utilize this life by doing something meaningful. This period of time often could be a continuation of endless hope which connects the beginning - birth to the end - death. In Waiting for Godot it seems that the tramps’ hope is Godot; they continue their lives with that hope of meeting Godot, because they believe that they “Will be saved”. Meanwhile, as the tramps are Waiting for Godot, they try to find something to do in order to pass the time.

Vladimir: What do we do now?

Estragon: Wait.

Vladimir: Yes, but while waiting.

Estragon: What about hanging ourselves?

Vladimir: Hmm. It’d give us an erection!


Such attempt to escape from the monotonous, meaningless life, escape from absurdity is considered by Albert Camus ‘philosophical death’. One must also refer to history here which brings out this fact that when Godot was written, committing suicide was a criminal offence in Britain.

25 Ibid., 13.
The tramps hope that Godot will be the saviour to bring comfort into their lives. Estragon asks “If he comes?” Vladimir replies “We’ll be saved”\(^\text{26}\). However, after deciding against the idea of suicide they select the act of waiting. In the very first sentence of the play, Estragon states “Nothing to be done”\(^\text{27}\), concluding with the idea that the tramps may want to spend their time doing nothing. This becomes certain when Vladimir insists “I’m beginning to come round to that opinion”, and throughout the play they come back to the same conclusion, “Nothing to be done”.

Time has an important role in the play because it seems to highlight the idea that the present moment has already become part of history: that time does not regenerate. When Estragon complains “Nothing to be done”, Vladimir insists “Be reasonable, you haven’t yet tried everything”\(^\text{28}\), and he is disappointed by Estragon’s forgetful memory: Estragon does not have memory for the past events, he explains himself “That’s the way I am. Either I forget immediately or I never forget”\(^\text{29}\). Vladimir insisting:

> You’d be nothing more than a little heap of bones at the present minute, no doubt about it...it’s too much for one man. We should have thought of it a million years ago, in the nineties\(^\text{30}\).


\(^{27}\) Ibid., 7.

\(^{28}\) Ibid.


\(^{30}\) Ibid., 9.
*Waiting for Godot* resembles the existentialist literature because it deals not only with existence or identity but also with the momentary and the internal time. The time mentioned in *Waiting for Godot* is related to man’s mental condition. Vladimir and Estragon constantly complain of the slowness of time passing and do their best to hurry it with their futile diversions.

Nothing happens, nobody comes, nobody goes, it’s awful.31

But we know that the natural time flows on. For example, the tree has grown five or six leaves. Pozzo has grown blind and Lucky dumb. Here Estragon remarks:

They all change, only we not.32

There is a distinction between the physical/natural time and internal time. In *Waiting for Godot* physical time is sometimes taken seriously and sometimes it is ridiculed or condemned. Estragon once succeeds in confusing Vladimir about the passage of time as well as about the day of week. In the same sentence the tramps speak of a million years ago and in the nineties.

Doubts about time make the tramps doubtful about their existence and identity. One tramp

31 Ibid., 38.

claims to be of the part, it is doubted by the other. Their own identity and existence in time is also questionable. One day seems to have elapsed between the first act and the second, yet it becomes extremely difficult to differentiate this day with the previous by any important physical evidence.

The dramatic system itself has no time setting, because the play has been written in the fifties, but they talk about the nineties. The tramps are uncertain of the day that they were to wait for Godot:

   Estragon: You’re sure it was this evening?

   Vladimir: What?

   Estragon: That we were to wait.

   Vladimir: He said Saturday. (Pause) I think.

   Estragon: You think...But what Saturday? And is it Saturday? It is not rather Saturday? Or Monday? Or Friday? ...Or Thursday?33.

The dramatic system suggests that “waiting” is the only choice the tramps have if they want to continue their lives, ‘the theme of the play is not Godot but waiting’. Man throughout is in endless wait, quest for something, and Godot simply seems to represent that object of our waiting. The underlying question in the dramatic system is, how can this wait be made result-oriented? In *Waiting for Godot* the tramps are merely passively waiting.

The theme of “Waiting as an essential characteristic of the human condition” is a statement that becomes clearer amidst the confusion and disappointment as the action in the dramatic system progresses. Vladimir says, “In this immense confusion one thing alone is clear. We are Waiting for Godot to come”. Their waiting functions as an absurd parallel to our real lives, as we wait our whole lives to be happy for something we do not have instead of being happy with what we have. It seems as if waiting is a habit because waiting is tied with hope, and there is no human existence without hope. The “waiting” represents a common theme both in absurdity as well as in reality, as we continue waiting until we are satisfied, even though in reality what we are looking for may never happen.

Godot seems to be the only hope in the lives of the tramps, who have no existence without the hope for Godot, therefore their future depends on that hope because the tramps truly believe that Godot can rescue them from their hardship and discomfort.

Estragon: And if he doesn’t come?

Vladimir: We’ll come back to-morrow.

Estragon: And the day after to-morrow.

Vladimir: Possibly.

Estragon: And so on.

Vladimir: The point is.
The tramps’ hope to meet Godot continues their desire to fight for their lives as Vladimir says, “Let’s wait and see what he (Godot) says...I’m curious to hear what he has to offer”\(^{35}\).

In *Waiting for Godot* a space without identification of its background, either materially or culturally, is created or applies to the world in general. This allows the audience to focus on the dialogue itself rather than the scenery. The audience is presented with a desolate, unfamiliar and strange space where almost nothing exists. Nothing noticeably changes in the appearance of the stage, except for few leaves growing on the tree in the second day of the second subsystem.

The tree is the only object that exists in the middle of emptiness. Interestingly, the first astonishing absurdist element, the tree, seems struggling to survive with the tramps. The tramps’ attention to the tree is repeated in the play:

**Estragon:** What is it?

**Vladimir:** I don’t know. A willow.


\(^{35}\) Ibid., 2.
Estragon: Where are the leaves?

Vladimir: It must be dead.\textsuperscript{36}

At the end of the second sub-system, they mention the tree for the last time:

Vladimir: Everything’s dead but the tree.

Estragon: (looking at the tree). What is it?

Vladimir: It’s the tree.\textsuperscript{37}

The tree may symbolise many possibilities, such as death, survival, change, and life. The tree which has no leaves or fruit could be a representation of lifelessness and death, although it is surviving throughout the harsh circumstances; likewise the tree in the winter time looks pale and dead. Eventually that tree slowly begins to change, growing leaves, and perhaps regaining life.

The space in the play could be interpreted in a number of ways. It could be hell; a reflection of the miserable situation the tramps are in. It could be Dante’ limbo where souls long and cry for


\textsuperscript{37} Ibid., 59.
redemption; or it could be heaven; where they expect to live fully and happily ever after the
meeting with Godot. The visible space is very different from what one sees in conventional
plays or in reality; thus the space in the dramatic system also gives the impression of
hollowness and emptiness.

Waiting for Godot compels us to introspect and answer questions such as , where are we
today? Is the world progressing in true sense? Are we leading a meaningful life? How can one
lead a meaningful life in this meaningless shallow world? How can one achieve communion
with God? The tramps' lack of knowledge about everything is a metaphor for mankind’s lack of
basic understanding of the universe and life itself. The creation of the entire universe has
always been a big unresolved mystery, though modern science tries to find answers for these
questions, but the truth is that we have not been able to know either the creation or our
existence. Throughout the dramatic system one comes across hundreds of questions that have
no answers, consequently paralleling our lives because we never understand the Divine Force
that guides us, moulds us and is responsible for all our actions.

In a way Waiting for Godot is an exposition and also lamentation on the prevalent “existential
vacuum” a sense of nihilism which is tormenting everyone. Nihilism is a radical philosophy of
meaninglessness. The world and the people in it exist without meaning, purpose, truth and
value. Any system of belief, or artistic expression, which denies or drains away meaning can be
described as “nihilistic”. Thus the order of the contemporary society is characterized by the
“disappearance, of the real, of meaning, of the individual, of the social and so on:

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Nihilism is the radical repudiation of values, meaning and desirability. As Nietzsche observed that it has several manifestations viz., ontological, epistemological, existential, political and moral. The common nihilistic debilitation is usually associated with moods of despair, random destructiveness and nothingness.

In *Waiting for Godot*, the nihilistic atmosphere can be observed. Estragon and Vladimir, the two protagonists, thrust a lack of meaning and purpose upon the observer’s soul. They often insist on chatting about meaningless matters in order just to kill the time. Beckett’s use of nonsensical language exposes the existentialist theme throughout the whole play. Even though their lives have turned to be so monotonous that they are inclined to hang themselves, it somehow implies something other than that. Nietzsche puts it better when he says: “suicide is the deed of nihilism” (1968, p. 143). Hence; it would not be inappropriate to declare that there is a very remarkable connection between waiting for Godot and nihilism which lies within postmodernism.

Another important issue in the play is the characters’ names. A person’s name is an important signifier of his existence, but the audience’s perception of the tramps is confused since they go by many names given to them by different people. The tramps go by names including Vladimir, Didi, Albert, Estragon, Gogo and Adam. There are no two people who call them the same name, as Estragon calls Vladimir, Didi, the boy calls him “Mr. Albert”\(^{38}\), and Vladimir calls Estragon Gogo, but Estragon introduces himself to Pozzo as “Adam”\(^{39}\). So who are they, and what are

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\(^{39}\) Ibid., 43.
their identities? The audience is left in darkness about the identity of the protagonists whereupon the unknown becomes the most significant issue, as is typical in the genre of the absurd. It also throws light on the modern man’s endless quest for identity in a continually changing world.

Vladimir says “In this immense confusion one thing alone is clear, we are waiting for Godot to come”40. Nevertheless, the audience is in a complete fog when it comes to Godot’s identity. After such a long time waiting they still doubt the name of the person they have been expecting; Estragon asks “His name is Godot? Vladimir “I think so”41. He does not reply “yes”, but that he “thinks so”, and that the person they have been waiting for such a long time might be “Godot” or someone else.

Vladimir: Oh he’s a …he’s a kind of acquaintance.

Estragon: Nothing of the kind, we hardly know him.

Vladimir: True...we don’t know him very well...but all the same...

Estragon: Personally I wouldn’t even know him if I saw him42.

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40 Ibid., 51.

41 Ibid., 14.

He (Godot) is simultaneously whatever we think he is and not what we think he is. Godot has a function rather than a meaning. He stands for what sustains us – to and in – existence. He is the unknowable that represents hope in an age when there is no hope.

The Dramatic system seems to suggest that not waiting for Godot could result in some sort of punishment. When they do not see a shadow of Godot by the time night falls, they think of giving up on him, but they are afraid to disobey or disrespect Godot by not coming tomorrow. At the end of the second act Estragon asks, “If we dropped him? (pause.) If we dropped him?” Vladimir reply is “He’d punish us”. Therefore, they come tomorrow to wait for Godot as Estragon asks “You say we have to come back to-morrow? Vladimir “Yes”43, is it because they “have” to, not because they “want” to? Angela Hotaling insists “Without Godot, the men have lost the meaning to their days. What is the “punishment” for dropping Godot? It is essentially the loss of meaning”44.

The dramatic system develops on the idea that whatever is certain in this moment may turn out to be uncertain in the next moment, and as Estragon insists “No, nothing is certain”. In subsystem I Pozzo and Lucky were healthy, but in subsystem II, the following day, Pozzo becomes blind and Lucky dumb. In only one day both of their lives have changed. Pozzo’s dialogue in the second subsystem is an excellent illustration of the uncertainty of life, which is, ironically, one of the few certainties in life:

43 Ibid., 60.

Have you not done tormenting me with your accursed time!...One day, is that not enough for you, one day he went dumb, one day I went blind, one day we'll go deaf, one day we were bone, one day we shall die, the same day, the same second, is that not enough for you? They give birth astride of a grave, the light gleams an instant, then it’s night once more. (He jerks the rope.) On!.

The two sub-systems of the complex dramatic system are further supported, enriched and strengthened by philosophical, psychological and literary sub-sub-systems.

On close analysis, one can find hidden relation between Freudian concept of unconscious and Beckettian uncertainty. Sigmund Freud classified the human mind into three psychic zones-conscious, sub-conscious and unconscious (Id, Ego and Super-Ego). A vast space of the mind is occupied by the unconscious. Our unconscious is a vast reservoir of primordial images, thoughts and emotions. Similarly, the tramps also constantly forget Godot, possibly because they are frustrated with him as Vladimir says “We have kept our appointment and that’s an end to that. We are not saints, but we have kept our appointment. How many people can boast as much?”.

Nevertheless, the tramps, especially Vladimir, constantly reminds him as Freud and others believed, although we push down our difficulties into the unconscious mind the memories are not completely erased there: It remains alive in the unconscious, like radioactive matter buried beneath the ocean, and constantly seeks a way back into the conscious mind, always succeeding eventually”, as Freud observed that there is always a return of the repressed.
Vladimir’s “repression” about Godot and the events including Pozzo and the boy who he met the day before, are stored in his unconscious. He is unable to identify the distinction between his own conscious and unconscious mind, because his “conscious awareness” is under the control of the people (Estragon, Pozzo and the boy) who he has been surrounded by.

In *Waiting for Godot*, Beckett has made use of the universal theme of “human condition, and man’s despair at being unable to find a meaning in existence” when confronting men’s desire to understand the meaning of life. Generally, men try to find the meaning of life by creating their own pattern based on their daily routine. If a man is not able to find his own pattern, then he will get lost in the world of confusion making it very difficult to find his way, while simultaneously fantasizing about the meaningful life that he has been expecting.

In *Waiting for Godot*, waiting is the pattern they create to represent the meaning of their lives, because they strongly believe that their lives will be fulfilled if they meet Godot. Their situation may symbolize man’s desire to meet some unseen Divine Power, Higher Power, with the hope of getting redemption from the meaningless life of today.

The “tomorrow” which never arrives in reality keeps the tramps alive with the hope of meeting Godot. Beckett has created a dramatic system using the theme of uncertainty to point fingers toward us, and wakes us up from the dreams we have been dreaming for decades to ask us what is certain in our lives?

The two protagonists believe that they will be able to live fully and happily ever after, when they meet Godot, thus the place where they want to be cannot be the earth because on earth
there cannot be a life without suffering. Therefore, they may hope that they would be able to attain eternal happiness under the guidance of Godot.

*Waiting for Godot* is a poignant dramatic system about ceaseless waiting, about repetition, the meaninglessness, the absurdity of waiting or rather life, of feeling (and being) suspended in time instead of moving forward in a meaningful direction and, about ‘waiting for waiting’, and finally being imprisoned in one’s mind i.e ‘ego’.

The dramatic system *Waiting for Godot* represents the man in general who is facing the problems of his existence in this world. ‘Hope for salvation’ is the central theme of system and is the problem faced by the whole human race. Representing the man in general, the two tramps realize the futility of their exercise and we note that they are merely filling up the hours with the pointless activity.

The system delineates the picture of pretty hopelessness. Neither time nor existence, neither reality nor memory or the past have any meaning or significance. Acts are meaningless, time does not flow consecutively, memory seems deceptive, existence is an impression or perhaps a dream and happiness is extreme and affliction is crystal clear through the situation of two tramps. One of the interpreters of Beckett, Angela Hotaling who considers Godot an illusion, writes
Godot will never come and the clarity that Godot might offer will never be reached.\textsuperscript{45}

However, I argue that the above observation does not seem to be convincing, as an intensive exploration of the dramatic system reveals that the tramps are going to wait for Godot, who may appear tomorrow denying all our apprehensions. I argue that Godot is not an illusion. Roger Blin, the first director of the play, in one of his interviews clarifies that when it was performed under the guidance of Beckett Godot was pronounced as “God oh!” Unfortunately even some of the great scholars have also missed this fact. In this light the title of the play should be articulated as \textit{Waiting for God Oh!}

The dramatic system indeed raises a very serious question - is it possible to meet God without faith in Him? Such a wait is futile is in the case of the two protagonists of the dramatic system. A true devotee when pines for God’s Grace, His Divine vision, would pray incessantly and wait with unflinching faith rather than wait in the manner of Vladimir and Estragon. In the Discourses of Oriental religion of saints (Radhasoami faith) it is written:

\begin{quote}
It is true that all men do not possess the same conception about God, but it cannot be denied that the belief in the existence of a Supreme invisible power – an unknown Divinity – finds favour with men of all grades of intelligence. The brilliant scientists and versatile philosophers who frequent the jaded galleries of the Great Britain and who pass three quarters of their lives in abstract thinking
\end{quote}

as well as well as the wild pigmies of South America living in dark forests where the ray of modern civilization has not yet penetrated and who pass their time in procuring food for their hungry bellies, have moments alike when their minds feel prone to prostrate before the majesty of that “Supreme Invisible Power.”

It is further written

If we do not believe in God, we shall be leading either an objectless life or we shall be devoting it to the achievement of some inferior object and we will be depriving ourselves of the blessings of the highest state of existence.

The dramatic system *Waiting for Godot* is a dramatization of the absence of spirituality, resulting in our inability in realizing the presence of supreme Lord Almighty’s presence. Dramatizing God’s absence from right to the end, Beckett goes beyond all philosophical reflections and offers readers and theatre goers an actual experience of absurdity who cannot perceive that God is within them, but they don’t realize because of lack of faith in Him. Thus we can perceive that artistic system encapsulates a metaphysical vision.

*Waiting for Godot* may be reinterpreted in terms of the triple-hierarchies of consciousness both in cosmic macrocosm and human microcosm. Be it cosmic physical or material plane or human

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47 Ibid., 140.
body at the lowest level of consciousness hierarchy, it is subject to second law of thermodynamics (of science), of necessary disorder or entropy which is indeed a measure of information in classical system as well as quantum system. At the middle level of consciousness hierarchy whether in the region of universal mind or microcosmic human mind, consciousness takes the form of cognitive knowledge or intelligence, corrupted by mind or ego which is the subject of study of psychology. At the highest level of consciousness hierarchy stand the purely spiritual region of macrocosm (pervaded by Supreme Being or God) and the spirit-essence of the human being as the microcosm which constitute the prime consciousness force, each characterized by the truth of love or inseparability ('Sat'), the conscious knowing the ultimate reality of immortal existence ('Chit'), bliss of love experiencing the joy of unity consciousness ('Premananda'), the refugence of consciousness ('prakash' or enlightenment), original or other characteristic mystic name or word ("Shabda" such as "Radhasoami" - "Sat" - "Soham" - "Rarang" - "Om" or "Aum" - "Niranjan") and accompanying unstruck celestial or divine music ("Anahad Nad"), which become the rightful domain of religion, theology or philosophy.
Science as Metaphor for Human Behaviour:

A Study in Arcadia

Tom Stoppard was born "Tom Straussler" in Zlin, Czechoslovakia on July 3, 1937. His family moved to Singapore in 1939 to escape the Nazis. Then, shortly before the Japanese invasion of Singapore in 1941, young Tom fled to Darjeeling, India with his mother and brother. His father, however, Eugene Straussler, remained behind and was killed during the invasion. In 1946, the family immigrated to England after Tom's mother married Kenneth Stoppard, a major in the British army.

At the age of seventeen, after just his second year of high school, Stoppard left school and began working as a journalist for the Western Daily Press (1954-58) and the Bristol Evening World (1958-60). He began to show a talent for dramatic criticism and served for a time as freelance drama critic for Scene (1962-3), a British literary magazine, writing both under his own name and the pseudonym William Boot. He also started writing plays for radio and television and soon managed to secure himself a literary agent.

Stoppard's first television play, A Walk on the Water (1963) was later adapted for the stage as Enter a Free Man (1968). Over the next few years, he wrote various works for radio, television and the theatre including "M" is for Moon Among Other Things (1964), A Separate Peace (1966), and If You're Glad I'll Be Frank (1966). He also wrote 70 episodes of A Student's Diary: An Arab in London for the BBC World Service.

His first major success came with Rosencrantz and Guildenstern are Dead (1966) which catapulted him into the front rank of modern playwrights overnight when it opened in
London in 1967. The play, which chronicles the tale of Hamlet as told from the worm’s-eye view of the bewildered Rosencrantz and Guildenstern, two minor characters in Shakespeare’s play, was immediately hailed as a modern dramatic masterpiece.

Over the next ten years, Stoppard wrote a number of successful plays, the most popular of which include Jumpers (1972) and Travesties (1974). He also translated a number of plays including those of Mrozek, Nestroy, Schnitzler and Havel, and was heavily influenced by the work of the Polish and Czech absurdists.

In 1977, after visiting Russia with a member of Amnesty International, Stoppard became concerned with a number of human rights issues which have manifested themselves in his work. Every Good Boy Deserves Favour (1977) was actually written at the request of André Previn and was inspired by a meeting with Russian exile Viktor Fainberg. Professional Foul (1977), a television play, was Stoppard’s contribution to Amnesty International’s declaration of 1977 as Prisoner of Conscience Year. Other works such as Dogg’s Hamlet, Cahoot’s Macbeth (1979) and Squaring the Circle (1984) are direct attacks on the oppressive old regimes of Eastern Europe. Not all of Stoppard’s plays, however, are political. One of his works, The Invention of Love (1997), examines the relationship between famous scholar and poet A.E. Housman and the man he loved his entire life, Moses Jackson--a handsome athlete who could not return his feelings. The play opened to rave reviews at the Royal National Theatre in 1997.

In addition to his work for the stage, Stoppard has written a number of screenplays including The Human Factor (1979), Empire of the Sun (1987), and Billy Bathgate (1991). His screenplay for Brazil (1985), which he co-authored with Terry Gilliam and Charles McKeown, was nominated for an Academy Award in 1985, and in 1999, he won an Oscar for "Best
Screenplay" for Shakespeare in Love (1998) which he co-authored with Marc Norman. Other awards include the John Whiting Award (1967), the EVENING STANDARD Award (1967, 1973, 1975, 1979, 1983), the Italia Prize for radio plays (1968), three Tony Award (1968, 1976, 1984), the Shakespeare Prize (1979), an Outer Circle Award (1984), and a Drama Desk Award (1984).

Arcadia was premiered on the Lyttelton stage of the Royal National Theatre of Great Britain on April 13, 1993. It opened on Broadway two years later, March 31, 1995, at the Lincoln Center Theater. Both productions were greeted with tremendous enthusiasm by critics and the public alike. In London, the play earned the prestigious Olivier Award for best play (comparable to Broadway's Antionette "Tony" Perry Award), while in America Arcadia received the New York Drama Critics Circle Award. Even the small handful of reviewers who found fault in Arcadia were compelled to grudgingly hail it as Stoppard's greatest play to date.

Arcadia represents a pinnacle in Stoppard's career. After years of writing witty plays with intellectual appeal, he managed to produce one that tugs at the heart as well as the mind. After its Broadway debut, Vincent Canby in the New York Times, considered Arcadia to be Tom Stoppard's richest, most ravishing comedy to date, a play of wit, intellect, language and emotion.

In October 1989, Tom Stoppard gave a lecture at the California Institute for Technology entitled “Playing with Science ”. During this lecture, Stoppard argued that although his knowledge of science was general, he grasped it well enough to apply it as a metaphor. The principal source of Stoppard’s understanding of Chaos theory was James Gleick’s (1987) bestselling book Chaos: Making a New Science, which provides a very clear exposition of
chaos not only in terms of scientific advances but in terms of the individuals who often tangentially understand how a science of chaos might exist.

Tom Stoppard attempts to address the role of determinism, thermodynamics, and recent developments such as nonlinear dynamics in our lives as human beings: “I thought that quantum mechanics [for my previous play Hapgood] and chaos mathematics [for Arcadia] suggested themselves as quite interesting and powerful metaphors for human behaviour—not just behaviour, but about the way, in the latter case, in which it suggested a determined life, a life ruled by determinism, and a life which is subject simply to random causes and effects. Those two ideas about life were not irreconcilable. Chaos mathematics is precisely to do with the unpredictability of determinism”. (as quoted in Gussow, 1995, p. 25)

Stoppard argues for the importance of human choice and action in the universe, and thereby foregrounds human will as a fundamental part of the chaotic universe. He intuits a connection between the characteristics of human identity and modern science. Uncertainty, unpredictability, indeterminacy, complementarity and the ultimate fate of the universe are of utmost importance, in human life.

From what he learned about chaos theory, Stoppard realized that determinism and chaos are both at work in our lives. He takes the characters in the dramatic system through a world ruled first simply by Newton’s laws, then one where those laws are revised by the laws of thermodynamics, and then one where they are revised yet again by Chaos theory. A few purposeful anachronisms in the form of characters making discoveries decades to centuries earlier than they were made in reality allows Stoppard to condense centuries’ work of scientific development, along with man’s response to it, into the dramatic system’s seven scenes which are its seven sub-systems. Stoppard’s primary concern lies in analyzing
our understanding of history and its evolution, our comfort with predictability, and the impact of various developments in science on the psyche of man. The reactions of his characters to new information mirrors the way mankind responded to the paradigm shifts.

_Arcadia_ reflects on many issues central to study in the humanities, which include historical change and continuity, the meanings and effects of love, creativity and imagination. The play explores the nature of truth and time, the differences between the Classical and the Romantic temperaments and what Stoppard describes as the disruptive influence of sex on our orbits in life - "the attraction which Newton left out."

_Arcadia_ is set at an estate in England called Sidley Park in two times separated by nearly 200 years. The earlier setting is a weekend in April 1809, and though Chaos Theory is still nearly 200 years away from being articulated, Stoppard works it into the plot of the dramatic system through a 13-year-old math prodigy named Thomasina Coverly, who manages to invent fractal geometry and recognizes entropy and its irreversibility—both of which are central to Chaos Theory. Thomasina’s discoveries are expounded in the present-day setting of the dramatic system by her descendant Valentine Coverly, a mathematician who is applying chaos theory to his study of changes to the grouse population in the area. Through Valentine’s study, it is explained to the audience how chaos theory works. Predictability and determinism are put to test as the characters in the present day, literary scholars Hannah Jarvis and Bernard Nightingale along with Valentine, attempt to reconstruct the events of that weekend in 1809 through the pieces that are available to them in their own time.
Arcadia, entwines post-Enlightenment aesthetics, literary discovery, romantic dalliance and chaos theory.

This dramatic system presents the concepts at the heart of Chaos Theory and, to a lesser extent, Thermodynamics, to a non-mathematical audience, while at the same time never failing to be entertaining. There have been very few literary works with lines about iterated algorithms, and even fewer whose wit is a constant delight.

According to classical Physics (developed primarily from Sir Isaac Newton’s theories) the world functioned as machine, deterministically propelled by cause and effect. Prediction is possible in the deterministic world, therefore free will and autonomous human choice and action become subject to the same predictable system.

The arrival of the second law of thermodynamics shook the Newtonian world with the realization that in the universe the level of disorder is constantly rising and the amount of potential energy is steadily diminishing. The inevitability of disorder in isolated systems and the continuous dissipation of energy in the universe are two facets of the second law. The ultimate fate of the universe became known as ‘heat death’ and the prospect terrified the nineteenth century world that had been raised with the stable, eternal Newtonian world. In Great Ideas in Physics, Alan Lightman explains the trepidation many felt towards the second law:

Historically, the notion of a stable and unchanging universe has always been appealing, and the second law upset many people, including scientists when it was discovered in the mid-nineteenth century. The second law says that some processes in nature are one-way arrows, never going backward, never
returning the world to its initial condition. The machines are running down.

The universe, on average, is dissipating itself.¹

The emergence of Quantum theory sent shock waves through the Newtonian world, shattering the clock work model and destabilizing notions of certainty and perception. At the end of the nineteenth century Max Planck, a leading German physicist, argued that light was not merely a wave (as previously believed) but made up of “quanta” or discrete packets of energy. Through his work with black body radiation, he realized that because quanta can be absorbed and released they can also change form. Albert Einstein extended Planck’s discovery in 1905 with his own theory that light does not always behave like a wave – sometimes behaves like a particle. This wave – Particle duality forms the basis of Quantum theory and is still one of the greatest enigmas of the quantum world. In response to Wave – Particle duality Niels Bohr developed his principle of complementarity, which states that it is possible for matter to simultaneously exist in opposite states. It also states that the observer, through the act of observation, ultimately effects which state will present. In the 1920s Werner Heisenberg, an assistant to Bohr, developed a mathematical theory, known as “Uncertainty Principle” to account for the wave-particle duality. Around the same time Ervin Schrodinger also developed a theory and both theories contributed in laying the basis of theoretical Physics.

Quantum physics revealed the indeterminacy inherent in the clock-work model and destroyed the pre-quantum notion of passive observer.

In the twentieth century, uncertainty is not unique to physics. With the social, political and moral upheavals of the twentieth century, uncertainty has crept into almost every facet of the world. Increasingly scholars have employed cross-disciplinary methods to examine issues in their own field. In recent times, scholars are also examining the relationship between Quantum Theory and literature. Lightman, a renowned scientist and novelist, notes the common use of metaphors and analogies in both disciplines as a means of negotiating and articulating uncertainty. Katherine Hayles is currently exploring the relationship between science and literature. In her book *Complex Dynamics in Literature* and *Science*, she focuses specifically on the relationship between literature and Chaos Theory.

Chaos theory also known as science of chaos is based on the discovery that highly chaotic systems are actually rich in information and often exhibit some sort of underlying pattern. Chaotic systems depend upon ‘strange attractors’ and ‘recursive symmetry’ to make sense of information. Any point in a system that attracts it is an ‘attractor’; strange attractor occurs in a nonlinear system.

Nature is highly complex, marvelous and mysterious, and the only prediction is its unpredictability. The amazing unpredictability of nature is what Chaos Theory looks at. Chaos Theory has managed to somewhat capture the beauty of the unpredictable nature and display its some of the most awesome patterns.

Chaos Theory is a mathematical sub-discipline that studies complex systems. Examples of these complex systems that Chaos Theory helped understand are earth's weather system, the behaviour of water boiling on a stove, migratory patterns of birds, or the spread of vegetation across a continent. Chaos is everywhere, from nature's most intimate considerations to art of any kind.
Up to the Quantum Mechanical Revolution people believed that things were directly caused by other things, that what went up had to come down, and that if only we could catch and tag every particle in the universe we could predict events from then on. Several systems of belief were founded on these beliefs, and when Sigmund Freud invented psychoanalysis, he headed out from the idea that malfunctions in the mind are the results of trauma suffered in the past. Regression would allow the patient to stroll down memory lane, pinpoint the sore spot and rub it away with Freud's healing techniques that were again based on linear cause and effect. Chaos Theory however taught us that nature most often works in patterns, which are caused by the sum of many tiny pulses.

Chaos Theory originated when in 1960 Edward Lorentz created a weather-model on his computer at the Massachusetts Institute of Technology. Lorentz's weather model consisted of an extensive array of complex formulae. Clouds rose and winds blew, heat scourged or cold came creeping up the breeches. Colleagues and students marveled over the machine because it never seemed to repeat a sequence; it was really quite like the real weather. Some even hoped that Lorentz had built the ultimate weather-predictor and if the input parameters were chosen identical to those of the real weather howling outside the Maclaurin Building, it could mimic earth's atmosphere and be turned into a precise prophet.

Earlier Lorentz had let the program run on certain parameters to generate a certain weather pattern and he wanted to take a better look at the outcome. But then one day he decided to play a trick so, instead of letting the program run from the initial settings and calculate the outcome, he decided to start half way down the sequence by inputting the values that the computer had come up with during the earlier run. The computer that Lorentz was using calculated the various parameters with an accuracy of six decimals. But the printout gave
these numbers with a three decimal accuracy. So instead of inputting certain numbers (like wind, temperature and stuff like that) as accurate as the computer had calculated them, Lorentz settled for approximations; 5.123456 became 5.123 (for instance). And that little inaccuracy appeared to amplify and cause the entire system to swing out of whack.

The Uncertainty Principle has already established that a tiny particle cannot be accurately pin-pointed. We can't get an accurate fix on the present situation, just a mere approximation, and so our ideas about the weather are doomed to fall into misalignment in a matter of hours, and completely into the nebulas of fantasy within days. Nature will not let herself be predicted.

Complex systems often appear too chaotic to recognize a pattern with the naked eye. But by using certain techniques, large arrays of parameters may be abbreviated into one point in a graph.

The first Chaos Theorists began to discover that complex systems often seem to run through some kind of cycle, even though situations are rarely exactly duplicated and repeated. Plotting many systems in simple graphs revealed that often there seems to be some kind of situation that the system tries to achieve, an equilibrium of some sort. For instance: a city to accommodate 10,000 people establishes one supermarket, two swimming pools, a library and three churches. We assume that this setup pleases everybody and an equilibrium is achieved. But then a company decides to open an ice cream plant on the outskirts of the town, opening jobs for 10,000 more people. The town expands rapidly to accommodate
20,000 people; one supermarket is added, two swimming pools, one library and three churches and the equilibrium is maintained. That equilibrium is called an “attractor”.

There is sudden change in the situation, 3,000 people move away from the city and 7,000 remain. The supermarket chain calculates that a supermarket can only exist when it has 8,000 regular customers. So after a while they shut the store down. Demand rises and some other company decides to build a supermarket, hoping that a new supermarket will attract new people. And it does. But many were already in the process of moving and a new supermarket would not change their plans.

The company keeps the store running for a year and then comes to the conclusion that there are not enough customers and shuts it down again. People move away. Demand rises. Someone else opens a supermarket. People move in but not enough. Store closes again. And so on.

Such awful situation is also some kind of equilibrium, but a dynamic one. A dynamic kind-of-equilibrium is called a “Strange Attractor”. The difference between an “Attractor” and a “Strange Attractor” is that an “Attractor” represents a state to which a system finally settles, while a “Strange Attractor” represents some kind of trajectory upon which a system runs from situation to situation without ever settling down.
Fig. 1 Characters in the Dramatic System *Arcadia*- Past (early Nineteenth Century)

**Thomasina Coverly**
- daughter of Lady Croom and the central role of the play
- A genius who comes to understand chaos theory and theorizes the second law of thermodynamics, before it is officially recognized and established in mathematical and scientific communities.
- Dies in a fire accident just a day before her seventeenth Birthday.

**Mr. Ezra Chater**
- A botanist and an unsuccessful poet
- A friend of Captain Brice who stays as a guest at Sidley Park on the invitation of Brice.
- Most of the time he is upset about his wife’s carnal affairs and his letter challenging Septimus for a duel leads to confusion in the next century.

**Augustus Coverly**
- Younger Brother of Thomasina Coverly

**Jellaby**
- Butler at Sidley Park

**Richard Noakes**
- Landscape Architect at Sidley Park

**Lord Byron**
- Poet and the unseen guest at Sidley Park who has introduced Septimus Hodge to Coverly Family

**Septimus Hodge**
- Initially Tutor of Thomasina who falls in love with her and after her accidental death, becomes a hermit at Sidley Park and spends his time working on the theories of Thomasina until his death.

**Lady Croom**
- Thomasina’s mother and the owner of the Coverly estate - Sidley Park

**Captain Brice**
- Brother of Lady Croom who is a guest at Sidley Park

**Mrs. (Charity) Chater**
Fig. 2 Characters in the Dramatic System *Arcadia*- Present (Late Twentieth Century)

- **Chloe Coverly** -
  - The modern day equivalent of Thomasina and daughter of
  - Modern day Lady Croom
  - She proposes a theory that the Newtonian universe does not work because of sex and the problems that it causes between people

- **Mr Bernard Nightingale** -
  - A don at a modern university, he comes to Sidley Park hoping to work with Hannah on his theory about Lord Byron staying at the estate. Foolishly, he disregards searching for further proof of his theories, and, hoping for fame, he announces on TV his theory that Lord Byron killed Ezra Chater in a duel. At the end of the play, Hannah proves him wrong.

- **Hannah Jarvis** -
  - A best-selling author and garden historian who is visiting the estate to do research for a new book on hermitages. Hannah collaborates with Bernard and Valentine to uncover the mystery surrounding the identity of the hermit at Sidley Park.

- **Gus Coverly** -
  - Younger brother of Chloe Coverly

- **Valentine Coverly** -
  - A graduate student of mathematics and Chloe's older brother. After poring over several old documents, he comes to acknowledge Thomasina's genius

- **Modern Day Lady Croom** -
  - Mother of Chloe, Valentine and Gus and the owner of the Coverly estate - Sidley Park
Table 1 Prominent Behavioural Patterns of Characters in *Arcadia*

**Prominent Behavioural Patterns of the Characters in *Arcadia***

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<td></td>
<td>Septimus Hodge</td>
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The first scene of *Arcadia* opens with Septimus Hodge and Thomasina Coverly sitting in the front room of a very large country house Sidley Park estate in Derbyshire, England in April 1809. The house is surrounded by beautiful, traditional English park-like landscape of the time, which is lush and green. Thomasina, a curious and rather impetuous girl of thirteen, is the student of Septimus, who is twenty-two. Thomasina is exceptionally intelligent for her age and is currently given the task of finding a proof for Fermat’s last theorem while Septimus is reading Mr Chater’s poem which was in praise of love. Search for the proof of Fermat's last theorem, an algebraic conundrum has perplexed mathematicians since the seventeenth century. The French mathematician Pierre de Fermat died in 1665. A note found in the margin of his textbook *Arithmetica* declared he had found a proof for his theorem that $x^n + y^n = z^n$ has no solutions where $n$ is a whole number greater than 2, but did
not have room to write it down. The proof was finally found by the Cambridge mathematician Andrew Wiles in 1993.

Thomasina asks Septimus what "carnal embrace" might be as she overheard Jellaby, a butler at the estate, telling the cook that Mrs. Chater, wife of the poet Ezra Chater, had been found in carnal embrace in the gazebo.

Thomasina becomes more curious and pesters Septimus for more information on the topic. Jellaby enters the room and interrupts the conversation by bringing a letter to Septimus from Mr. Chater. Septimus reads the letter and tells Jellaby to inform Mr. Chater that he will have to wait until the lesson is finished.

After Jellaby leaves, Thomasina asks Septimus if he thinks it is odd that when one stirs jam in his or her rice pudding into swirls in one direction, the jam will not come together again if they swirl the pudding in the opposite direction. In other words, she asks why one cannot stir things apart.

Thomasina speculates about why rice pudding can never be unstirred and the mysteries of determinism, a philosophical principle that emerged following the ideas of Laplace that strict and completely prescriptive Newtonian laws of motion ought to apply to the physical operations of the mind and that this implied that all future thoughts must be predetermined. Thus Man had no true free will. She discusses with Septimus, and begins to develop her theory of the chaotic shapes of nature.

THOMASINA: When you stir your 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 need 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 odd?

SEPTIMUS:  No.

THOMASINA: Well, I do. You cannot stir things apart.

SEPTIMUS:  No more you can, time must needs run backward, and since it will not, we must stir our way onward mixing as we go, disorder out of disorder into disorder until pink is complete, unchanging and unchangeable, and we are done with it forever. This is known as free will or self-determination. ²

Thus, Thomasina’s question leads to a discussion about Newton’s Law of Motion. Thomasina believes that if one could stop every atom in motion, a person could write a formula for the future.

Mr. Chater suddenly enters the room and Septimus bids Thomasina to leave the room. Mr. Chater accuses Septimus of "insulting" his wife in the gazebo. Septimus tells Chater that he is wrong and that he made love to Mrs. Chater in the gazebo the day before at Mrs. Chater’s request. Mr Chater challenges Septimus to a duel, but Septimus declines and tells Chater that he cannot shoot him dead as Mr Chater is one of the two or three first rank poets now living. Septimus further flatters Mr. Chater by praising his new poem, "The Couch of Eros," and tells him that this new poem will make Mr Chater’s name perpetual and he further promises to write a good review of Mr Chater’s work. Mr Chater feels flattered, forgives

Septimus for his indiscretion and even inscribes on Septimus's copy of "The Couch of Eros". Septimus only means to distract Chater. Mr Chater then reads his inscription in a ringing tone which is as follows:

To my friend Septimus Hodge, who stood up and gave his best on behalf of the Author- Ezra Chater, at Sidley Park, Derbyshire, April 10th, 1809.3

Lady Croom returns from her garden and enters the room with her brother Captain Brice and the landscape gardener Mr Noakes in tow. Lady Croom is very upset with Noakes's plans for the landscaping of Sidley Park as she thinks that Noakes's plans are too modern, Sidley park is beautiful and an "Arcadia" as it is. They all discuss the modifications to the classical style of the gardens of the Park into the new picturesque style, a development of English landscape design popular in the early nineteenth century, when the calm tranquility of lawns, lakes and Grecian temples gave way to jagged, irregular shapes, ruins and "romantic" wildness.

The sound of hunting fire outside the window precedes Lady Croom’s exit ordering Noakes, Brice, and Chater to follow her. As Mr. Chater leaves, he shakes Septimus's hand in friendship. Thomasina and Septimus are again alone. Thomasina remarks that she has grown up in the sound of hunting guns and that her father's life is recorded in the game book by the game birds he has shot. Thomasina then goes to the reading stand and draws a hermit in the new garden landscape plan of Mr Noakes remarking what is a hermitage without a hermit? A hermitage was a popular feature of English landscape gardens in the eighteenth and nineteenth centuries. Thomasina delivers a secret note to Septimus from Mrs. Chater and runs into the garden on her mother’s call.

The Scene 2 is laid in the present day, which is apparent from the clothing of the characters on stage. The setting is still Sidley Park, but there have been changes in the surrounding landscape with time. The modern day characters, Hannah, and Chloe sit in the same room as Thomasina and Septimus. Hannah, a historian writer in her thirties, sits and leafs through the pages of Mr. Noakes's sketchbook. Hannah Jarvis is researching the house and its grounds for a book about hermits as symbols of the breakdown of the Romantic imagination. She is also the author of a popular best-seller on Byron's mistress Lady Caroline Lamb. Chloe Coverly the daughter of the home is showing way to Bernard, a visitor, enter from another doorway. The two enter a room that has been cleared out because the family is hosting a dance for the district. Bernard has come to talk to Hannah about the estate, and Chloe goes to look for her. Gus, the mute oddity of the estate, looks through the doorway from which Chloe exited but quickly goes away. Valentine, the son of the estate, next enters the room and exits by the door at the opposite end of the room.

Valentine Coverly is doing postgraduate research into the population biology of the game birds in the grounds of the house. The population biology was the study of the rise and fall of animal populations in relation to predation, food supply, mating success etc. Scientists working in this field were among the first to see that each year’s population size could be related to the next by a simple mathematical equation, yet still be unpredictable in the Newtonian sense.

Valentine returns to the room and finally takes notice of Bernard. Bernard introduces himself to the distracted Valentine who vaguely remembers talking to Bernard on the phone the day before. Valentine finds his tortoise, Lightning, under the bed. Valentine leaves to
take the tortoise on his run. Hannah finally enters. Bernard has given a bad review of Hannah's last book, on Caroline Lamb, and doesn't immediately reveal his identity. Chloe has told Hannah that Bernard's last name is Peacock rather than Nightingale and addresses him as "Mr. Peacock." While Hannah scrapes the mud off her boots from the garden, Bernard raves about Hannah's book. Hannah is annoyed at Bernard's gloating and threatens to leave, but Bernard then mentions about Ezra Chater, takes out *The Couch of Eros* from his bag and mentions that this book belonged to Lord Byron and then reads the inscription in the book which is as follows:

To my friend, Septimus Hodge, who stood up and gave his best on behalf of the Author-Ezra Chater, at Sidley Park, Derbyshire, April 10th 1809.  

Bernard has to deliver a talk next week in London. He thinks either Ezra Chater or Septimus Hodge would be an interesting topic for his talk and hence wants information from Hannah. Hannah tells Bernard that she hasn't found anything on Mr Chater in the records of Sidley Park. Hannah is looking for information on the Sidley Hermit, whose death she attributes to the breakdown of the romantic imagination. Mr. Noakes, the gardener of Sidley Park, actually built a hermitage, specifically as part of the landscape of the estate. The hermit was added as a piece of landscape, just as a pottery gnome. When the hermit died, the hermitage was found filled with papers with mysterious proofs written about the end of the world. Hannah thinks that this hermit's work and life is the perfect symbol of the Romantic Period, a century of rigorous intellectualism that turned on itself.

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4 Stoppard, Tom. *Arcadia.* London: Faber and Faber, 2009. 15.Print
Chloe walks through the room and addresses Bernard by his real name, Mr. Nightingale. Hannah now knows Bernard's true identity, the academic who criticized her work in the *Observer*. Hannah is furious, and Bernard has difficulty keeping her in the room. Bernard tells Hannah he wants to collaborate with her on a project. Apparently, Bernard's copy of Ezra Chater's *The Couch of Eros* belonged to Lord Byron. Inside the book there are three original documents/letters which respectively read as follows:

Sir- we, have a matter to settle. I wait for you in the gun room.- E. Chater, Esq.

My husband has sent to town for pistols. Deny what cannot be proven- for Charity’s sake- I keep my room this day. – unsigned

Sidley park, April 11th 1809. Sir- I call you a liar, a lecher, a slanderer in the press and a thief of my hour. I wait upon your arrangements for giving me satisfaction as a man and a poet.- E. Chater, Esq.5

These letters which were found in Lord Byron’s book have led Bernard to believe that Lord Byron killed Mr Chater in a duel. Bernard believes that Lord Byron killed Mr. Chater in the duel over Mrs. Chater. Because Lord Byron left United States in 1809, soon after Chater published his last known work, Bernard assumes he was fleeing the murder. Hannah distrusts Bernard. She assures Bernard that she has found no evidence of Lord Byron at the

estate, and she believes he has never been there. More conversation reveals that Septimus Hodge and Lord Byron went to Trinity together. Bernard believes that this fact is proof of Byron's presence at the estate. Chloe enters as Bernard leaves triumphantly.

Chloe tells Hannah that her brother, Gus, is in love with Hannah. Gus, is the mute and, apparently, brilliant brother who wanders in and out of the scenes. The scene ends with Gus entering the room from the garden and giving an apple to Hannah.

Again in scene 3 the dramatic system shifts back to the early nineteenth century. It is morning and Thomasina and Septimus sit together in the schoolroom. Septimus is reading a letter that has just arrived, and Jellaby waits for a reply. In front of Septimus are *The Couch of Eros*, Mr. Chater's book, and sheets of notes that Septimus has taken for the review. Like Valentine, Septimus also has a tortoise, Plautus that currently acts as a paperweight. When Septimus finishes the letter, he folds the paper and puts it in the leaves of *The Couch of Eros*.

Thomasina is translating a paper in Latin and is having some difficulty. Septimus takes out Thomasina's corrected mathematics lesson book from underneath Plautus and hands it to her. Thomasina is upset that Septimus gave her an "Alpha minus" (A-) on her problems. Thomasina cribs over the equations which Septimus is making her plot as she feels that his equations are limited to commonplace manufactured forms. She wants to create the kind of equations that make nature—an equation to make a flower or a leaf rather than a circle, cone, or square.
Thomasina  God’s truth, Septimus, if there is an equation for a curve like a bell, there must be an equation for a curve like a bell, there must be an equation for one like bluebell, and if a blue bell, why not a rose? Do we believe nature is written in numbers?

Septimus  He (God) has mastery of equations which lead into infinities where we cannot follow.

Thomasina  What a faint-heart ! We must work outwards from the middle of the maze. We will start with something simple. (she picks up the apple leaf.) I will plot this leaf and deduce its equation. You will be famous for being my tutor when Lord Byron is dead and forgotten. 6

Septimus firmly asks her to get back to the translation of Latin poetry on Cleopatra. Thomasina strongly feels that the burning of the great library of Alexandria is the price what Egypt paid for all that was overdone by Cleopatra in her weakness for sex. She grieves the loss of intellectual knowledge in the process. But Septimus explains her that we are like travellers who have to carry everything in arms and we have to shed to pick up new things and what we let fall get picked up by others in the march of the long procession so, the lost knowledge, discoveries and inventions at one place/point of time get rediscovered or reinvented in some other place/point of time (as will Thomasina’s ideas about iteration be recovered in the twentieth century).

Septimus then takes the Latin paper which Thomasina has been struggling with and reads it easily. Thomasina breaks into tears, accuses Septimus of cheating and runs out of the room.

Captain Brice enters the room, followed by Mr. Chater, who stands behind Brice. Chater tells Septimus to address Brice when Chater wants to speak to him (Chater). Septimus then talks to Brice as if he is Chater, which eventually infuriates Brice. Lady Croom enters the room and tells Chater that Lord Byron is dying to read Mr Chater’s book and also intends to include Mr Chater’s name in the Second edition of his *English Brads* and *Scottish Reviewers*. Lady Croom spots the book *The Couch of Eros*, on the table and takes it way with her to give to Lord Byron. The book now has three letters in it.

Scene four once again switches to the present time. Hannah is reading aloud to Valentine, who is holding Lightning, the tortoise. Hannah is reading from Thomasina's Mathematics Primer while Valentine is leafing through the mathematics lesson book which Thomasina used for writing. Suddenly Hannah comes across something which is as follows:

> I Thomasina Coverly, have found a truly wonderful method whereby all the forms of nature must give up their numerical secrets and draw themselves through numbers alone. This margin being too mean for my purpose, the reader must look elsewhere for the New Geometry of Irregular Forms discovered by Thomasina Coverly.7

Hannah then hands over the text book to Valentine and asks him to explain what it means. The pages of Thomasina's book are filled with iterated equations or equations that feed solutions of one equation into itself in the next step/iteration. Valentine attempts to explain the significance of iteration to Hannah.

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Valentine: What she is doing is, every time she works out a value for y, she’s using that as her next value for x. And so on. Like a feedback. She’s feeding the solution back into the equation, and then solving it again.8

He further tells her the technique which he is using on his grouse numbers research work.

Valentine: Actually I am doing it from the other end. She started with an equation and turned it into a graph. I’ve got a graph—real data—and I’m trying to find an equation which would give you the graph if you used it the way she’s used hers. Iterated it.9

Hannah picks up the algebra book and reads from it

...a method whereby all the forms of nature must give up their numerical secrets and draw themselves through numbers alone.’ This feedback, is it a way of making pictures of form in nature? Just tell me it is or it isn’t.10

Valentine explains that what Thomasina came up with is what is now called fractals. Valentine is surprised about what Thomasina would have been doing as iteration has been in practice for the last twenty years only. Valentine tells Hannah that if each algorithm fed

8 Stoppard, Tom. Arcadia. London: Faber and Faber, 2009. 60. Print
9 Ibid., 61.
10 Ibid., 59.
into itself a thousand times each dot would land in an unexpected place. In other words, the unpredictable results of iteration are like the unpredictability of nature.

Valentine: If you knew the algorithm and feed 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 shape, because every dot will be inside the shape of this leaf. It wouldn’t be a leaf, it would be mathematical object. But yes. The unpredictable and the predetermined unfold together to make everything the way it is. It is how nature creates itself, on every scale, the snowflakes and the snowstorm. It makes me so happy. To be at the beginning again, knowing almost nothing. People were talking about the end of physics. Relativity and quantum looked as if they were going to clean out the whole problem between them. A theory for everything. But they only explained the very big and the very small. The universe, the elementary particles. The ordinary-sized stuff which is 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’re better at predicting events at the edge of the galaxy or inside the nucleus of an atom than whether it’ll rain on auntie’s garden party three Sundays from now. Because the problem turns
out to be different. We can’t even predict the next drip from a dripping tap when it gets irregular. Each drop sets up the conditions for the next, the smallest variations blows prediction apart, and the Weather is unpredictable the same way, will always be unpredictable. When you push the numbers through the compute you can see it on the screen. 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.11

Bernard enters with a copy of *English Bards and Scotch Reviewers*. Inside the book there is a penciled superscription, apparently written by Byron, that mentions Chater and "Eros." Hannah demands that Bernard give her proof that Byron wrote the subscription, and she tells Bernard that he doesn’t even know if Byron ever came to Sidley Park. Valentine interjects that Byron did, indeed, come to Sidley Park—Valentine has seen a record of him in the game book. Byron runs off to find Chloe who knows where the game book would be. Valentine asks Hannah if he can keep Thomasina’s books so he can work out a diagram of her equations. Hannah is curious to know why no one tried Iteration or feedback before. Valentine explains that there wasn’t enough time or pencils to do the equations. Without an electronic calculator, it would have been impossible for Thomasina to continue the equations indefinitely.

Scene five, is set in the modern day. Bernard is practicing his lecture/talk with Valentine, Chloe, and Gus as audience. Valentine is eating a sandwich from which he extracts shreds of lettuce and feeding lettuce to Lightning, his tortoise. Bernard intends to introduce his new groundbreaking theory that Lord Byron killed Ezra Chater over a woman. As Bernard begins his dramatic lecture, Hannah enters the room briskly with a piece of paper to talk to Valentine. Chloe quickly silences Hannah, and Bernard begins his speech once again. Bernard expounds his theory linking Byron, the letters found in *The Couch of Eros*, and Ezra Chater. But Hannah is not convinced that Byron killed Mr Chater or even wrote the letters found in *Couch of Eros* to Chater. Hannah and Valentine ask for concrete evidence and pose challenges to Bernard’s theory, which annoy Bernard. Byron wrote an unsatisfactory review of Chater’s work in *The Piccadilly Review*, and Hannah just doesn’t believe that Byron would have done this after killing Chater. Hannah doesn’t think it is feasible that Byron actually borrowed *Couch of Eros*, reviewed it, posted the review, seduced Mrs. Chater, killed Chater, and then fled to Europe within two or three days. Valentine remarks that Bernard’s theory is not scientific. To this Bernard reacts acutely and says that he is not a scientist and retorts that Hannah just doesn’t understand Byron, as seen in her novelette. Bernard even ridicules Hannah of putting the wrong picture on the dust jacket of the book. During these rhetoric discussions Valentine stresses that personalities are trivial and what actually matters is scientific progress.

**Valentine:** The questions you are asking don’t matter, you see. It is like arguing who got there first with the calculus. The English say Newton, the German say Leibnitz. But it doesn’t matter.
Personalities. What matters is the calculus. Scientific progress. Knowledge.¹²

Bernard mentions that what matters to him is literature and philosophy and not science or its progress.

**Bernard:** Oh, you’re going to zap me with penicillin and pesticides. Spare me that and I’ll spare you the bomb and aerosols. But don’t confuse progress with perfectibility. A great poet is always timely. A great philosopher is an urgent need. There is no rush for Isaac Newton. We were quite happy with Aristotle’s cosmos. Personally, I preferred it. Fifty-five crystal sphere geared to God’s crankshaft is my idea of a satisfying universe. I can’t think of anything more trivial than the speed of light. Quarks, quasars- big bangs, black holes – who gives a shit? How did you people con us out of all that status? All that money? And why are you so pleased with yourselves?¹³

He even makes fun of Valentine’s work on grouse.

**Bernard:** If knowledge isn’t self –knowledge it isn’t doing much, mate. Is the universe expanding? Is it contracting? Is it standing on one leg and singing ‘When Father Painted the Parlour’? Leave me out. I can expand my universe without you. ‘She walks in beauty, like the night of cloudless climes and starry skies, and all that’s best of dark and

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¹³ Ibid., 83.
bright meet in her aspect and her eyes.’ There you are, he wrote it after coming home from a party. What is it that you’re doing with grouse, Valentine, I’d love to know?

Valentine gets upset and leaves the room. Bernard and Hannah continue to argue about each other’s books. Bernard asks Hannah to come to London with him not for the lecture on Byron but for carnal pleasure. Hannah refuses but nonetheless seems flattered. Bernard tells Hannah that he is coming back for the dance at Sidley Park, and he will be Chloe’s date. Bernard reveals that he is involved with Chloe, which surprises Hannah. Bernard then gives Hannah a book he found that mentions the hermitage and the hermit at Sidley Park which she has been studying. According to the book, the hermit had a tortoise named Plautus. In the meanwhile, Valentine entered the room with the letter that Hannah gave him in the beginning of the scene. Hannah reclaims the letters and reads out to him which is as follows:

The testament of the lunatic serves as a caution against French fashion ... for it was Frenchified mathematick that brought him to the melancholy certitude of a world without light or life ... as wooden stove that must consume itself until ash and stove are as one, and heat is gone from the earth.

He died aged two score years and seven, hoary as Job and meagre as cabbage-stalk, the proof of his prediction even yet unyielding to his labours for the restitution of hope through good English algebra.

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15 Ibid., 89.
Hannah enquires the meaning of what she read. Valentine casually replies that we are doomed and tells her that it is the Second Law of Thermodynamics. Hannah then enquires about the law and on learning that it is a recent discovery asks Valentine to check whether this law is connected with Thomasina’s discovery.

Hannah tells Valentine that Septimus Hodge and the hermit were born in the same year.

**Hannah:** He died aged two score years and seven. That was in 1830. So he was born in 1787. So was the tutor. He says so in his letter to Lord Croom when he recommended himself for the job: Date of birth - 1787.¹ The hermit was born in the same year as Septimus Hodge.¹⁶

Hannah begins to realize that the hermit she thought worthless was actually a great intellectual, a genius; it was Septimus Hodge.

Scene 6 is again set in the early nineteenth century. The scene is early morning with an empty room, distant pistol shot and the sound of crows. The Jellaby enters the room with a lamp and on hearing the pistol shot goes to the window looks out, puts the lamp on the table and goes out to the garden and calls Septimus. Septimus walks in with a dead rabbit for Thomasina. Jellaby informs Septimus about the event of Lady Croom encountering Mrs Chater leaving Lord Byron’s room and the departure of Captain Brice, Mr. Chater, Mrs. Chater, and Lord Byron from the estate following this event. Lady Croom enters the room with two letters written by Septimus and flings them on the table. One is a love letter addressed to Lady Croom written in the event of his death and the other one on rice

pudding addressed to Thomasina, which makes Lady Croom angry. She informs Septimus about previous night’s incident of Mrs. Chater being caught with Lord Byron, and Lady Croom kicking them all out for the same. She tells Septimus that she is also fully aware of unscrupulous incident that happened between him and Mrs. Chater and warns him. Jellaby hands over Byron’s letter to Septimus to which Lady Croom comments that it is not proper even to receive letters from someone who is not welcome in Sidley Park. Septimus offers apologies to Lady Croom for what has happened, flatters her with praise and to further win her confidence burns Byron’s letter without reading in her presence stating that he will never read a letter from Lord Byron. Lady Croom then tells Septimus that Mr. and Mrs. Chater took off with Captain Brice to Malta, with Mr. Chater to act as botanist. The scene ends with Septimus burning his two letters found by Lady Croom.

Scene 7 now switches to the early nineteenth century. At this point, the stage shows two rooms, one of the past and another of the present; or possibly there would be brief lighting changes to distinguish from the nineteenth century time period and that of modern day.

Valentine and Chloe are at the table and Gus is in the room. Chloe is reading from two Saturday newspapers and Valentine is working on his portable computer. She reads aloud the tiles of the articles which appeared in the newspapers covering the talk of Bernard in London. Chloe and Valentine discuss about deterministic universe. Chloe is of the opinion the random sex is failing the deterministic nature of the universe and extends the theory as follows:
**Chloe:** The universe is deterministic all right, just like Newton said, I mean it’s trying to be but the only thing going wrong is people fancying people who aren’t supposed to be in that part of the plan.17

Hannah enters the room with another tabloid paper and reads the title of the article on Bernard’s talk. Chloe is excited about the news coverage while Valentine and Hannah discuss about the absurdity of Bernard’s theory. They feel that until the right evidence is found if Bernard’s theory can’t prove true, it can’t even prove false, just like science the ultimate feel is of posterity. In the middle of the discussion Valentine proposes a trial marriage with Hannah but Hannah refuses his unusual proposal. Hannah asks Valentine not to give up his work on grouse explains to him the real goal of life as follows:

**Hannah:** Oh, that. It’s all trivial- your grouse, my hermit, Bernard’s Byron. Comparing what we’re looking for misses the point. It’s wanting to know that makes us matter. Otherwise we’re going out the way we came in. That’s why you can’t believe in the afterlife, Valentine. Believe in the after, by all means, but not the life. Believe in God, the soul, the spirit, the infinite, believe in angels if you like, but not in the great celestial get-together for an exchange of views. If the answers are in the back of the book I can wait, but what a drag. Better to struggle on knowing that failure is final.18

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18 Ibid., 102-103.
Hannah noticing something beautiful on Valentine’s computer screen asks Valentine what it is. Valentine tells her that he is iteratively plotting the Coverly Set on his computer using the equations given by Thomasina.

Hannah: The Coverly set! My goodness, valentine!

Valentine: Lend me a finger. (He takes her finger and presses one of the computer keys several times.) see? In an ocean of ashes, islands of order. Patterns making themselves out of nothing. I can’t show you how deep it goes. Each picture is a detailed of the previous one, blown up. And so on. Forever Pretty nice, eh?

Hannah: Is it important?

Valentine: Interesting and publishable.

Hannah: Well done!

Valentine: Not me. It’s Thomasina’s. I just pushed her equations through the computer a few million times further than she managed to do with her pencil.19

Valentine comments that she had been famous for this but learns from Hannah that she didn’t live to become famous as she died in a fire accident a day before her seventeenth birthday.

Thomasina is now sixteen and chases Lord Augustus, age fifteen, around the house. The two are stopped by Septimus, who calls Thomasina to begin her lesson. Thomasina is upset that

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Septimus gave her no marks for her rabbit equation; Septimus tells Thomasina that in her equation he has not seen any resemblance to a rabbit. Thomasina tells him that just as rabbits feed on their progeny her equation feeds onto itself and so she had no room to extend it.

The action shifts to the present. Valentine and Hannah are working on their separate projects, and Valentine reminds Hannah that her tea is getting cold. He asks Hannah if she thinks it’s odd that tea becomes cold by itself but it doesn’t get hot by itself. The he explains her as follows:

**Valentine:** Well, it is odd. Heat goes to cold. It’s a one way street. Your tea will end up at room temperature. What’s happening to your tea is happening to everything everywhere. The sun and the stars. It’ll take a while but we’re all going to end up at room temperature. When your hermit set up shop nobody understood this. But let’s say you’re right, in 18_ whatever nobody knew more about heat than this scribbling nutter living in a hovel in Derbyshire.²⁰

The scene returns to the schoolroom. Thomasina asks Septimus if she will marry Lord Byron, and Septimus tells her that it would be highly unlikely. Thomasina reminds Septimus that he must teach her to waltz. Septimus gives Thomasina an essay from the Scientific Academy in Paris that is like Thomasina's own work—the scientist has found a contradiction in Newton's theory of determinism.

Septimus: He demonstrates the equation of propagation of heat in solid body. But in doing so he has discovered hersy- a natural contradiction of Sir Isaac Newton.

Thomasina: Oh! He contradicts determinism?

Septimus: No!... Well perhaps He shows that the atoms do not go according to Newton.21

The focus is again drawn to the present day. The scenes at this point overlap, and the characters’ dialogues overlap. There is little separation between the past and the present. Chloe enters the room looking for Gus to be in a photograph. Chloe is still dressed in regency clothing. Lady Croom has come in the schoolroom looking for Mr. Noakes. Lady Croom is upset about the sound of Mr. Noakes's steam engine. Thomasina thumps the book on the table, containing the essay about determinism, down on the table and tells Lady Croom and Septimus that she knew there is problem with determinism and the cause of the problem is likely hidden in the author's observations about the action of bodies in heat. Mr. Noakes enters the room, and Lady Croom lectures him again about his landscaping. Lady Croom doesn't understand the reason why he is draining the lake, nor why he has built a hermitage without a hermit. Septimus asks Noakes if there might be room for a piano in the hermitage.

Thomasina draws a diagram concerning Mr Noakes Heat engine, gives Mr Noakes the diagram and explains as follows:

Thomasina: It concerns your heat engine. Improve it as you will, you can never get out of it what you put in. It repays eleven pence in the shilling at most. The penny is for this author’s thoughts.\textsuperscript{22}

When Septimus asks her what it meant she explains as follows:

Thomasina: Oh...yes. Newton’s equations go forwards and backwards, they do not care which way. But the heat equation cares very much, it goes only one way. That is the reason Mr. Noakes’s engine cannot give the power to drive Mr Noakes’s engine.\textsuperscript{23}

Thomasina sketches an image of Septimus holding his pet tortoise Plautus and hands it over to Septimus and leaves the room.

Bernard enters the room, followed by Hannah who is carrying a garden book which contains an entry from October 1, 1810 that proves that Chater the poet was the same Chater who was killed by a monkey bite in Martinique in 1810; thus, Bernard's theory is destroyed—Byron did not kill Ezra Chater. Hannah tells Bernard she intends to write a letter to \textit{The Times} explaining the letter. Bernard feels shattered.

Septimus enters with an oil lamp carrying Thomasina’s primer. Thomasina enters secrecyively, barefoot in her nightgown holding a candlestick. It is the night before Thomasina’s seventeenth birthday, and she wants Septimus to teach her how to waltz.

It is also the night of the annual dance in the twentieth century, and Hannah enters, dressed for a party. Septimus and Valentine study the diagram doubled in time.

\textsuperscript{22} Stoppard, Tom. \textit{Arcadia}. London: Faber and Faber, 2009. 118. Print.

\textsuperscript{23} Ibid., 119.
Valentine stumbles in and tells Hannah that Thomasina’s diagram is of heat exchange. Valentine and Hannah feel that even though Thomasina did not have enough mathematical background she could clearly see things/theories which were way ahead of her time.

Septimus and Thomasina discuss Thomasina’s diagrams. Septimus discards her diagram as story telling rather than science. Thomasina tries to get him to dance. The music heard from inside the house changes to a waltz, and Thomasina and Septimus begin to dance. Septimus kisses Thomasina and the couple begins to dance again. Septimus returns Thomasina’s essay with an A+ grade and sends her to her room with a lit candle cautioning her against the flame.

Gus enters and gives Hannah a picture that Thomasina drew of Septimus holding Plautus. Gus bows to Hannah and invites her for a dance. Though Hannah hesitates for a moment she gets up and begins to dance with Gus.

In the finale, past and present fuse as Septimus and Thomasina, Hannah and Gus dance around the stage to the music of waltz, separated by centuries yet united by the mysteries of chaos and attraction.

Thus, the view of Elisabeth Angel-Perez on Arcadia is quite apt which is “With Arcadia Stoppard suggests that post-modernism, fragmentation and chaos are reclaimed if not by order, at least by determinism. In Chaos theory, Stoppard finds the oxymoronic and paradoxical vision of a world which becomes disorganized as a system but organized as
chaos. The Stoppardian new problem play elects complexity as its thesis and conveys a message which is both conservative and iconoclastic.”²⁴

Fig. 4 Cognitive Map of Arcadia
Arcadia throws light on the nature of evidence and truth in the context of modern ideas about history, mathematics and physics. It shows how the clues left by the past are interpreted by scholars. The dramatic system refers to a wide array of subjects, including mathematics, physics, thermodynamics, computer algorithms, fractals, population dynamics, chaos theory vs. determinism (especially in the context of love and death), classics, landscape design, romanticism vs. classicism, English literature (particularly poetry), Byron, eighteenth century periodicals, modern academia, and even South Pacific botany. These are the concrete topics of conversation.

The wide array of subjects which the play refers to, to present the Main Theme: Everything is gradually dispersing into a state of chaos and entropy and yet within that chaos order can be found.
Emergent Dichotomies in the Dramatic System *Arcadia*

The themes presented within *Arcadia* are based on a series of dichotomies. The main dichotomy is between Classicism Vs. Romanticism and the other dichotomies— the Order Vs. Chaos, classical Newtonian determinism Vs. Second law of thermodynamics, Regular Euclidean geometry Vs. irregular geometry (fractals) and Humanities Vs. Science. As shown in the figure these dichotomies are depicted through three elements— the past and the present characters, the unseen Garden of Sidley Park, and the scientific background.

**Fig. 6 Lining Up of Supposed Opposites in *Arcadia***

**Lining up of the Supposed Opposites in Arcadia**

- Arts ↔ Science
- Determinism ↔ Indeterminism
- Classicism ↔ Romanticism
- Intuition ↔ Logic
- Regular geometry ↔ Irregular geometry
- Thinking ↔ Feeling
- Newton’s equation which work both backwards and forwards
- The irreversibility of time
- order ↔ Chaos
The Dichotomy of Classicism Vs. Romanticism is depicted through the argument between Lady Croom and Mr. Noakes over the changes being made to the garden. This shows a direct shift between the tidiness and order of Classic style to the rugged, Gothic appearance of the Romantic.

Hannah passionately exclaims to Bernard,

The whole Romantic sham, Bernard! It's what happened to the Enlightenment, isn't it? A century of intellectual rigour turned in on itself. A mind in chaos suspected of genius...The decline from thinking to feeling.25

This dichotomy is also articulated through Septimus and Thomasina. Thomasina is exceptionally brilliant and even though she lacked sufficient mathematical background through her intuition she could propound Second law of thermodynamics, contradict Classical-Newtonian Determinism, discover foundations of chaos theory and irregular geometry (fractals). Septimus is a strong advocate of classical Newtonian science and discards her discoveries as mere stories until he understands the implications of her discoveries. Later, after her death, as a hermit at Sidley Park, he spends his entire life in proving these discoveries through English Algebra.

This dichotomy of Classicism Vs. Romanticism is also articulated through modern day characters Hannah Jarvis and Bernard Nightingale. Hannah’s character embodies classical temperament with her classical reserve and her objective approach in the investigation of the mystery surrounding the hermit who stayed at Sidley Park in the nineteenth century. She did not jump to conclusion based on her intuition and strived for evidence to prove that the hermit was none other than Septimus Hodge the tutor of Thomasina, whose love got

shattered with the premature accidental death of Thomasina and having realised the implications of Thomasina’s discoveries spent rest of his life in proving her theories using English Algebra. On the other hand the character Bernard Nightingale is an embodiment of Romantic temperament and this is evident from the way he does subjective investigation and advances his theory that Lord Byron killed Mr Ezra Chater in a duel at Sidley Park in 1810, without proper evidence and even mentions about his theory in his talk at London. Later, when Hannah proves him wrong he immediately leaves Sidley Park with feelings of embarrassment and devastation. His character depicts recklessness, passionate nature, predominance of feeling over thinking, arrogance, greed, pomp and biased research. He values literature and personalities more than scientific progress.

The Dichotomy of Science vs. Humanities forms an important part of the dramatic system. The character of Valentine Coverly embodies scientific temperament. His background in science, mathematics and chaos theory helps him understand the discoveries of Thomasina. Through Valentine the author explains to the audience the entire scientific background of Arcadia and Thomasina’s discoveries through her intuitive genius, which were much ahead of her time, and their implications in the present. The argument between Valentine and Bernard brings out the dichotomy between science and humanities.

In scene five when Bernard puts forth his theory that Lord Byron killed Mr Ezra Chater in a duel over his wife. Valentine and Hannah doubt his theory and stress the need of objective approach and concrete evidence in proving his theory. In the arguments that follow Valentine stresses that personalities are trivial and what actually matters is scientific progress. Valentine says:
The questions you are asking don’t matter, you see, It is like arguing who got there first with the calculus. The English say Newton, the German say Leibnitz. But it doesn’t matter. Personalities. What matters is the calculus. Scientific progress. Knowledge.²⁶

Bernard defends art and humanities by holding the view that artistic genius exceeds scientific understanding and what matters to him is literature and philosophy and not science or its progress. He says:

Oh, you’re going to zap me with penicillin and pesticides. Spare me that and I’ll spare you the bomb and aerosols. But don’t confuse progress with perfectibility. A great poet is always timely. A great philosopher is an urgent need. There is no rush for Isaac Newton. We were quite happy with Aristotle’s cosmos. Personally, I preferred it. Fifty-five crystal sphere geared to God’s crankshaft is my idea of a satisfying universe. I can’t think of anything more trivial than the speed of light. Quarks, quasars- big bangs, black holes – who gives a shit? How did you people con us out of all that status? All that money? And why are you so pleased with yourselves?²⁷

Another significant dichotomy is between Classical Newtonian determinism vs. Second Law of Thermodynamics. In the age of Enlightenment scientists believed in the idea that the universe was comparable to a mechanical clock wound up by Supreme Being which

²⁶ Stoppard, Tom. Arcadia. London: Faber and Faber, 2009. 82-83.Print
²⁷ Ibid., 83.
continues ticking as a perfect machine with its gears governed by Newton’s laws of physics making every aspect of the system perfectly predictable. They believed that events within in this universe are bound by causality in such a way that any state of an object or an event is completely determined by its initial state. They held the view that since prediction is possible in the deterministic world, free will, autonomous human choice and action become subject to the same predictable system. This is generally referred to as Classical Newtonian Determinism.

Thermodynamics at its origin was a study of engines. Most early engines built in the Enlightenment era were slow and clumsy, converting only 2% to 3% of the fuel into useful work as they used conduction of heat between bodies at different temperatures. Sadi Carnot, a French scientist who is regarded as the father of Thermodynamics, is the first person to realize this and mentioned in his book *Reflections on the Motive Power of Fire* that the conduction of heat between bodies at different temperatures is a wasteful and irreversible process, which must be eliminated if the heat engine is to achieve maximum efficiency. He postulated that some calorie is lost and isn’t converted into mechanical work and hence, no real heat engine could realize the Carnot cycle’s reversibility, and would consequently be less efficient. He formulated this in terms of calorie rather than entropy, which formed the early version of the second Law of thermodynamics. At his time his theory received very little attention until Emile Clapeyron published a report in which he developed the work of Sadi Carnot and later it was further elaborated by Clausius and Kelvin who derived from it the concept of entropy and the second law of thermodynamics. Entropy is a thermodynamic property that can be used to determine the energy not available for work in a thermodynamic process such as in energy conversion devices, engine and machines. In
classical thermodynamics entropy is defined by the second law of thermodynamics, which states that the entropy of enclosed system not in thermal equilibrium always increases. Closed systems spontaneously evolve towards thermal equilibrium—the state of maximum entropy. The second law is a statement that all processes go only in one direction, which is the direction of greater and greater degradation of energy, in other words, to a state of higher and higher entropy. It implies that thermal energy always flows spontaneously from regions of higher temperature to regions of lower temperature and the process reduces the state of order of the initial system. Therefore entropy is an expression of disorder or randomness.

The question is why are certain physical phenomena, allowed by conservation laws such as energy, nevertheless forbidden from occurring? The second law of thermodynamics is the underlying reason. Entropy is a measure of the likelihood for some event to occur, and only those events can occur for which entropy increases, since they are more likely. In other words, an isolated system always goes from a less probable to a more probable configuration. In any physical process, the entropy $S$ for an isolated system never decreases.

In the very first scene of the play Thomasina could understand this concept and raises discussion on this topic by putting forth her rice pudding example and enquires the reasons underlying this:

Thomasina: When you stir your 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 need 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 odd?

Septimus: No.

THOMASINA: Well, I do. You cannot stir things apart.28

The problem of rice pudding is a direct consequence of Second law of thermodynamics which states that all processes go only in one direction, which is the direction of greater and greater degradation of energy, in other words, to a state of higher and higher entropy. This only points at the irreversibility of time but it also points at the irreversibility of the process which answers her puzzle and marks the beginning of Thomasina’s doubts on Newtonian determinism. Newton’s laws do not differentiate between whether time flows forward or backward. Newton's second law tells us that force causes acceleration. Now if we replace time by $t'= -t$, the acceleration caused is the same, but now $t'$ becomes smaller and smaller (more negative) as physical time $t$ increases. In other words, time flows backwards. Meaning hereby that if Newton’s law predicts, for example, that a ball will bounce in a certain way, then in a world where $t'$ is the time, the ball will bounce in a reverse motion. But we all know that time flows in a certain fixed and irreversible direction and such a thing can never happen in real-world and so is the case with Thomasina’s rice pudding problem. Even though Septimus knows about the irreversibility of time he does not know the answer to this puzzle and therefore mentioning about the irreversibility of time he diverts the discussion to free will.

Septimus: No more you can, time must needs run backward, and since it will not, we must stir our way onward mixing as we go, disorder out

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of disorder into disorder until pink is complete, unchanging and unchangeable, and we are done with it forever. This is known as free will or self-determination.  

Irreversibility of time is one of the major themes which surface in the dramatic system and gets highlighted in the above scene.

In scene 7 Septimus gives Thomasina an essay from the Scientific Academy in Paris that is like Thomasina's own work in which the scientist has found a contradiction in Newton's theory of determinism. On hearing this she exclaims that she knew about this since long and feels happy that the French Scientist’s results are in line with her intuitive ideas.

Septimus: He demonstrates the equation of propagation of heat in solid body. But in doing so he has discovered hersy- a natural contradiction of Sir Isaac Newton.

Thomasina: Oh! He contradicts determinism?

Septimus: No!... Well perhaps He shows that the atoms do not go according to Newton.

Thomasina: Well ! Just as I said! Newton’s machine which would knock our atoms from cradle to grave by the laws of motion is incomplete! Determinism leaves the road at every corner, as I knew all along, and the cause is very likely hidden in this gentleman’s observation.

Lady Croom: Of what?

In the seventh scene Thomasina could clearly see the inefficiency in Mr. Noake’s Steam engine as a consequence of entropy and second law of thermodynamics. She expresses her ideas about the same in the form of a diagram (which in present day times is known as Heat Exchange diagram) gives it to Mr Noakes and explains as follows:

**Thomasina:** It concerns your heat engine. Improve it as you will, you can never get out of it what you put in. It repays eleven pence in the shilling at most. The penny is for this author’s thoughts.

When Septimus asks her what it meant she explains as follows:

**Thomasina:** Oh...yes. Newton’s equations go forwards and backwards, they do not care which way. But the heat equation cares very much, it goes only one way. That is the reason Mr. Noakes’s engine cannot give the power to drive MrNoakes’s engine.

**Septimus:** Everybody knows that.

**Thomasina:** Yes Septimus, they know it about engines!

Septimus tells her that everybody knows about the inefficiency of a steam engine. Thomasina sarcastically remarks “they know it about engines!” this clearly shows the confidence what she had on the universality of her intuitive ideas which would later be discovered and established as entropy and Second law of Thermodynamics.
The idea of heat death also stems from the second law of thermodynamics. According to this view as a consequence of the second law of thermodynamics the mechanical movement of the universe will run down as work is converted to heat in time due and lead to heat death.

Towards the end of the play in the seventh scene when Septimus begins to understand Thomasina’s intuitive ideas/theory concerning second law of thermodynamics, entropy and as a consequence the heat death of the universe, he says “So, we are all doomed!” to which Thomasina cheerfully replies “yes”. Septimus later in a way seeming to understand Thomasina’s theory says “So the Improved Newtonian Universe must cease and grow cold. Dear me.”

The dichotomy between Regular geometry and irregular geometry is again employed in the dramatic system to emphasize the dichotomy between Classicism and Romanticism with regular geometry representing classicism and irregular geometry representing romanticism. In the third scene Thomasina cribs over the equations which Septimus is making her plot as she feels that his equations are limited to commonplace manufactured forms. She wants to create the kind of equations that make nature. Through deterministic chaos Thomasina intuits that irregularity triggers the emergence of life.

Thomasina: God’s truth, Septimus, if there is an equation for a curve like a bell, there must be an equation for a curve like a bell, there

must be an equation for one like bluebell, and if a blue bell, why not a rose? Do we believe nature is written in numbers?

Septimus: He (God) has mastery of equations which lead into infinities where we cannot follow.

Thomasina: What a faint-heart! We must work outwards from the middle of the maze. We will start with something simple. (she picks up the apple leaf.) I will plot this leaf and deduce its equation. You will be famous for being my tutor when Lord Byron is dead and forgotten.33

In the seventh scene Thomasina tells Septimus:

Mountains are not pyramids and trees are not cones. God must love gunnery and architecture if Euclid is his only geometry. There is another geometry which I am engaged in discovering by trial and error, am I not, Septimus?34

In Scene 4 Hannah and Valentine come across Thomasina’s Mathematics Primer through which they come to know of Thomasina’s discoveries. They see written in the book

I Thomasina Coverly, have found a truly wonderful method whereby all the forms of nature must give up their numerical secrets and draw themselves through numbers alone. This margin being too mean for my purpose, the

34 Ibid. 114.
reader must look elsewhere for the New Geometry of Irregular Forms discovered by Thomasina Coverly.\(^{35}\)

Hannah and Valentine discover that the pages of Thomasina’s book are filled with iterated equations or equations that feed solutions of one equation into itself in the next step/iteration. Valentine explains to Hannah “What she is doing is, every time she works out a value for \(y\), she’s using that as her next value for \(x\). And so on. Like a feedback. She’s feeding the solution back into the equation, and then solving it again.” He further tells her that this is the technique which he is using on his grouse numbers research work. Hannah further discovers written in Thomasina’s algebra book

...a method whereby all the forms of nature must give up their numerical secrets and draw themselves through numbers alone. This feedback, is it a way of making pictures of form in nature? Just tell me it is or it isn’t.

Valentine explains that what Thomasina came up with is what is now called fractals. Valentine is surprised about what Thomasina would have been doing as iteration has been in practice for the last twenty years only. Valentine tells Hannah that if each algorithm fed into itself a thousand times each dot would land in an unexpected place. In other words, the unpredictable results of iteration are like the unpredictability of nature. Explaining to Hannah Valentine says

If you knew the algorithm and feed 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 shape, because every dot will be

inside the shape of this leaf. It wouldn’t be a leaf, it would be mathematical object. But yes. The unpredictable and the predetermined unfold together to make everything the way it is. It is how nature creates itself, on every scale, the snowflakes and the snowstorm. It makes me so happy. To be at the beginning again, knowing almost nothing.36

Valentine iteratively plots the beautiful “Coverly set” on his computer screen using Thomasina’s equations and tells Hannah “In an ocean of ashes, islands of order. Patterns making themselves out of nothing. I can’t show you how deep it goes. Each picture is a detailed of the previous one, blown up. And so on. Forever. Pretty nice, eh?”37

In the dramatic system Arcadia passion for love and academic/intellectual knowledge are shown to be in constant conflict throughout. It is only the proposition of marriage, the intellectual justification for sex, which allows a resolution between the two forces. The theme of love vs. intellect is touched upon in the first pages of the dramatic system. Sexual knowledge always acts in conflict with intellectual knowledge, and here it gets in the way of Thomasina’s lesson. Thomasina also remarks on the conflict between emotion and intellect in her history lesson. Thomasina heralds Queen Elizabeth who would not have been tempted by love to give away land or power. The great Hannah Jarvis is, like Thomasina’s Queen Elizabeth, unswayed by romantic passions. She believes, as does Thomasina, that romantic inclinations would destroy or distract her from her work. Hannah refuses warmth

37 Ibid. 103.
or emotion: she refuses a kiss, denies Bernard's propositions, laughs at Valentine's proposal, and brushes off Gus's flirtation.

Nonetheless, Hannah, like Thomasina, Septimus, and Gus all waltz at the conclusion of the dramatic system. Hannah cannot refuse emotion or the bashful Gus by the end of the play and is drawn into an uncomfortable and uneasy dance. The conflict between emotion and intellect is resolved because Hannah suddenly understands that the two are inseparable. Hannah is unlike Thomasina, who unconsciously understands this, driven forcefully by the mystery of both.

The dichotomy between Order and Chaos is again employed to reinforce the dichotomy between Classicism and Romanticism where order represents Classicism and disorder represents Romanticism. This dichotomy is predominant throughout the dramatic system and is presented not only through different dichotomies seen above and the discussion of chaos theory but also through the scenes and the characters of Arcadia. The scenes in the dramatic system keep bouncing from the past to present in a non-linear manner and finally in the last scene past and present are juxtaposed reflecting the chaotic structure of the play and revealing how everything is gradually dispersing into a state of chaos and entropy (represented by the final scene), and yet within that chaos, order can be found. Valentine summarizes this idea: "In an ocean of ashes, islands of order. Patterns making themselves out of nothing."38 The characters attempt to define the order of the world through their ideas and theories, and they are continually overturned. Even the table which collects props from both time periods throughout the dramatic system is a strong example of the

chaos/order dichotomy. In *Science in Hapgood and Arcadia*, Paul Edwards, professor of English and History of Art at Bath Spa University, explains what this represents:

"At the end of the play, the table has accumulated a variety of objects that, if one saw them without having seen the play, would seem completely random and disordered. Entropy is high. But if one has seen the play, one has full information about the objects and the hidden 'order' of their arrangement, brought about by the performance itself. Entropy is low; this can be proved by reflecting that tomorrow night's performance of the play will finish with the table in a virtually identical 'disorder'—which therefore cannot really be disorder at all."39

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**Major Emergent Thematic Strands in the Dramatic System**

One of the emergent themes is Irreversibility of Time and Finality of things. Thus scientifically through Thomasina's remarks on Newtonian equations, which work both backward and forward, Thomasina's rice pudding (which inspires these remarks) that cannot be "unstirred", flows of heat only in one direction, the theme of irreversibility of time and the idea of heat (and the second law of thermodynamics) is thus represented through the actions of the characters. They burn bridges in relationships, they burn letters, candles burn,

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and in the end, it is revealed that Thomasina will burn to death. The finality of things is always present.

Thomasina’s insights into thermodynamics and heat transfer, and the idea that the universe is cooling, echo the poem "Darkness" by her "real life" contemporary, Lord Byron\textsuperscript{40} written in 1816—"Year Without Summer" caused by atmospheric volcanic ash from the Mount Tambora eruption in the Dutch East Indies. ‘Darkness’ depicts a world grown dark and cold because the sun has been extinguished.

\textbf{Fig. 7 Depiction of Second law of Thermodynamics through the symbol of Heat}

\textbf{Depiction of Second Law of Thermodynamics through the symbol of Heat}

\begin{center}
\begin{tikzpicture}
  \node[draw, circle, fill=blue!50, minimum size=2cm] (lib) at (0,0) {Burning of Library in Alexandria};
  \node[draw, circle, fill=blue!50, minimum size=2cm] (cand) at (4,0) {Burning of Candles};
  \node[draw, circle, fill=blue!50, minimum size=2cm] (let) at (0,-4) {Burning of letters};
  \node[draw, circle, fill=blue!50, minimum size=2cm] (acc) at (4,-4) {Burning of Thomasina in the fire accident};

  \node[draw, text centered, fill=white, minimum size=2cm] (final) at (2,-2) {The finality of things};

  \draw[->, blue, line width=1mm] (lib) -- (final);
  \draw[->, blue, line width=1mm] (cand) -- (final);
  \draw[->, blue, line width=1mm] (let) -- (final);
  \draw[->, blue, line width=1mm] (acc) -- (final);
\end{tikzpicture}
\end{center}

Fig. 8 Thomasina’s Mathematics, Science and Her Intuitive Discoveries in Arcadia

1. Fermat’s Last Theorem
2. Thomasina’s Rice Pudding Problem a contradiction to Newton’s Laws
3. Thomasina’s Proposition of the Geometry of Irregular Forms
4. Trials to plot equations of flowers, apple leaves, etc. and continues her efforts
5. Iterative Algorithm and Thomasina’s rabbit equation
6. Fractals Thomasina’s “Coverly Set”
7. Feedback equation contradicts Newton’s Laws
8. Thomasina comes to know about the research in France on Propagation of Heat in solid bodies which also contradicts Newton’s Laws.
9. Thomasina on looking at Naoake’s steam engine draws the heat exchange diagram and mentions that Newton’s laws do not account for something that is getting lost in the process which is heat in the context of steam engine
10. She intuitively discovers second law of Thermodynamics and Entropy. She sees their universal applicability and realizes the irreversibility of time and process, and finality of everything and exclaims “we are all doomed”
11. Waltz: a circular dance Symbolizing spiraling in on itself

Year 1809 ... 1812
Another emergent theme of dramatic system is the Disruptive Influence of Sex in the Pursuit of True Knowledge which is depicted in several scenes pertaining to past and present. In the dramatic system, sex which is a biological instinct has been used as a symbol of “Strange Attractor” in the context of chaos theory that represents some kind of trajectory upon which a system runs from situation to situation without ever settling down. This is also evident in the seventh scene when Chloe expresses her view that sex is the attraction which Newton left out in his laws and holds this ‘strange attractor’ responsible for Chaos. She says:

Chloe: The universe is deterministic all right, just like Newton said, I mean it’s trying to be but the only thing going wrong is people fancying people who aren’t supposed to be in that part of the plan.41

To this Valentine says “The attraction that Newton left out. All the way back to the apple in the garden.”

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41 Stoppard, Tom. Arcadia. London: Faber and Faber, 2009. 100. Print
Fig. 9 Theme of Love: The Strange Attractor in *Arcadia*

- Lord Croom
- Lord Byron
- Thomasina
- Mrs. Chater's Spirit

**Characters and Relationships:**
- Captain Brice
- Septimus
- Thomasina
-Lord Croom
- Lord Byron
- threatens Count Zemlinsky
- falls in love with Septimus
- gravitates toward Lord Byron
- falls in love with Thomasina and spends his life as a hermit at Scilly Park grieving the death of Thomasina.
- proposes a pleasure trip with Hannah
- has an affair with Chater
- falls in love with Hannah
- Gus
- loves Hannah
- falls in love with Bernard
The Theme of Continuity of Knowledge in the Long March of History

In the third scene Septimus describes the Continuity of Knowledge in the Long March of History. He explains her that the lost knowledge/discoveries/inventions at one place/point of time get rediscovered or reinvented in some other place/point of time. This story is ironic to the fate of Thomasina’s own discoveries which do not get revealed due to her sudden demise in a fire accident until in 1993 when her primer is found, analyzed and her discoveries unearthed by Valentine and Hannah. But by that time those discoveries are made again and the concepts are formally established as chaos theory, Fractals and thermodynamics. This is quite similar to what happened in the real life of Carnot who is regarded as the Father of Thermodynamics. Carnot died at an early age of 36 years due to Cholera epidemic and as it was considered to be contagious all his belongings including his books which contained his research work were buried along with him. Tom Stoppard presents Arcadia as a portrayal of evolution of knowledge. While Thomasina and Septimus make new discoveries, Hannah and Valentine work to find their discoveries. The work of Thomasina and Septimus is lost but later found again.

Transition of Temperaments and Blurring of Dichotomies

The end of the dramatic system brings all of these dichotomies and themes together, showing that though things may appear to contradict—Romanticism and Classicism, intuition and logic, thought and feeling, science and Humanities — they can exist, paradoxically, in the same time and space. As rightly pointed out by critics like John
Fleming\textsuperscript{42} and Hersh Zeifmann\textsuperscript{43} that the characters that embody the Classical and Romantic temperaments – Hannah and Bernard- experience a change in their attitudes which emerge with special force in the case of Hannah, who forgets her “sentimentality over geometry” when acknowledging the beauty of fractal images and by the end of the play leaves aside her “classical reserve” and agrees to dance with young Gus Coverly. The Order is found amidst chaos. It actually highlights these opposing notions are the opposing psychological attitudes which every human being possesses.

\textbf{The Emergent Theme of order in disorder and its metaphysical Implication}

Nature is unpredictable and random, universe is moving towards disorder and we are all doomed, yet, there is Order in this disorder. Seeing order in disorder refers to seeing the purpose of our life. In the long march of the history, man has always been driven by purpose. His purpose is finding the order of the nature, the truth. Common Man has always feared the end of these mysteries which could make his life purposeless and mechanical as emphasized by Valentine:

People were talking about the end of physics. Relativity and quantum looked as if they were going to clean out the whole problem between them. A theory for everything. But they only explain the very big and the very small. The universe, the elementary particles. The ordinary- sized stuff which is 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’re better at predicting events at the edge of the galaxy or inside the nucleus of an atom than whether it’ll rain on auntie’s garden party three Sundays from now. Because the problem turns out to be different. We can’t even predict the next drip from a dripping tap when it gets irregular. Each drop sets up the conditions for the next, the smallest variation blows prediction apart, and the Weather is unpredictable the same way, will always be unpredictable. When you push the numbers through the compute you can see it on the screen. 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.44

Septimus also feared this as is evident from what he says “When we have found all mysteries and lost all the meaning, we will be alone, on an empty shore”. To this Thomasina says “Then we will dance. Is this a waltz? Thomasina has intuition so she probably understood the never ending cyclic flow of mysteries in nature and said so. Man on solving one mystery feels happy about it and then moves on to the next one. Dance and waltz here refer to the never ending cyclic nature of the unsolved mysteries of nature/universe and it also symbolizes the celebration following the unraveling of one mystery. This process will go on and man will remain in this vicious cycle realizing higher and higher order in the nature/universe and thereby attaining more and more happiness until finally realizes the Highest Order, the Highest and the Ultimate Truth and attains eternal happiness. One doesn’t come out of a maze until the way out is found. In this dramatic system this aspect is

touched upon in the sixth scene when Hannah says “It’s all trivial- your grouse, my hermit, Bernard’s Byron. Comparing what we’re looking for misses the point. It’s wanting to know that makes us matter. Otherwise we’re going out the way we came in.”45 Later in the seventh scene Valentine says “… till there’s no time left. That what time means”46. This statement of Valentine also throws light on the aspect that though there is randomness and unpredictability in the nature/universe, the irreversibility of time and finiteness of lifespan (we are all doomed!) are certain. So, regardless of one’s profession, one has to spend time even in understanding and realizing the mysteries concerning Higher Truth i.e. object of one’s life, realizing the spirit, realizing the Universal Spirit and thereby attaining the Highest level of consciousness. If we explore the metaphorical implications of Hannah we realize that all other pursuits are trivial in comparison with the pursuit of realization of The Ultimate Reality/ The Ultimate level of Consciousness.

Decoding Symbols: Emergent Properties

Fire takes on multiple meanings in the play, but it most strongly symbolizes death and the eventual and inevitable end of the human species. Like Thomasina’s diagram of heat exchange, as exemplified by Mr. Noakes’s steam engine, all will eventually end. As the law of thermodynamics prescribes, we will all eventually burn up. Fire is destruction and death happening over and over again. Septimus burns Lord Byron’s letter, unread, a rare and valuable piece of historical literature. Fire also symbolizes passion that keeps bodies in motion. Thomasina and Valentine wish to describe and analyze the universal laws of heat

46 Ibid. 128.
and destruction. The final scene is the greatest culmination of the fire motif. While Valentine and Hannah discuss the meaning of Thomasina’s heat-exchange diagram, Thomasina holds the flame that eventually causes her own destruction. As Thomasina and Septimus waltz, the audience is aware of Thomasina’s fate. We can see the workings and progress of the heat diagram before our eyes.

Mathematics and "Simple English Algebra" is the foundation of Arcadia. The mysteries of math reveal greater truths about humanity and the family as a whole. Mathematics is also a source of pride within the dramatic system. Valentine, as a chaos mathematician himself, is reluctant to share Thomasina’s theory and fractal with Hannah. Thomasina’s algebra and geometry lessons culminate into her genius understanding of the laws of thermodynamics and chaos theory. The laws of thermodynamics dictate the fate of all the characters on stage, and the realization of such fate eventually conclude the play (most tragically, Thomasina’s own ironic death by fire). Septimus and Thomasina, along with Gus and Hannah, succumb to the law of thermodynamics by coming together in a waltz. The couples know their mathematical, unstoppable fate and embrace each other in spite of it.

The Gardens of Sidley Park symbolize the transformation and transition between romanticism and classicism. Mr. Noakes wishes to alter the gardens into the picturesque and thoroughly romantic style and means to tear out the gazebo in favor of a hermitage and drain the lake with a newly improved steam engine. Mr. Noakes means to transform the green, lush perfect Englishman’s garden into an "eruption of gloomy forest and towering
crag," Lady Croom describes it as a haunt of "hobgoblins." As Hannah describes it, the
garden is a classical painting imposed on landscape or "untamed nature in the style of
Salvatore Rosa ... everything but vampires". The garden represents romanticism, (for
Hannah) a decline from thinking to emotion, and the need for "false emotion" and "cheap
thrills."

The modern day characters wear the Regency Clothes or clothes that would be worn to a
fancy dress ball in Thomasina's time. Regency Clothes symbolize high society and privilege.
The dress not only links the two generations and time periods, but it reveals the heyday of
the English aristocratic family. Chloe, Gus, and Valentine wear the outfits to have their
pictures taken and dress for the annual dance. The dress reestablishes their power as a
family and role in the community, seemingly diminished in modern times.

The Primer is the symbol of learning and academia. Thomasina is the first to use the primer,
which once belonged to Septimus; however, at the conclusion of the play, Septimus has
taken back his primer. Septimus's use of his the primer once again symbolizes his return to
being a student; this time he is a student of Thomasina, who has surpassed his knowledge
and teachings.

Apples functions as a special attractor in the dramatic system it is not only a symbol of
science and its progress but also becomes a symbol for love and desire. The apple, a
timeless symbol of temptation from the garden of Eden and the central image in the
apocryphal story of Newton’s discovery of gravity is first given to Hannah by Gus this special
attractor inspires Thomasina to develop equation for apples leaf which ultimately becomes the principle governing image in the dramatic system.

In *Arcadia*, wit reaches us in a form that we expect, but it strikes us because of its unexpected contents. Just as Chaos theory envisages complexity inside a system, Stoppard shows not only how wit inscribes disorder in order, but also how complex things may get inside a determined system. Stoppard’s wit becomes a perfect example of deterministic chaos. The unconscious, which is responsible for the semantic choice of images, rehabilitates determination. At the heart of wit, lies the unpredictable: the image is often far-fetched and this is why it is pleasant. Thomasina’s comparison between cosmic entropy (the movement taking the world from order to disorder) and the spiral of strawberry jam in rice pudding is unexpected, unpredictable, yet accurate and extraordinarily simple:

Thomasina: When you stir your 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?47

*Arcadia’s* plot structure depends on recursive symmetry, strange attractors and human action for its movement and development. Fleming notes that Stoppard constructs *Arcadia*

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through a “nonlinear bouncing between time periods [that] suggests disorder, yet lurking underneath is a tightly ordered dramatic structure.” He also notes that the term fractal means “self-similar” as in the “self-similarity of dialogue, situations, characters, props, costumes and musical accompaniments” across the scenes covering two historical periods. Stoppard foregrounds relationships and sex, exploring the many ways in which our actions are informed by them. Stoppard is not merely juxtaposing quantum science and human interactions for the sake of drama; rather by excavating the complexities of human action, choice and identity through the lens of chaos theory and quantum science, Stoppard demonstrates the fundamental connection between individuals and the post-Newtonian world.

Post-script

In the context of emerging twenty-first century modern science, particularly invoking the concept of quantum information and von Neumann Entropy, beyond Shannon Entropy as a measure of classical information, this researcher would like to add the modern scientific metaphor of quantum information as a post-script to shed further light on the Emergent Theme of order in disorder and its metaphysical implication (pp. 59-61).

Fears of entropy and futility can then be addressed in a correct perspective that, at the end of the play 'Arcadia', while entropy is 'high' one has "fuller" information about the physical objects and the hidden order of their arrangement brought about by the performance itself. Thus, the consciousness, as accruing information in the physical plane, grows with...
increasing entropy both in the domains of classical Newtonian mechanics as well as quantum mechanics. As we make transition to the meta-physical region of the universe of mind, consciousness makes a transition from physical (sense-based) information to the cognitive knowledge or intelligence ("Chit") and with further ultra-transcendence into the purely spiritual region, the consciousness takes the highest form, as personification ("Swarupa") of Supreme ("Param") Truth ("Sat"), Wisdom ("Chit"), Bliss of Life ("Premanand"), Refulgence ("Prakash" or Enlightenment), Characteristic mystic word ("Shabda"), Unstruck Celestial Sound ("Anahad Nad"). This is indeed realization of the very purpose or object of existence in terms of immutable, everlasting ultimate reality or consciousness of oneness of spirit force with the Supreme Being accompanied by duality at free-will with no uncertainty referred to as "Omni Quantum Theory" ("O" Theory) of consciousness in the Eastern Philosophy of Oriental Saints of Radhasoami Faith.50