

Ecological Semiotics in *The Tempest*

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Article Detail:	Abstract
<p>Received: 27 May 2025; Received in revised form: 20 Jun 2025; Accepted: 25 Jun 2025; Available online: 29 Jun 2025</p> <p>©2025 The Author(s). Published by International Journal of English Language, Education and Literature Studies (IJEEL). This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/).</p> <p>Keywords— Ecological Semiotics, William Shakespeare, <i>The Tempest</i></p>	<p><i>If Semiotics is all about signs, then this entire Universe can be considered as a discourse encrypted in signs, and Nature is one of the densest texts with intricately coded signs. Semiotics and Ecology are vast domains of study, and so is Shakespeare, the synonym for English Literature across the world. The Tempest, widely considered as the last work by Shakespeare, has been re-visited, re-worked and re-interpreted time and again, and is one of the favourite texts of leading literary critics and scholars of all times. Scholars point out that the second half of Twentieth century and the early part of the Twenty first century witnessed an escalating focus on environment, leading to the advancement and spread of various multidisciplinary streams such as media ecology, cultural ecology, environmental humanities and so on. An Ecossemiotic reading of a text is different from an Ecocritical reading, and this paper is an attempt to look at the aspects of Ecological Semiotics in The Tempest, to see how this trend in the horizon of literary studies can be applied successfully to decode the encoded ecological signs seamlessly weaved into the fabric of the text.</i></p>

I. INTRODUCTION

The relationship between Nature and humans is something that is ever present in all forms of art and literature from the beginnings of recorded history, as evinced by the earliest cave paintings. An exact definition of Nature is rather difficult to reach as well. Nature is different for scientists and artists, and still different for the common people, depending on their way of living and life style. For different branches of Science, Nature is perceived through diverse perspectives, in terms of energy, for instance, or in terms of chemicals and chemical reactions, or as a bouquet of life forms and their interconnectedness. Artists and writers have romanticised Nature, projecting inner emotions and external conflicts onto Nature, depicting Nature as benevolently caring or brutally

unforgiving. For common people, for those living by the sea side or in the hilly terrains, Nature is still something else, providing an inexhaustible source of livelihood in various forms.

The concern with Nature is now on the rise, not only in Literary studies but in almost all other disciplines such as Developmental Studies and other branches of Humanities as well as Science.

In the second half of the twentieth century, the influence of ecology and other biosciences on the humanities became noticeable. This movement led to the development of various novel paradigms (media ecology, cultural ecology) that adopted ecological concepts (environment, ecosystem, symbiosis), and also led to the rise of interest towards environmental issues as

research objects (e.g. in ecocriticism and environmental history). (Maran 2023)

There are numerous schools of thought that celebrate and examine the interconnectedness and interrelationship of Nature and humans, with anthropocentrism probably becoming one of the most popular catchphrases in the recent times. Ecocriticism is another popular approach of literary study, the genesis of which is usually traced back to the works of Cheryll Glotfelty and Harold Fromm, which essentially looks at the relationship of humans with Nature as depicted in literature, “the relationship between literature and the physical environment” and thus “literary ecology is the study of the ways that writing both reflects and influences our interactions with the natural world” (amazon.in).

Ecological Semiotics or Ecossemiotics, however, is different from Ecocriticism, and it is by general consent regarded as a branch of Semiotics, and can be broadly said to be concerned with the “semiotic aspect of man-nature relationships”, looking at “the appearance of nature as dependent on the various contexts or situations”, and examine a multitude of aspects such as “the context-dependence of the valuation of nature, differences in seeing and understanding it”, (Kull 1998) for instance. Articles dealing with Ecossemiotics often place it in contrast to Biossemiotics, for example, or other such concepts to define how it “can be considered as a part of the semiotics of culture, which investigates human relationships to nature which have a semiotic (sign-mediated) basis” (Kull 1998).

This paper is an attempt to look into the possibilities of discovering elements of Ecossemiotics embedded in the fabric of the celebrated last work by Shakespeare, *The Tempest*. Though there are umpteen number of articles on the Ecocritical reading of *The Tempest*, and multitudes of other aspects such as Gender or Power, no article could be found on the Ecossemiotics of the text, and hence this attempt to determine whether Shakespeare could have possibly buried codes of Ecological Semiotics into the text famous for its coded messages of Colonisation and Post Colonialism, Orientalism and Magical Realism, to mention a few of the major analytical frameworks used by scholars.

II. ECOLOGICAL SEMIOTICS

The genesis of Ecossemiotics is generally traced back to 1998, when two research papers were published related to it in the journal *Sign Systems Studies*, by Winfried Noth and Kalevi Kull, two outstanding figures in the domain of Semiotics. A special issue on Ecossemiotics and many conferences later, universities would start courses on Ecossemiotics (Maran and Kull 2014). While tracing the evolution of the term, Maran and Kull point out that it could have been Alfred Lang (1993) who used “semiotic ecology” for the first time, though initial inputs were heavily German in origin. In the seminal article “Ecossemiotics and The Semiotics of Nature” (2001) Noth positions Ecossemiotics between the semiotics of Culture and that of Nature, and explains how communication “occurs not only among humans, but also between all other organisms throughout the whole biosphere” (Noth 2001). He also identifies “four main cultural models of a semiotic relationship between humans and their environment” (Noth 2001) which are given below.

1. the magical (human sign use have direct influence on the natural environment)
2. the mythological (explain human-environment relationship using narratives)
3. the metaphorical (nature is metaphorically understood)
4. the pansemiotic model (Nature is essentially a sign of something else) (Noth 2001)

So when a magician commands, “let there be a storm” and it happens, it is the magical model of Nature, wherein his commands change the natural environment. In the mythological model, myths say about “what we can, should, and must do with our natural environment” (Noth 2001). When nature is read as “an enigmatic sign, a cypher, a hieroglyphic, a riddle, a book, or a code, that has to be deciphered in order to be understood” (Noth 2001) it is the metaphorical model of nature. When nature is taken to mean nothing on its own, but is interpreted to be a sign of something else altogether, that is the pansemiotic model, which “claims that all environmental phenomena are ultimately and “really” semiotic in their essence” (Noth 2001).

Maran explains this concept further when he says that “[l]iving systems are meaning-making

systems. In other words, they are sign-using systems, or communicative systems. By definition, communication is an interaction based on sign relations" and thus "Ecosemiotics is a view on ecosystems as communicative systems" (Maran 2023). He also points out the futility in attempting a narrowed down theoretical description of the term because primarily it is looking into all sorts of interconnectedness of organisms and nature, going beyond the binaries such as humans and nature.

III. NATURE, NATURES AND CULTURE

Alongside defining Ecosemiotics "as the semiotics of relationships between nature and culture", Kull goes on to explain that there are different types of Nature and that the purview of Ecosemiotics also includes "research on the semiotic aspects of the place and role of nature for humans, i.e. what is and what has been the meaning of nature for us, humans, how and in what extent we communicate with nature" (Kull 1998). Kull goes on to explain that it is possible to perceive not just one Nature, but multiple natures. Given below are the four types of nature as classified by Kull.

1. Zero nature (Nature as it is)
2. First nature (Nature as seen, described and interpreted by humans)
3. Second nature (materially interpreted or changed/ produced nature)
4. Third nature (virtual nature as found in arts and literature) (adapted from Kull 1998)

Kull goes on to explicate the categories thus:

Zero nature is seen as changing by itself, the objective nature itself, 'out there' (or 'in here'). The first nature is nature as we have it due to (or thanks to) our language, a language-filtered (or sign-filtered) nature. It is like a translation of zero nature into our knowledge; this is our image of nature at the same time, either mythical, or social, or scientific. The second one can be seen as a back translation of the first into the zero, nature as changed through our participation, a manipulated nature. And the third nature is the interpretation of interpretation, the translation of translation, the image of image of nature. (Kull 1998)

Kull also goes on to cite Hoffmeyer, according to whom, "the relationship between culture and internal nature is the sphere of psychosomatics, the relationship between internal and external nature is the field of biosemiotics, and the relationship between culture and external nature is the *environmental sphere*" (Kull 1998). The latter area, comprising the relationship between culture and nature can also be called "ecosemiotic area".

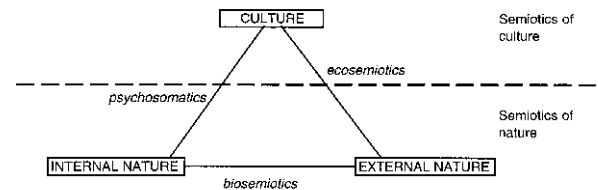


Fig. 1 The Sphere of Ecosemiotics vis a vis Biosemiotics and Psychosomatics
(Kull 1998)

Of the eight basic principles of Ecosemiotics enlisted by Maran and Kull, the last one connects nature and culture from the perspective of ecological semiotics, which states that "[t]he concept of culture is incomplete without an ecological dimension," and that a "theory of culture is incomplete without the ecosemiotic aspect" (Maran and Kull 2014). "Culture is always part of an ecosystem and it never functions without non-linguistic sign systems, that is, without the non-cultural aspects of ecosystems and the semiosphere" (Maran and Kull 2014), and hence, they point out that a mere dichotomy of nature versus culture is rather an illogical and mistaken one. Also, "Ecosemiotics does not build a barrier between human semiotic activities and those of other habitants" but rather "allows research questions to be raised about the whole communicative structure of the geographical space" (Maran and Kull 2014).

The scope of a research paper does not permit an elaborate discussion on the vast range of research potential that comes under Ecosemiotics, especially in relation to Biosemiotics. Suffice it to say that Biosemiotics and Ecosemiotics are separate yet connected domains of study, and both look at "researching nature from a semiotic point of view" (Kull 1998). Maran and Kull warn that Ecosemiotics is an area of study that is extensive and inclusive,

thereby turning into a close aide of multiple disciplines such as ecolinguistics, “cultural geography, environmental history, ecocriticism, environmental anthropology, environmental culture studies, and other fields that focus on the various aspects of the representations of nature in human culture” (Maran and Kull 2014).

IV. THE TEMPEST

William Shakespeare is the name that is used synonymously with English Literature by people cutting across class and creed, across cultural and linguistic barriers, around the world. Despite theories that argue for and against his authorship of the plays and sonnets, the Shakespeare canon remains unbeaten at the top slot of Literature and Literary studies. Shakespeare is supposed to have written 38 plays, 154 sonnets and 2 long poems (rsc.org.uk). He tackled all the genres popular in those times and also created a new form of sonnet – which would come to be known as Shakespearean sonnets – and also contributed innumerable new coinages to the English language vocabulary.

In an age of inconsistent and insufficient documents to support actual facts, there are a lot of suppositions and assumptions surrounding the life and the works of Shakespeare. By general consensus *The Tempest* is recognised as the last known work by Shakespeare, widely regarded as his swansong. This is one of his plays that has fascinated Shakespeare scholars and critics alike, across centuries and across theoretical frameworks. It is the story of Prospero, a duke wrongfully exiled from his own dukedom, and who seeks asylum in a forlorn island, where he trains himself as a magician and also brings up his young daughter Miranda. He has fairy-like creatures and demon-like creatures under his control, and it is later revealed that he actually took over the island from a witch called Sycorax, whose son, Caliban, is enslaved by Prospero. When the play opens, there is a shipwreck instigated by Prospero, resulting in the scattering of its crew consisting of Prospero’s wicked brother, Alonso and the King of Naples, his son, his jesters and others. Prospero manages to confuse the crew with the help of his magic and Ariel, his fairy-slave, and Ferdinand, the prince of Naples, falls in love with

Miranda. In the end all confusion is resolved, justice is served, promises are kept and Prospero relinquishes his magic wand forever.

This play has fascinated scholars and art lovers alike, with numerous productions and retellings in theatre and movies, including a change in gender of Prospero. Studies abound, with Caliban as the displaced oriental victim, and also regarding the colonial and post-colonial aspects that seem to be weaved into the play by Shakespeare.

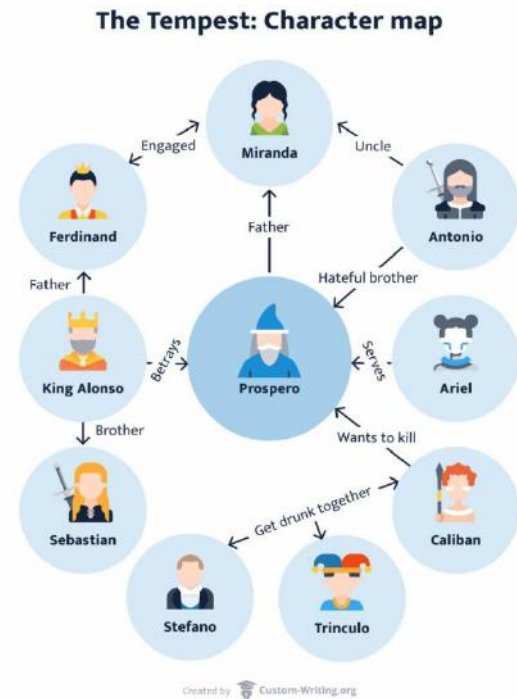


Fig. 2 Character Map of *The Tempest*

(<https://custom-writing.org/blog/the-tempest-characters>)

V. ECOLOGICAL SEMIOTICS IN THE TEMPEST

For the convenience of a structured analysis, this study opts to use the four cultural models of semiotic exchange between humans and nature, as explicated by Noth (2001) for examining whether elements of Ecosemiotics can be found in *The Tempest*. In addition to this, some of the basic concepts as outlined by Kull (1998) will also be used to supplement the primary analysis.

1. The magical (human sign use have direct influence on the natural environment)

The opening scene itself stands testimony to this cultural model of semiotic exchange between nature

and humans, with Prospero's magical wand practically creating the storm that results in the shipwreck which will lead to the scattering of its crew, and later result in delivering justice, though delayed.

2. The mythological (explain human-environment relationship using narratives)

The use of Sycorax, whom the audience never meets except through the narratives of Prospero and Caliban, her son, is a powerful cultural modal that uses the mythological aspect to explain the human-nature relationship using narratives. It is suggested that Sycorax was evil, and that she had enslaved Ariel, the good fairy, "into a cloven pine" (*The Tempest* I, ii). The narrative involving Sycorax paints a dark and sinister picture of the nature found in the island, and that element of abhorred evil is continued through the play using Caliban, "the son that she did litter here/ A freckled whelp, hag-born) not honored with/ A human shape" (*The Tempest* I, ii). Caliban's rude and unpolished narratives revolve around his mother, and keeps on bringing back the different type of nature that once pervaded the island through his reminiscences. For instance, one of the first curses he utters is "As wicked dew as e'er my mother brushed/ With raven's feather from unwholesome fen/ Drop on you both" (*The Tempest* I, ii). Later on, he would assert that "This island's mine by Sycorax, my mother" (*The Tempest* I, ii) and go on to curse that "All the charms/ Of Sycorax, toads, beetles, bats, light on you" (*The Tempest* I, ii) while recounting how he had been fooled by the false charm of Prospero on first meeting him. Thus, the mythological nature that shrouded the island is presented to the audience repeatedly using the reference to Sycorax and through Caliban.

3. The metaphorical (nature is metaphorically understood)

It can be unarguably established that in *The Tempest*, nature is certainly used as a metaphor to be deciphered and understood. The secluded island with fresh water streams and mysterious caves, shielded by the sea and the winds, represents nature unadulterated by man-made customs and civilisations, but is rather wrapped in different types

of magic – the so-called black magic of Sycorax first and then the so-called good magic of Prospero. Nature is presented as a signifier to the audience, to be interpreted and understood as per individual choice – as benevolent nature (when it rescued Prospero and his baby girl) but at the same time abandoning Caliban to the mercy of Prospero.

4. The pansemiotic model (Nature is essentially a sign of something else)

Nature in the play can also be interpreted to signify the unpolluted character and soul of Miranda, who remains protected by Prospero and his magic. Like the secluded island and its shroud of unpolluted nature, Miranda is safeguarded by her father from both internal and external threats using his magical powers.

Apart from these, it is also possible to apply the four types of Nature as put forth by Kull (1998) can also be successfully used to identify elements of Ecosemiotics in the play.

i. Zero nature (Nature as it is)

The play is set in a remote and isolated island, inlaid with streams and dense thickets, and surrounded by the sea, all of which depict Nature as it is, with no polluted effects or after effects by human actions.

ii. First nature (Nature as seen, described and interpreted by humans)

This is the nature that is "translated into our knowledge" (Kull 1998) through the use of language. One of the first references made by Miranda is about "wild waters" (*The Tempest* I, ii), which she knows has been put to roar by her father, and to whom she entreats to soften the turmoil. The descriptions by the crew who undergoes the man-made ship-wreck, narratives of Caliban and the scattered members of the crew all give instances of nature as seen, described and interpreted by humans. A classic example would be the instance where Sebastian and Alonso converse in jest and says,

SEBASTIAN: I think he will carry this island home in his pocket and give it his son for an apple.

ANTONIO: And sowing the kernels of it in the sea, bring forth more islands. (*The Tempest* II, i)

Here the island is talked about as if it is an apple, a fruit, with kernels and sowing for producing more

islands like plants. Also in Caliban's descriptions of the island, it is the fertile and good points that he highlights, as in "I'll show thee every fertile inch o' th' island" and again "I'll show thee the best springs. I'll pluck thee berries./ I'll fish for thee and get thee wood enough" (*The Tempest* II, ii). When he promises Stephano that

I prithee, let me bring thee where crabs grow,
And I with my long nails will dig thee pignuts,
175 Show thee a jay's nest, and instruct thee how
To snare the nimble marmoset. I'll bring thee
To clustering filberts, and sometimes I'll get thee
Young scamels from the rock. . . . (*The Tempest* II, ii)

His interpretation of nature is all positive, only Prospero is the villain in his perception. Whereas for the shipwrecked people nature is not so benevolent or beautiful, especially for Ferdinand who thinks his father lies "full fathom five" below (Ariel *The Tempest* I, ii). For Ariel nature is ambivalent because whether under Sycorax or under Prospero, it is ultimately slavery for him.

iii. Second nature (materially interpreted or changed/ produced nature)

It can be clearly seen that nature as found in the play is clearly changed by the interventions of Prospero, from the narratives of both Prospero and Caliban. Prospero believes that he liberated the island – and its nature – from the evil spell and aftermaths of Sycorax's negative magical powers. His interventions bring about changes including an induced storm and illusory visions, and interferes with the life of other beings including Caliban and Ariel. The nature after his interventions is different in its characteristics, especially towards the end of the play, when the action reaches its denouement and Prospero's mind becomes calm and settled.

iv. Third nature (virtual nature as found in arts and literature)

Apart from the nature directly depicted and referred to in the play, there is also a virtual nature to be perceived amidst all the plotting and revenge and justice and happy ending. This is the nature that a reader or an audience can perceive in the play, as a backdrop of the action that is unfolding on the island.

VI. DISCUSSION

It is thus evident that aspects of Ecological Semiotics have a very strong and clear presence in the play, *The Tempest*. The "four main cultural models of a semiotic relationship between humans and their environment" (Noth 2001) and the four types of nature as identified by Kull (1998) can be successfully applied to the text, and effectively analysed to reveal elements of Ecosemiotics. As Kull rightly observes, nature soaks "into culture and cultural landscapes" and "[l]iving with nature ultimately means changing nature" (Kull 1998). In *The Tempest* it is possible to find unadulterated nature or nature as it is, nature as depicted through narratives, nature changed by the beings in communication with it as well as a virtual nature as found in arts and literature.

VII. CONCLUSION

Shakespeare, as always, proves his versatility once again, and his play, *The Tempest*, written four centuries ago, can easily be read using the framework of Ecosemiotics, which looks at the semiotic codes vis a vis nature and beings, encoded into a discourse. The scope of this paper does not permit a detailed textual analysis of the play with elaborate illustrations to establish the presence of Ecosemiotics, albeit a whole book can be written regarding this. There is plenty of scope for future research in this area, to identify and establish the various concepts of Ecological Semiotics effectively and subtly encoded in the play *The Tempest* by William Shakespeare.

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