

INTERPRETATION POTENTIAL OF NUMBER IN (MATH) DRAMA: A STUDY IN ELMER RICE'S *THE ADDING MACHINE*

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Abstract

In certain Math drama, the playwrights employ the mathematical thinking as a theme or as a technique to help their characters as well as the audience to analyze their financial status, evaluate their current situations, and solve their problems.

And the American playwright Elmer Rice(1892-1967) exploits such idea in *The Adding Machine*(1924) whose the treatment of the unsolved social problem of modern depressed era is conveyed through the dramatization of numbered characters.

This study aims at presenting an evaluation to the treatment of numbered character in Rice's dynamic text, *The Adding Machine* and an assessment to Mr. Zero's dynamism by using different manners of literary criticism including modern approaches in psychiatry and psychoanalysis.

Key Words: Rice, Math drama, Adding Machine, Mr. Zero, Number, Character and Dynamism.

Introduction

"In numbers, the mysteries of life can be revealed"

By the cast of Rice' *The Adding Machine*

A number is a mathematical object used to count, label, or measure, and recently it becomes so crucial one that involves in every aspects of living in modern digital age. Mathematics which is defined as a science of structure and order proves its own significant interdisciplinary relation with other different sciences like physics, computer, and with the literary fields as well, like drama.

As far as the relation between drama and mathematics, Drama, as an art of performance, has a important power in teaching the essential mathematical concepts to children, as in counting by the use of fingers. Such fact is quietly recognized by many teachers and educationalists who document the ability of drama to engage student's emotion and to facilitate the perception of many abstract mathematical ideas. It is highly proved, drama is a significant tool in teaching. Hence, it is suggested as an approach of teaching in different curriculum, particularly in primary schools. In brief, the performance or the dramatic method is highly successful and fascinating approach in teaching various educational levels due to its ability to relate and convey a variety of topics in dynamic way as in dramatic mathematics.

The relation between mathematics and art is developed to be an excited one that attracts the attention of authors who intend to create a fictional work that focuses on mathematical topics and characters, with less interest in form and medium. Such type of work is categorized as a mathematical fiction and recently labeled as a genre of literature, though it has been existed since the ancient times, as in the English satirical novella, *Flatland: A Romance of Many Dimensions* (1884) by Edwin Abbott Abbott. (Padula, 2016, 40)

According to a professor Kasman, " any work containing mathematics or mathematicians has been treated as mathematical fiction". (Kasman,2005, 250) Digging deeply in such issues, the

scholar explored other literary text which is much older than Abbott's *Flatland*. It is an ancient comedy that was written by Greek playwright Aristophanes (450—388 BCE) and performed in 414 BCE. (Frucht, 1999, 352) Aristophanes established math drama that is skillfully represented by the modern American playwright Elmer Rice (1892-1967) in his play *The Adding Machine* (1923).

The Dramatic Interpretation of Number in Rice's *The Adding Machine*

By blending math and drama, the playwrights employ the mathematical thinking as a theme or as a technique to help their characters as well as the audience to analyze their financial status, evaluate their current situations, and solve their problems. In this type of drama, the author makes sense of his dramatic treatment of certain social issues through the employment of certain mathematical subjects. So, the math problem must make sense in the context of the play, whether in its story, character, setting, or even in its language. Math drama can be interpreted as a criticizing opportunity that is designed as entertainment by wearing the mathematical mask. And the American playwright Elmer Rice exploits such idea in *The Adding Machine* whose the treatment of the unsolved social problem of modern depressed era is conveyed through the dramatization of numbered characters.

Numbering is currently used in drama to denote the sequence of acts and scenes in the structural building of the play and sometimes attached to the characters when the playwright introduces a member of certain class with no significant distinguished traits, like the first soldier, second soldier. Such character has no specific individuality that demands a personal name, and such style used by Shakespeare and also by other various dramatists. But in *The Adding Machine*, the numbers are used as names for Rice's characters and attached to the social titles of Mr. and Mrs., as he introduces six numbered couples (Mr. One, Mrs. One, Mr. Two,....Mr. Six, and Mrs. Six) as friends to the play's protagonist Mr. Zero and his wife Mrs. Zero.

Zero is a number that is used in mathematics to describe a null quantity. It is neither positive nor negative, but it fulfills the central role in his additive identity to the real numbers, integers and many other algebraic structure. Moreover, it is the placeholder in different place value systems as in physics, etymology, chemistry, computer science, telephony, and also the year label (calendar). (Gagey, 1948, 151)

The number zero means nothing when it stands on its own symbol (0), but it is so significant when it acts as a placeholder and endows all other numbers with value. (e.g 1000). So, all other numbers can be defined in terms of their relationship to zero, since its function as a placeholder modifies the values of the other attached numbers, for examples 25, 205, 250, 2500. Such hardcore mathematical issue of the function and value of zero is approached from a literary perspective in *The Adding Machine* whose author invites the audience into a journey through Mr. Zero's trial, death, and after life. (Gascoigne, 1974, 50)

"Mr. Zero", the protagonist's name is the conventional denotative tag that reflects the essence of the character as being a worthless one with no value in the world of humanity. And such worthlessness and null value of Mr. Zero is reflected in his speech and action and by the entire plot.

The story of Rice's *The Adding Machine* focuses on Mr. Zero, an accountant at a large, faceless company. After twenty-five years at his job, he is informed that he is going to be replaced by an adding machine that's run by a high school girl.

BOSS: The fact is that my efficiency experts have recommended the installation of adding machines.

ZERO: (staring at him): Addin' machines?

BOSS: That's it. They do the work in half the time and a high school girl can operate them. Now of course I'm sorry to lose an old and faithful employee _____

ZERO: Exuse me, but would you mind sayin' that again?

BOSS: I say I'm sorry to lose an employee who' been with me for so many years ____.(*The Adding Machine*, 200)

In wrath and soreness, as he finds himself as a mere number with zero value, Mr. Zero smashes and kills his boss by stabbing him with a bill file. He tries hardy to defend and alienate himself from the death of his boss in his following words:

ZERO: I thought he was going to give me a raise... do I look like a murder? Do I ? I never did no harm to anybody... I never got into trouble... twenty-five years in one job an' I never missed a day. Fifty-two weeks in year... he canned me after twenty five years, see? I .. it gives me a headache. And I can't get the figure outta my head, neither... but he kept talkin' an talkin... suppose you was me, now may be you'd 'a done the same thing. (*The Adding Machine*, 203)

So, he is taken for this murder, and his cry of help gets nothing. " ZERO: Don't take me away! Don't kill me! Gimme a chance! Gimme another chance...I don't want to die! I want to Live!"(*The Adding Machine*,) He is judged as a guilty and hanged. After the scene of death, the play turns into a dream-like, where Mr. Zero completes his journey in "Elysian Fields" that can be described as a heaven-like setting where he begins to operate certain adding machine until being informed by Lieutenant Charles, his boss of this Elysian Field, to be sent back to earth and reused since he is nothing here and merely a waste of space.(Atallah,2015, 21)

CHARLES: Back you go- back to your sunless groove- the raw material of slums and wars- the ready prey of the first jingo or demagogue or political adventurer who takes the trouble to play upon ignorance and credulity and provincialism. You poor, spineless, brainless boob—I'm sorry for you!

ZERO (falling to his knees): Then keep me here! Don't send me back! Let me stay!

CHARLES: Get up. Didn't I tell you I can't do anything for you? Come on, time's up! (*The Adding Machine*, 221)

Actually, the continuation of Mr. Zero's journey afterlife in Elysian field does dramatically introduce a nonrealistic form of modern expressionistic drama that explores the futility of the cycle of life, death and rebirth. *The Adding Machine* motivates the audience to find an answer to the following question that is raised by the director Jerry Rapiet: "What does it take to live our life well?"(Gassner, 1963,101)

Nothing is left to Mr. Zero, Mrs. Zero or other couples (Mr. and Mrs. One , Mr. and Mrs. Two, ...) to enable them to move into something more valuable or achieve their dreams. They are mere numbered characters with no individuality, and their stylized and undistinguished speech and behavior portray them as different idle machines in a mechanized world or as mere zeros in a society of a numbered figures, as it stated by Palmieri:

That the characters in the play have been given numbers instead of names signifies that they have been dehumanized by modern society, that they have lost their individuality, and that they are multitudinous in society as numbers themselves.

(Palmieri, 1980, 63)

"[A]s numbers themselves", Palmieri's words indicate that Mr. Zero and all other numbered characters in this play dramatize their own subconscious of their own captivity in the modern dehumanized world. They are trapped in their society's mechanization and inside the inaccurate visualization of the surrounding world that is created out of their own psychological conflict with the material authority over humanity. Henceforth, Mr. Zero is crippled linguistically and emotionally to the extent that he cannot perceive anything outside the mathematical world or the language of numbers. Imprisoned to the bookkeeping of numbers for twenty-five years, Mr. Zero cannot stop figuring numbers or escape out of mathematical world. So even in his dreams, Mr. Zero counts numbers and the equations uninterruptedly take off through his discussion.

ZERO: I want you [the jury] to get that right—all of you. One, two, three, four, five, six, seven, eight, nine, eleven, twelve. Twelve of you. Six and six. That makes twelve. I figgered it up often seventeen. And eight is twenty-five. And three is twenty-eight. Eight it out! Them damn figgers! I can't forget 'em. Twenty-five years, see? (*The Adding Machine*, 221)

Numbers and figures do not quit, and Mr. Zero can never escape the slavery of the mathematical world of his job. So, he pays no attention to his spiritual need or the feelings of those who round him. Everything round him seem as mere numbers. That's why he fails to notice the love of his female-co-work, Daisy who is quickly driven into world of numbers that punctuate her recurrent speech.

DAISY: Aw, don't be givin' me so many orders. Sixty cents. Twenty-four cents. Seventy-five cents. One fifty. Two fifty. I don't have to take it from you and what's more I won't. (*The Adding Machine*, 223)

The subjugation of Mr. Zero and Daisy by their job is a symbolic portrayal for the suffering of the common workers who are dominated by their bosses. Rice criticizes the cruel controlling of businessman in his play, *The Adding Machine*.

BOSS: I'm sorry—no other alternative—greatly regret—old employee—efficiency—economy—business—business—BUSINESS. (*The Adding Machine*, 214)

The cruel boss finds that the arrival of the adding machine can solve the problem of having too many workers on the payroll, in addition to its ability to save time and effort. So he decides to replace Mr. Zero by a new mechanical fast worker, and such decision clumps out the individuality of Mr. Zero who has enslaved by the routine of the math business. (Taylor, 1968, 10)

The theme of enslavement is one of the major topics that are treated in non-realistic play *The Adding Machine* that is an excellent example of expressionism which is defined by Richard Sheppard as:

An attempt to create a visionary world, liberated from the language and values and pattern of bourgeois society, expressive of the deepest levels of the personality, and utilizing symbols derived from the modern industrial world. (Sheppard, 1978, 277)

So, Rice employs the expressionism as a vehicle that helps him to submerge deeply into the economic, social and political fields of modern American society where the humans are imprisoned in desperate situation, and this is the major message that is supposed to be revealed behind the story of *The Adding Machine*. (Hadi, 2016, 4) The latter is full-length drama that

raises many questions about the consequence of progressing technology on human relationships that is adeptly represented in the story of Mr. Zero.

"Mr. Zero is clearly a victim of a mechanized, industrial society that has robbed him of his humanity and made a cipher of him".(Taylor,1968, 9) He likes the unfortunate component in a modern business world. "ZERO: Twenty-five years in one job an' I never missed a day. Fifty-two weeks in a year....They didn't have t' look for me, did they?"(*The Adding Machine*, 205) He has not be evaluated as a significant figure in his work as in his house where his is victimized by the unsympathetic nagging wife whom he hope never met and marry. Mr. Zero is dehumanized by all, his wife, job, boss, and jury members.

ZERO: Suppose you was me, now. Maybe you'd done the same thing. That's the way you oughta look at it, see? Suppose you was me __

JURORS (rising as one and shouting in unison): GUILTY!(*The Adding Machine*,205)

He is enslaved by the iron and steel and when he decides to free himself from the cage of numbers, unfortunately leads himself into another captivity in the cage of guilt in the prison. He is nothing , with no value. He is a failure person.

CHARLES: You're a failure, Zero, a failure. A waste product. A slave to a contraption of steel and iron. (*The Adding Machine*, 221)

Rice names his protagonist as Zero in order to symbolize the modern American man whose value becomes zero in modern mechanized world. But to evaluate the image of Mr. Zero in *The Adding Machine*, one has to analyze his character which is "the essential self " of the text. In other words, the figure that has been employed to represent the lost man in the current dehumanized world does not necessary to be a character of "zero dynamism".

Dynamism of character explicates the progress of character within the sequence of the action in the drama. According to Marian Mazur, it is "parameter responsible for sustenance of life processes in the organism will determine a person's general strategy of behavior in terms of motivation and needs". (Sadowski,2003, 53)

Mazur introduces five dynamic classes of character in a correspondence with the different developmental stages of human life as following: exodynamic (childhood) , exostatic (youth) , static(adulthood) , endostatic (late maturity) and endodynamic (old age). Moreover, each class gives an account to special motivation and behavior of the character, as it is indicated below by Mazur.

- "Exodynamic characters disperse everything and accumulate nothing;
- Exostatic characters disperse more than they accumulate;
- Static characters disperse as much as they accumulate;
- Endostatic character accumulate more than they disperse;
- Endodynamic characters accumulate everything and disperse nothing."(Mazur,1966, 57)

Presenting an account to Rice's *The Adding Machine*, one can find that the focus on the human behavior with its motive is the main cause behind the constructing of this play. So the ultimate goal is to awaken the audience inner conscious and motivate their instinctive tendency to realize and understand the character of Mr. Zero and all other numbered ones. " Every human beings is an acute observer of all other human beings"(Plotkin,1993, 172) and all human are in need to

gossip about other's conducts and personalities, as it is asserted by the psychologist Steven Pinker who states that:

"Gossip is a favorite pastime in all human societies because knowledge is power knowing who needs a favor and who is in a position to offer one, who is trustworthy and who is a liar, who is available and who is under the protection of a jealous spouse or family- all give obvious strategic advantages in the games of life." (Jung, 1969, 227)

Here-upon, the psychological impulses that joins hand with the literary skill in the creation of Mr. Zero character as both read and interpret the human's inner world and behavior in relation to the impact of the surrounding world is the major cause behind the success and the great appeal that is achieved by Rice's *The Adding Machine*. The latter is opened by the appearance of Mr. Zero as employee whose twenty –five years of working are mixed with negative impact of his nagging wife that add more to his realization as being a wretched miserable man.

ZERO: Twenty-five years! An' I ain't seen nothin' happen. Twenty-five years in the same job. Twenty-five years tomorrow! You're proud of it, ain't you? Twenty-five years in the same job an' never missed a day! That's somethin' to be proud of, ann't it? Sittin' for twenty-five years on the same chair, addin' up figgers.(*The Adding Machine*, 197)

Mr. Zero starts his dramatic journey in *The Adding Machine* as a static character who is highly attached to passivity and , but later on he follows the endodynamic bent of gathering power under the impact of the cruel and inhuman treatment of his boss who never appreciate and assess his effort and faithfulness of twenty-five years in relation to the surrounding difficult conditions. So, Mr. Zero is twisted between two contrastive status: the too obedient faithful passive employee and the too active daring killer, and in both cases, he is a victim and slave.

ZERO (sullenly): You ain't very particular about what you call people, are you?

CHARLES: You wanted the truth, didn't you? If there ever was a soul in the world that was labeled slave it's yours. (*The Adding Machine*, 219)

In this point Mr. Zero shares Shakespeare's *Macbeth* in his suffering from "the characterological inconsistency" which is defined by Bradley as "the classic endostatic dilemma of a man whose conscious or reflective mind moves chiefly among considerations of outward success and failure, while his inner being is convulsed by conscience".(Bradely, 1991,11)

The characterological dilemma of Mr. Zero is reflected in his own welcoming of different conditions under the impact of the evils of capitalism that forces him to indirectly announce the depth of his earlier passive existential being and passes the transformational period of dynamism into the phase of extreme endodynamism when he utters "NO" loudly. But the disappointing action is happened when in an endodynamic dream in a mythic land and it never saves Mr. Zero from his ultimate loss.

It is true that he is the character that is created to show the zero value of human in the modern age of machine, but it is equally true that he proves his high standard in the aspect of dynamism. Mr. Zero is a highly developed figure who passes through different range of dynamic classes of character. Mr. Zero moves from statism (an accountant at a large faceless company) through endosatism (a guilty person- killing the boss) to endodynamism (hanged and awake I heaven – like setting). In brief, Mr. Zero who portrays the image of low man with no value, proves to be a highly dynamic character.

Conclusion

Elmer Rice's *The Adding Machine* which is a good example of math-drama is constructed to present an x-ray photograph of the American society in twentieth century, the era of depression. It is the famous satire that is based on the artistic effect of the employment of Mr. Zero's dynamism.

Mr. Zero who is neither student nor a schoolmaster, has been involved in the world of number to mirror symbolically the degradation of modern man into a mere number with zero value.

Rice's characters (Mr. Zero, Mrs. Zero, Mr. One, Mrs. One,...Mrs. Six) whose names are derived from their own occupational sphere of number are employed to suggest the worthlessness of their being and to symbolize the spiritual nonentity in modern time. Their humanity have been sucked by the machine of the modern digital age whose people lose their individualities and turn to be as mere abstract numbers.

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