

## Some Mathematical Patterns in the Analysis of Selection and Deletion in Modern Short Stories

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In this research, the art of selection and deletion, has been considered in modern short stories with mathematical models of analysis. After revolution of A. Chekhov, and then writers like *Issac Babel* and *Ernest Hemingway*, the miniature art of selection and deletion has seriously affected the modern literature and especially short story. Now famous writers like *Ann Taylor*, *Kazuo Ishiguro*, *John Updike*, *Raymond Carver*, and others have created new minimalism on the basis of these patterns. After *The Village After Dark* (K. Ishiguro) it seems that the short stories of 21 centuries will obey completely the rules derived from minimalism.

It seems that the rules of selection and deletion (basic elements of minimalism) can be completely described by mathematical patterns. The real art of writers like A. Chekhov has been made on deep understanding of how to select and delete words. *Issac Babel* was genius in such selection and deletion and the first paragraph of *DiGrasso* is a complete model for this (SAMPLING).

In addition the way of starting of a story can strongly determine its termination. Like a system that is dependent on inputs and effects the output with the kind of it, modern short stories are strongly depended the way they start their beginning. The TELEOLOGY THEORY of mathematics can help us understand why the first paragraph of stories like *Lady With The Dog* is so important and basic for creating such a complete art. (See below).

FRACTAL COMPRESSION seems basic in modern short story. In short stories of *Kazuo Ishiguro*, especially in *A Family Supper*, compression of words and descriptions in the basis of rules of fractal compression seems outstanding. In most famous short stories of *Hemingway*, especially *Old Man at The Bridge*; and *Hills Like White Elephants* we can analyze the stories by fractal compression effectively. The famous story of *Issac Babel*, (*The Kiss*) is much better even than *Hemingways* for such an analysis.

Characters of nine stories of *J.D. Salinger* are completely predictable and suitable for modeling and simulation by using CORRELATION INTEGRAL. *Simor*, *Elloise*, *Lee*, *Lionle* and other characters of nine stories are parts of the complex and specific character of *Holden Caulfield* (*The Catcher in The Rye*). We can complete the obvious and hidden characteristics of these apparently unique characters using correlation integral analysis. Let explain about one of these patterns using comparison of two stories of A. Chekhov (Teleology Theory).

The function of a system, to be brief, is like a machine that receives some information as input and processing on them sends them out as output. Therefore, in general the outputs of a certain system is dependent on its inputs. Even a system with a fixed respond that acts the same for all inputs, somehow fellows this principle and it's behavior can be regarded as a limit behavior. However some systems are able to change their behavior over a period of time and organize their output according to fresh needs. This act, in system theory, is known as adaptation principle. In synergetics this is called self – organization. For instance an organization may be established for a given purpose, yet after some years do only some part of what it is meant to do or even take on new roles for which it was not planned. In other words systems try to limit their answers and in so doing make themselves independent of various reactions against various inputs.

Certain systems do not have apparent sensitivity over their input, however, some other have an unpredictable reactions. Such a behavior is seen in systems called non – linear systems and this type of behavior has been named *chaotic*. The reactions of systems is also different against changes. Some respond quickly to input and some do this with some delay.

The analysis of a short story can be viewed from this perspective. There are at least two ways of doing so. The first method involves dealing with characters and their situations as input and their

ultimate behavior as output, the stress being on this method in the present discussion. The second way would be to find out the function of a system based on the relation between input and output as in a black box. (For example if numbers 1 through 4 are given to a system and the results be 1,4,9 and 16 then one understand that the system squares the numbers given to it). So, the relation between the characters and their fate could be a ground for the analysis of the writers views.

In a short story, also we come across such phenomena. It may seem that a writer is free to change his characters actions according to his wishes as he is free to bring them to being. Yet this is not true. As soon as a character is created, it takes on his own course of actions and acts according to his own personality traits, otherwise he would not seem natural. Thus an author creates a character, involves him within a set of incidents and witnesses his reactions. However, we may face a chaotic behavior too. The way a character is introduced unavoidably affects his actions throughout the story. The hidden potentials of a character may either give the writer some leeway in designing the events or put a constriction on him.

That is why a writer is not free to choose any kinds of ending to his story. Rather he should see to it that what end is appropriate for his characters. The stories of *Bishop* and *The Lady With The Dog* is expressive of two kinds of ending that are related with the beginning these stories.

In the *Bishop*, bishop *Putor* is a very serious and disciplined man. He is intelligent and his presence causes embarrassment to others. Even his mother addresses him with respect. Yet this woman is very intimate with the bishop's friends. At the end the *Bishop* dies of typhoid and just before death recalls his childhood. After his death *Chekhov* confirm his doubts.

In the last paragraph of the story every word shines and the art of choice is perfect. The loneliness of the bishop's mother, her life with her brother in law that has but a simple job in an unknown town and her insistence that her son was once a famous bishop, her hesitations and that of her addresses all indicate the worries of a wise man like *Chekhov* who is sick and is doubtful of his efforts.

Comparing with *The Lady With The Dog*, we find another sort of ending. Both stories present discontented individuals. *Bishop* has no way out of it but in *The Lady With The Dog* there is an effort to overcome the problem. The *Bishop* story a philosophical subjects starts with deep layers of bishop's personality. But the beginning do not allow many choices. One could not imagine *Bishop* quit his profession to join his mother and to be a shepherd. The story should end with the bishop's death in disappointment over his past and any hope of his release. However, in the second story there are still ways to end the story that carries on with suspense allowing the reader to imagine his own sort of ending.

But what is of importance in this discussion is the way a story starts and its relation with its ending. If the bishop was one like father *Sisseue* and was a heavy and carefree man, he would not come to such an end. The crisis such as bishop faces just occurs for people like him and *Chekhov* has described these effectively in his story.

On the contrary, in the *Lady With The Dog* we are not dealing with heroic actions or philosophical thoughts. Everything begins with the frivolity of a man and ends in social prohibition. Neither does *Chekhov* have a solution and nor does he enter the discussion. *Chekhov's* choice in ending are limited to these ethical codes.

Thus we view two final parts of *Bishop's* story as a fatalistic inevitability and all tensions converge and end by his death. Yet the second story can have more than one ending with little favorable or wishful results. So occurrence of any of these is equally probable and we face an random variable. To have a chaotic behavior we should revise *Chekhov's* story. But the social restriction of the setting does not allow it and we do not expect weird behaviors from the characters. For instance it is out of question to imagine that they join a gypsy group or take refuge in to a monastery. (In *Dostoyevsky's* works such happenings are possible).

There are also systems which act independently from their output and their answer could be classified in this range. Also the functions  $h(x) = \sin 1/x$  &  $s(x) = \sin x$  &  $a_n = 1/n$  are among systems which react differently toward inputs. For example the final behavior of  $a_n = 1/n$  is independent from its beginning but the other two show different sensitivity against inputs. As the above the *Bishop* is a final direction story and the personality has a determined final but in *the Lady With The Dog* there are several possibilities for ending the story.