

Biosemiotics in Tulus S. Novel Artworks

Octo Dendy Andriyanto
Universitas Negeri Surabaya
Surabaya, Indonesia,
octoandriyanto@unesa.ac.id

Sri Sulistiani
Universitas Negeri Surabaya
Surabaya, Indonesia
srisulistiani@unesa.ac.id

Abstract—A community who is divided into various ethnic groups has diverse customs and cultures. The process of exchanging messages or semiosis is an indispensable characteristic of all worldly life forms. Biosemiotics are the integration of developing fields of semiotics and biology that study the production and interpretation of signs and codes in the biological world or living organisms. Biosemiotics are the fields of biology that are interpreted as the study of sign systems, about the significance, communication and formation of habits of the semiotic living process in nature which is biologically alive from all signs and interpretations of signs. Through qualitative descriptive research, this article seeks to examine the biosemiotic aspects in the novel by Tulus S. As the author Tulus wants to express the state of nature with all its contents in the novels produced. In this regard, this research will reveal the biosemiotics contained in the novel by Tulus S. The purpose of this research is to prove and reveal that the author in writing his ideas cannot be separated from the surrounding natural environment with all the signs that exist.

Keywords—*biosemiotics, novels, Tulus S.*

I. INTRODUCTION

Literature does not born from the emptiness of writer, rather than it is the representation of social reality that writer been understood. The idea of aware of broaden surrounding must mean that between us there is no man that freely do harm to the nature whether it is living or non-living or even between nature itself. The nature does not only out there, but it is also lives inside us. This is the way of thinking about how human in a “space” for finding themselves in their habitat, not only in social role but, we are also in the system process of nature, social and culture. The feeling of space as a mobile, visual process, creative, as well something that is connected and intersubjective does introduce an ethic. This is an ethic of semiotic in responding a good responsibilities and respond.

The preface about the history of biosemiotics, contextually the history inside and fighting against the philosophical and science mind that is greater to put humanity to its place. Biosemiotics is a study about the biological process through semiotic with applying the model of creating a meaning and communication. Reductionism in modern science has made a difficult step for the bachelor of humanities and the art of

presenting biosemiotics as a system of semiotic evolutionary approach that is non-reductive towards the science of living organism (including human). Gould [1] proposed that the tension between two cultures has made humanist community to step back to the defensive academism and the scientist assumed that literature and philosophy research does not a serious method to explored or characterize the world. Gould solution perceive biosemiotics does not overlap if it seen from interdisciplinary perspective. Humanities division specifically interested in ecology problems and its representation whether it is centered or aware, more or less and symptomatic in literature and art or in the observation of patterns and movement that is similar appeared in biology and culture of shape, scientific work that formulated life science must become a vital attention. When we are chasing a question about biodiversity and its important, lost species, climate changes and ecological decomposition, from those science we take a lead. In understanding an evolution and the development of biology system, from those science we could to think about the organism relation that able to shape them or even us nowadays.

Based on the description above, the research problem that being proposed in this research are (1) What are the biosemiotics elements that appeared in Tulus S literature? And (2) how does the writer describe the biosemiotics elements inside his artwork? From the biosemiotics analysis shows that the author are starting to be more creative in writing and presenting a new better colour than the previous artworks with taken an idea from the surrounding.

II. METHODS

This article are using a qualitative approach. The data resources of this research is the novel from Tulus S. The data of this research is the word, phrase, sentence that is inside the novel. The data retrieval is done with understanding the sign system, whether it is in a form of strings of words, signs that could analogous as a word, writing style and others. The collection of data technique is using a documentation study technique.

Data analysis was done during and after the collection of data. Content analysis technique is used with the reason for making the data which pressed on content study that is relevant with the focus of study while the descriptive analysis technique is used with the purpose to make a description about the situation objectively. Beside the perseverance of

observing, the validity of data testing is done with triangulation of source and theory, as well with discussion with peers. This technique purpose is to make the researcher to keep an open act and honesty as well given a chance to test the basic assumption that is come from the researcher mind.

III. RESULTS AND DISCUSSION

A literature if it is observes smartly will shows its value that contains a deep meaning and useful for social life [2]. The value that contained in literature cannot be separated with its writer and the social culture that influenced it. Pradopo [3] proposed the sign system of literature does not separated from the community convention, whether language community or literature community, and community in general. From understanding this background of social culture the full value of literature can be extracted.

A. *Biosemiotics in Literature*

A concept of socio-culture in Javanese modern poetry, indeed cannot be separated from the convention of socio culture of java that is associated with the writer. The poet of modern java poetry in general lives in a village or came from a village that is commonly still intact with ethic and customs of java. What are the writer trying to convey in his artwork in general is his idea as the result of contemplation of writer towards its surrounding. Whether it is, contain an appraisal or critic. The pattern of delivering social critic cannot be separated from the basic idea of the writer as the member of Javanese community. Hutomo [4] declared that a critic must be perceive as a little part of "Java Culture" which in the part of "introspective" or even as a manifestation of "suggestion" of the little society. The little society that been describe were based by the reality of Java literature in general been followed by the lower layers of society.

The understanding of value in this context is the nature that is important or useful for the humanities. This value is an important part of human culture. Horton & Hunt [5] described value as an idea about whether an experience is worth it or not. Value will lead to someone behaviour and consideration. In the heteronomy community, the conflict of value will always be exist and those value will change from time to time following the development of social dynamic. A culture does not accumulated from folkways and mores, but it is a behavior system that is organize. The culture value is an abstract concept about the basic problem that is really important and valuable in human life. Based on the mind-set of Kluckhohn [6] culture value system in every culture of the world relating to five important problems, which: Problems of essence of human life, problems of essence from human creation, problems of essence of human position in time space, problems of essence between human interaction with its nature and the problem of essence between both of human interaction.

Biosemiotics even though it is quite old, but in application of content it is still considered as new. The terms of biosemiotics have develop since the Conference of

Biosemiotics and Culture in 2013, which involved these figures : Jesper Hoffmeyer and Søren Brier from Kopenhagen, Kalevi Kull from Tartu of Estonia, Donald Favareau from United States and Singapore, John Deely and Terrence Deacon from United States. Jesper Hoffmeyer and Kalevi Kull that become a founder of biosemiotics studies in two central of Denmark and Estonia, just like in history of biosemiotics that been explained by Donald Favareau. Kull [7] explained that biosemiotics can be seen not only as a sub division of biosemiotic, but it is also as an approach in biology theories.

Biosemiotics involved a study about meaning in the biologist system and between the root of intellectual it is semiotic. Language as its medium of literature has already a sign that has meaning or semiotic. Language before it is used in literature had already symbolize something that has meaning which is determined by the convention of language user. Therefore, language in literature is a secondary sign system. Every kinds of literature (genre), whether it is prose, poetry, or even drama with its variation has a sign system that is related with its own convention.

The semiotic concept that been used in this research is a semiotic by Pierce. Based on Pierce [8] divided in three sign, which (1) Iconic, which a sign that its resemble an object that being represent (2) Indexical, which is a sign that is delivers through a certain methods with related with the object that being represented. (3) Symbolic, which is where there is a symbol being connected arbitrary to its reference. The researcher must analyze that literature system sign and selecting the convention that is possible for that sign or structure has meaning. Biosemiotics can be seen as a contributor on general evolution theory which involved the synthesis of variant science discipline. Using Pierce philosophy has made biosemiotics stronger in biochemistry and biophysics.

Wheeler [1] explained that biosemiotics with the knowledge of central science about the meaning of biology and its nature and purpose, value, interpretation that consisted in every living organism could give a path to the intersection of science discipline with other science that able to united a literature and philosophy with communication, institution and activity that is include the other culture of other organism. Biosemiotics made an argument that change the discipline that living things does not based on their gen and cannot be reduce as a machine that made by protein. The implication of this argument is very wide because it is not only covered every organism, but also their capacities to make them creatively adaptive to the pressure of the environment with their skill for being creative with themselves. [9] Every life that been exist has already covered inside its genetic material, winding trail from the past evolve to the beginning of life, while our self are busy adding the present to the future.

Favareau [10] explained that biosemiotic is a study about many types of communication and its significance that could be observe whether inside or between the life system. Representation process, meaning, senses, and biology significance from the sign process like language and the idea of abstract symbolic. Those sign process appeared everywhere

in literature about biology system. The terms usage like message, signal, code and relating sign with the biological process of non-linguistic in the end considered as metaphoric and those kind of terms could someday be reduced effectively for the chemistry interaction and sheer physicality that as a basic of that process. Someone could understand what is truly are biosemiotics and able to take the value from this volume in the meaningful ways.

The border that biosemiotics are trying to cross was hoped that able to build a connection between two sides that being alienation from our existence to gives human in nature. The development of biosemiotik can be understood as a development of Ecocritic and the way to provide integrated field which previously understood as a human preservation and all living things. It is biosemiotics field that is very useful alongside with the study of human growth and human sociality, as well the development of complex stratification system which is a combination of biology evolution and semiotic. Kull [7] declared that based on the biosemiotics view a species of biologist, a group of development that is an effect of communication between organism which is a communicative categories that was based on the acceptance between bipolar reproduction of organism. The idea of metaphysic that cell and organism just a systematic organic molecule that will help us to think about relationship between individu and nature as well the human culture in wide scale. In biosemiotics, biology and language being retold to reunited their mind, body, and surrounding in a new structure of conceptual work which move forward than what it is imagined.

The studies of biosemiotics that have been done by the previous researcher has pointing out to the biosemiotics analysis of a general object, which is relating the context of biology with semiotics. In this research, the writer are conducting a study of biosemiotics with novel in Javanese language from Tulus etiyadi or known as Tulus S.. as an object. The author was born in the environment of Javanese community that has an ideas orientation towards the social culture of Javanese community.

B. Biosemiotics Elements in Tulus S. Novel

A literature was created by the author does not in a state of hollow and does not even made without a purpose the author as the member of the community must experiencing every kind of problems that has happen in the community around him whether it is in wider community in general. The community generally fully aware of the literature is also a part of the culture that has an important meaning as a medium to understand the moral value, as well the world of mind of nation or a group of human. [11]

Tulus S as the part of javanese community in his life was influenced by his surrounding. The social life of javanese community are very intact with the nature sign. Those nature sign is described in symbols that is exist in the life of humanity, plant or even animal.

(1) Biosemiotics that related with human behavior

It is same as the phenomenology, biosemiotics are also exploring the nature of mind, awareness, and intentionality, but our field does all of this with all kinds of organism with various level of complexity [12]. In his novel, biosemiotic is described by Tulus in an icon of human anatomy. The characteristic of beautiful body according to the Javanese people or Indonesian people, probably different from the imagination in another place. The point of view of beauty from every nation could be different, which is why it related as quote below :

“...ing pojok kidul lapangan ana bocah ayu kang wiwit mau mung ngadeg wae nguwasake wong-wong padha jejogedan. Rambute sing sangisore gulu ngombyak-ngombyak kasilire angina wengi. Irung mbangir pakulitane kuning. Dedeg piadege lencir dhuwur...[13]

“ Yayuk pawakane lencir kuning, irung mancung lan rambute lurus. Dene Namin awake gedhe dhuwur bisa diarani gembrot lan rambute ngembang mbakung...irunge semu pesek...[13].

The description of a women beauty if they have a tall body, long hair and straight, pointed nose and clean skin. It is very contrast to the criteria that been told as unpretty which is someone who has a fat body, flat nose, and dark skin.

Biosemiotics are also part of the social status. For example, it is described in a form of house condition and fashion. Yayuk house are very simple which is very different with Mami house that is very grand. The style of the building and the accesoris as well the house location become a sign for specific social status. Mami's house which is very big and terraced in a real estate street. This is like what it has been quote below:

“...Saiba nggumune Yayuk sawise mudhun saka taksi weruh wewangunan omah gedhong kang mewah banget. Pagere ngarep katutup fiber glass dhuwure ngluwihi dedege wong. Omah kuwi mapane ing komplek real estate mewah. Wewangunan ditingkat loro dhasar jembar bisa kanggo manggon pirang-pirang wong. Ana kolam kang mepet tembok sisih kiwa. Ditambah air mancur sajak ndudut atine kang padha nyawang...[13]

Luxury home identical with a strong walls and big size, even it is terraced with a model and luxury facilities, as well a high fence. Luxury are also shown by the location where it is in elite environment, which usually guarded by a special force. High fence and closed also the security has been a symbol of the barrier interaction and communication with the surrounding. This matters are very different with the social status that lives in a village and still uphold togetherness in friendship and families.

The fashion styled, ornate and the usage of accessories are also a sign of social status in the community. The cloth that are were by the characters in the novel, such as Mami Susi which dressed very minimal and glamorous shown that Mami's character is a person who is free, brave and rich.

“...Mami Susi wis teka kanthi panganggo kang seksi banget. Rambut abang dijepit njegrak mimbuhi

kasuslistyane. Clana lan kaos sajak singset ngatonake wujud awak pancen nyengsemake kang padha nyawang...[13]

Mami Susi appearance as a pimp does support her profession. From the results of her work as a pimp she lives a luxury and glamorous life. However, a pimp is a profession that is despicable in the eye of society, because of her work are selling women for a pervert man. Status or title that been gained by someone has made a score from the society for herself.

Beside as a pimp, in the novel are also told a story about a bhiksu as a person who sacrifice himself for others or willing to suffered for the sake of humanity. Bhiksu is a clergy man of Buddha. His status are equal to priest (Christian), kyai/ustads (Islam), rama/pastor (Catholic), or Brahmana/pedande (Hindhu). The people who able to obtain those titled are very well respected by their followers.

"...sawangen para bikshu kae. Dhewekane ninggalake apa-apane lan methekur semedi ing alas. Apa tujuane? Ora mung golek butuhe dhewe nanging kanggo katentremane umat...[13]

A university student or known as Mahasiswa in Indonesia is a symbol for the people who has more knowledge, forward thinker and more positive rather than a people who does not go to school. The word "Maha" differentiate from the student. "Mahasiswa" is a person who studied in the higher institution, whether it is university, institution, or academy. Being registered as "Mahasiswa" in some college is only an administrative requirement to become a "Mahasiswa", but still becoming a "Mahasiswa" contains a wider meaning rather than administrative itself.

"... mas kowe kuwi mahasiswa kudune bisa mikir. Aja dadi mahasiswa banjur malik kiblat ngiles-iles marang kabudayane dhewe.....[13]

"...Iki wis kaping pindho anggane ora lulus mata kuliah kimia fisika. Tegese kudu mbaleni maneh taun ngarep. "Kapan luluse...manawa ngene terus," pangudasane....[14]

Having a titled as "Mahasiswa" is an honor as well a challenge. The road becoming "Mahasiswa" does not without a challenge. Does not passed a subject with extending the time of study, because subject of the study are sets by the odd and even semester. However, expectation and responsibilities that been carried by "Mahasiswa" are too big, because "Mahasiswa" is an agent of change and become someone who is able to give a solution to every problems that being faced by a certain community in every region of the world..

(2) Biosemiotics that related with the nature

Biosemiotics as the science of sign in the life system has a main unique characteristic that is located in the understanding. It is because in life entity does not interact like a mechanic subject, but it is as a role from a text. In Tulus novel has also described the situation of the surrounding. There are variant of

nature are being described. Peaceful nature and fresh made serenity, order, and peace.

"... ing alas wisata Nongko Ijo, Yayuk lan Yoseph padhe kepingin nguculake rasa lungkrahe. Wit-wit pinus kang ngayomi ditambah bandulan lan wewangunan gubung kang edi peni nimbuhi endahe taman wisata kuwi.[13]

The nature has also used as a sign metaphor of someone feeling. The author used metaphor "ketiban rembulan" (the fall of the moon) to describe someone feeling as being surprised because of happy. As well as the metaphor "ciblon ing segara mafu" (swimming in the ocean of honey) hinted a feeling of happiness and joy. The sweet honey is a symbol of happiness and joy because Yoseph conveyed his love for Yayuk. Because of surprise and confuse Yayuk body feels sweaty, which is like 'kringete metu sajagung-jagung'. Yoseph love confession are actually being waited for a long time by Yayuk, however when Yayuk hearing those confession she became clueless.

"... saiba kaya ketiban rembulan wae batine Yayuk. Awan kuwi kaya ciblon ing segara madu. Pangarep-arep kang disimpen jebul katekan. Yosep gelem nibakake katresnane. Kringete metu sajagung-jagung awit saka rasa bungahe. Nanging, ana rasa pekewuh lan semu isin....[13]

On the contrary, in life there is an ups and down. The down and the sadness has also been described by the author through a metaphor. The diction are like this '...Luhe tumetes mbanjiri pipine....[13]; "...jagad kaya wis peteng, ora ana papan kanggo nyimpen rasane kang terus-terusan nandhang susah....[13]; "Nanging emane nalika metu saka fakultas, Purnomo ngudarasane karo polatane malih peteng....'[14]

It is an example of sorrow metaphor. The word dark "peteng" is the sign of the atmosphere that used to describe the feeling of the human being. Sadness made someone could cry, but all the crying does not hinted sadness. Someone who is very happy could also expressed themselves through tears.

Metaphor are related to the nature of surrounding has also described through roses as a sign metaphor of love. The Purnomo character are curious with the women that always sending him roses everyday when he lay down in the hospital. The red roses are given to someone to expressed love and respect, beauty and romantism.

"Sawise kanca-kancane pamit bali, Purnomo tambah penasaran sapa satemene wanita kang ngirim kembang kuwi? Mangka kembang mawar abang kuwi tandha rasa tresna asih...." [14]

Roses has a charming persona comparing to the other colours. Roses kept a beautiful and attractive message to melt women heart and looks more romantic. Beside as the sender of love, the roses petal are usually converted to become a

fragrance that is sold with a higher price. Another natural romanticism sign is the natural sexist sign which is done by men and women. When men and women are drunk in love, there is a part of their body that become sensitive which given an impulse for the couple to have a sexual relationship. When men seeing women given a move of touching their lust area, for example kiss in the forehead, squeezing chest, kissing neck, and other parts. It is a natural things that every normal adult men and women feel. In the novel, the character Purnomo and Dyah has committed a relationship that is surpass the morality ethic with doing an intercourse like husband and wife. Even though they are very aware that they have broke the rules of religion, however this action has been done for many times.

“...Nalika Purnomo mbukak kaose lan tangane nggrayah tekan bokong, Dyah mung pasrah wae. Ora sawetara suwe bocah loro wis wuda tanpa busana babar pisan. Rasane wis ngleyang tekan ngendi-endi mung ngetutna rasane. Kabeh rasane seneng, jagat kaya mung duweke wong dhewe. Awan kuwi bocah loro wis kejegur marang godhane asmara nganti lali marang purwa duksina...”[14]

As an eastern people and people who has religion, having a sexual relationship outside married is forbidden. For men it will not leaving a mark, but for women it will leave a mark with the lost of her virginity. Virginity is a thing that must be keep by women before they are getting married and it would be a shame if she is pregnant outside the marriage. In the context of Javanese culture having a daughter must be keep and do not become “satu mungguhing cangkakan”. A daughter must kept her dignity until she married with the men that will become her life partner.

IV. CONCLUSION

Biosemiotics actually does not a new study, but it is have not really well develop. The study of biosemiotics recalled the reader understanding that literature was not born from a

hollow. The author as the part of the community will be influenced by the community environment and nature. Tulus S in his novel used the verbal symbol or even the non-verbal to describe the biosemiotic element that is related with human behavior and the nature that influence. Through the analysis of biosemiotic shows that the author are becoming more creative in writing and presented a new colour that is better than the previous artwork with taken the idea of surrounding

REFERENCES

- [1] W. Wheeler and L. Westling, “Biosemiotics and culture: introduction,” *Green Lett. Stud. Ecocriticism*, vol. 19, no. No. 3, pp. 215–226, 2015.
- [2] Koentjaraningrat, *Kebudayaan, Mentalitet, dan Pembangunan*. Gramedia, Jakarta, 1984.
- [3] R. D. Pradopo, *Pengkajian Puisi: Analisis Strata Norma dan Analisis Struktural dan Semiotik*, Cetakan Ke. Yogyakarta: Gadjah Mada University Press, Yogyakarta, 1993.
- [4] S. S. Hutomo, *Sosiologi Sastra Jawa*. Jakarta: Balai Pustaka, 1997.
- [5] C. L. Horton, Paul B. Dan Hunt, *Sociologia*. Mcgraw-Hill: Mcgraw-Hill - Interamericana, 1987.
- [6] Koentjaraningrat, *Manusia dan Kebudayaan di Indonesia*. Jakarta: Djambatan, 1982.
- [7] K. Kull, “Biosemiotics in the twentieth century: A view from biology,” *Semiotica*, vol. 127–1/4 (1, pp. 385–414, 1999.
- [8] T. Eagleton, *Teori Kesusastraan Suatu Pengenalan*. Kuala Lumpur: Dewan Bahasa dan Pustaka Kementerian Pendidikan Malaysia., 1988.
- [9] E. Hoffmeyer, J., “A Legacy for Living Systems: Gregory Bateson as a Precursor to Biosemiotics,” *Green Lett. Stud. Ecocriticism*, 2008.
- [10] D. Favareau, ““Why this now? The conceptual and historical rationale behind the development of biosemiotics,”” *Green Lett.*, vol. Volume 19, no. Issue 3: Biosemiotics and Culture Issue, 2015.
- [11] A. (ed) Ikram, ““Citra Kemimpinan dalam Sastra Indonesia Lama,”” in *Bunga Rampai Bahasa, Sastra, dan Budaya*, Jakarta: Intermedia, 1988.
- [12] A. Tønnessen, Morten & Maran, Timo & Sharov, “Phenomenology and Biosemiotics,” *Biosemiotics*, vol. 11, no. 3, pp. 323–330.
- [13] T. Setiyadi, *Carang-Carang Wisa*, Pertama. Lamongan: CV Pustaka Ilalang Grup, 2018.
- [14] T. Setiyadi, *Pupus-Pupus Godhong Kang Suwek*, Pertama. Lamongan: CV Pustaka Ilalang Grup, 2018.