

# Narrative cognition and modeling in new media communication from Peirce's semiotic perspective\*

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## *Abstract*

*This paper examines narrative form as a cognitive tool for logical thinking in the performance of advanced mental actions through interpreting activity. In particular, the observation of the feature of the triadic relation in Peirce's semiotic system in narrative categorical elements is a key factor in seeing how consciousness operates. Under this aspect, it is possible to see that two different entities of emotion and cognition come together for a purposeful interpreting activity as semiosis. This triadic relation can be applied to new media text in three categorical elements of narrative: form, medium, and genre. This will form my argumentation in the present paper.*

*Keywords:* Peirce's semiotic; triadic relation; interpreting activity; narrative form; modeling; Storyworld

## **1. Introduction: Narrative cognition in Peirce's semiotic**

What is a relevant point of Peirce's semiotic for narrative? I draw attention to two aspects in light of narrative cognition. First, narrative cognition is examined objectively by means of semiosis in the process of interpretation inasmuch as Peirce sees consciousness as a process to be constructed within a social context by virtue of synthesis of consciousness, that is, "the consciousness of a Third or medium" (*W6*: 186). This aspect will help to avoid a reference rule or "garden-path effect" in a reader's interpreting activity. This means that narrative interpretation does not allow unlimited interpretation by a subjective individual reader; rather, the subjective interpreting mind is constrained by the narrative text itself, which is socially constructed.<sup>1</sup>

Second, the characteristics of social consciousness of semiotic mediation in nature mediate the corporeal with the spiritual consciousness by way of the theory of continuity in Peirce's system.<sup>2</sup> A sociocultural mind mediates a

biological aspect with a psychological one. Accordingly, for Peirce, in the theory of mind, consciousness is explained in this way: “. . . consciousness *is* not the man but *is* in man . . .” (*CP* 7.580); “every state of consciousness [is] an inference; so that life is but a sequence of inferences or a train of thought . . . man is a thought, and as thought is a species of symbol, . . . he is a symbol” (*CP* 7.583).

From this aspect, consciousness has a social aspect, and mind is in a process of thinking. Consequently, narrative consciousness can be analyzed objectively by virtue of Peirce’s semiotic perspective based on the activity of narrative interpretation in discourse community. Narrative can be divided into three categories: form, medium, and genre. Each category has its own cognitive aspect, which I will explain later. More importantly, they are incorporated with each other for a purpose in semiosis of interpreting activity.

According to Peirce, feelings, efforts, and notions are three elements of consciousness and all are involved in inference and reasoning as in comprehension, extension, and information, respectively. In particular, information is produced by the union of extension and comprehension (*CP* 7.580). My understanding of these elements in connection with narrative mind is that feelings correspond to narrative form that provides the vague meaning of a Storyworld; efforts correspond to narrative medium by way of experience of narrative medium so as to grasp the meaning of the Storyworld in actual mind; and notions or concepts correspond to narrative genre by interpretation, so as to construct a Storyworld by virtue of collateral experience of narrative medium and form. In this respect, the three elements of narrative will cooperate in the triadic relation for narrative cognition as a whole for understanding the world and thus for revealing how people communicate.

The purpose of this paper is to show the potentiality of narrative form as a cognitive tool for meaning-making, as constructing a Storyworld within a narrative semiotic modeling system. One might argue that the study of narrative interpretation requires empirical data of interpretation by individual interpreters.

However, as opposed to the generalization constructed by the empirical data collected from individual, psychological interpretations, this study emphasizes observing narrative form as mental representation from Peirce’s semiotic framework and thus it is to examine narrative as a modeling system of semiotic mediation in communicative acts. Therefore, the narrative modeling is understood as an autonomous system where an interpreter turns to function as an utterer in the narrative semiotic system in a dialogic way. From this aspect, the interpreter is not a psychological entity; rather, a semiotic agent in the system. Accordingly, there will be no demarcation between the interpreter and the utterer or the interpreter and the text. That is, the interpreter and the utterer are mediated by narrative text, or the connected minds become embodied in the text.

From this aspect, this study focuses on the epistemological and ontological aspect of a narrative modeling system, being incorporated with a biological and psychological aspect of the interpreter in a triadic relation of semiosis. Therefore, analyzing empirical data is not an essential condition for this study; however, it will function to support the argumentation as an illustration of the conceptual work of narrative cognition, referring to a particular context.

For my argumentation on narrative cognition in the new media text, I will discuss three points. First, I will propose narrative communication, focusing on the mediated mind. Second, I will explain the notion of social consciousness, and thus the triadic relation of category of narrative is demonstrated. Third, I will explore the relationship between narrative categories and mind. After this, I provide an illustration of new media text within Peirce's triadic sign system.

## **2. The cognitive semiotic approach to narrative communication: The mediated mind**

Narrative has been a major subject for communication research since Walter Fisher introduced the term "narrative paradigm" for a metaphor in communication studies, inquiring into narrative aspects in producing and receiving messages. In fact, application of narrative analysis of a message in communication studies has provided an opportunity to develop a mechanical and simple communication model into a complex one.

The nature of narrative consists in a very complete autonomous text itself, and at the same time it is related to the context where the text is to be situated. Such context draws attention to the relation between author and reader with respect to narrative communication, placing emphasis on the reader's interpreting activity. Naturally, then, the communicative act through literary text tends to focus more on the reader's interpretation and understanding than on the writer's intentionality.

Regarding the significance of the reader's role in interpretation of literary texts, a literary critic such as Roland Barthes viewed literary texts as ones that can be rewritten by the reader. As we know, this aspect Barthes called "writerly text." This development in literary history indicates that classical narrative theory, where the text alone is the subject of study, has been extended to the domain of context in terms of interpretation of narrative by the individual reader.

It is also implied that narrative communication between the author and the reader becomes an interesting subject in narrative studies. Narratologists are concerned about how narrative meaning is transmitted, or rather interpreted.<sup>3</sup> Communication theory, philosophy, cultural and media studies, cognitive

science, linguistics, semiotics, and psychology are all involved in narrative communication research, for the concept of narrative is such a complex phenomenon that it requires human science-oriented disciplines.

Evolution of narrative form is considered to be associated with that of thought in terms of the matter of representation of the world. Does the world exist independently of the human mind? Or is the world constructed by the human mind? These two overriding questions are reconciled as *Umwelt* in the biologist Jakob von Uexküll's terms. This type of world can be interpreted as a semiotically-mediated world that mediates the external world with the internal world of psychology.

How then does man represent the world?<sup>4</sup> The answer will depend on how one can see the world, whether directly or indirectly, scientifically or idealistically, experientially or conceptually, and mediately or immediately in the mediated world. That is, a worldview or world picture of an individual is associated with a conception of how to represent the world. Therefore, a conception of the world is not fixed but is dependent upon an individual subject mind that is capable of representation. This means that the individual mind is capable of constructing a Storyworld by representing through narrative interpretation.

In the history of narrative, with regard to the distinction between classical and postclassical narratology, the matter of representation is important, especially in terms of the subject of representing and interpreting. Postclassical narratology criticizes traditional narrative form for transcendental structural narrative meaning so as to demonstrate the role of the subject in the structure. However, the subject is not discriminated from the text, mingling with the text within the structural relation. It thus appears that the narrative subject is restored, not as an independent entity but as an element to function to produce meaning in structural relations.

Along with this view, postmodern narration, which is associated with the poststructural movement, tends to focus on non-chronological temporal order. This seems to suggest that narrative meaning comes neither from binary opposition nor from the causality of mind, but rather from the subject's involvement in the structure of the text. In this respect, a postmodern text seems to reject the idea of representation in narrative altogether. Nonetheless, this aspect shows more strongly that narrative form is universal, projecting the logic of non-narrative form out of narrative as a whole.

From the outset, narrative is involved with representation by language whose business is primarily representation. That is, Socrates' remark on representation of speech was developed by Plato as two modes of representing the form of a story: diegesis and mimesis. The two modes are crucial in that representation of thoughts occurs in two ways: an indirect form of description or commentary and a direct form of dialogue in conversation between people. To put it simply, the former is called diegesis and the latter mimesis. This idea was

maintained in Aristotle's *Poetics* but with different viewpoints on the modes. Unlike Plato, Aristotle explains mimesis as representation of action in drama, emphasizing it in a work of art, "showing" human's action rather than "telling" it by way of language. Especially in drama, the showing mode provides the audience with active involvement by way of narrative mind, making them construct "narrativity" on their own. The two thinkers' ideas contribute to shaping narrative theory as representation media, simply describing them as showing versus telling in modern terms.

Normally, the two narrative modes of showing and telling are mediated by non-linguistic and linguistic signs, respectively, in order to construct a Storyworld. This aspect leads to digital narrative, where the visual mode is predominant, thus providing the audience with more opportunities to interact with the author and the text. Thus, it can be said that digital narrative has two distinctive features in narrative: visual and interactive elements, which work well in showing, and cognitive aspects of narrative.<sup>5</sup>

As I have shown, the history of narrative has evolved in terms of representation of the world, which can be called a Storyworld, whether it is factual discourse or fictional discourse. For this reason, whether we are using linguistic signs or nonlinguistic signs, basically we can communicate by virtue of the narrative form of a Storyworld. In particular, thinking of digital culture as audio-visually dominant phenomena, narrative form is revealed in multimodal media such as image, sound, and word. In this case, what matters to the audience of digital culture is to enter into a Storyworld for enjoyment of the media and to interact by way of performing through experience. The Storyworld exists as a form of possibility and potentiality in our imagination, and we can activate the possible Storyworld by our actual mind in action through experiencing media. This is totally possible because a possible world is constructed by the narrative form and in turn actualized by the medium, leading to the construction of an effective and meaningful world by interpreting genre.

Postmodern narrative has the tendency of showing rather than telling, that seems to stress presenting directly to the audience. This aspect can be interpreted as a requirement for the audience's active cognitive involvement by way of the visual mode and, paradoxically, a requirement for a functional entity of the audience's role, leading the audience to the immersive state of feeling provided by predominant visual elements of narrative. This seemingly contradictory aspect can be viewed in that the showing mode infused with visual factors in the digital era develops into resistance to representation by the linguistic mode of telling in the new media culture.

Nonlinguistic signs function differently from linguistic signs. Unlike linguistic signs, which represent something to somebody, nonlinguistic signs appear to present to the mind directly; however, the process mind working with

signs associates the phenomenal aspect of sign for construction. That is, the nonlinguistic signs are presenting themselves to allow the interpreter to guess what they are and thus interpret what they are representing in a specific place and time context by means of collaboration of mimesis and diegesis modes of narrative. In this respect, there is no doubt that the showing mode of mimesis, where visual factors function to present directly and yet mediately the narrative mind, works for meaning-making out of visual elements, which is a form of representation of the world to construct reality. This is a Storyworld in Peirce's semiotic perspective.

Accordingly, demarcation between linguistic signs and nonlinguistic signs does not affect the theory of representation. Both types of sign represent the world cooperatively. When postmodern narrative uses image or sound more than language, people tend to think that it does not consist in narrative form; rather, it can be said that a visual mode of showing in narrative challenges the audience to participate with active cognitive engagement, being cooperative with the linguistic mode of telling. As a result, this collateral observation and experience of two types of narrative mode and sign lead to interpreting activity in semiosis.

### **3. Narrative mind and social consciousness**

Peirce characterizes mental action in two ways: resemblance and contiguity. Regarding psychological terminology, he illustrates the element of performance and system of performance. Sensation, emotion, and feeling are the elements, and the instinctive mind and process mind are regarded as the system (*CP* 7.378–7.467). With reference to this terminology, what Peirce intended was that mental action should be developed to a higher function by virtue of the objective aspect of psychical elements.

Putting all his terms together, what he seems to explain is that mental action can reveal by way of its own logic. Mind is not for individual psychological data; rather, it is for general ideas and feelings, even erroneous instinctive consciousness. "A feeling is an element of consciousness just as it immediately is in the moment when it is there for itself and not as delegate of some other feeling not present. Such a feeling is not a psychological datum" (*CP* 7.465). Peirce's object is to formulate the law of mind, and association of mental action is to support the mental systems. "The law of mind is that feelings and ideas attach themselves in thought so as to form systems" (*CP* 7.467).

Sensation and emotion as psychical facts are incorporated with feeling in general. Feeling for Peirce is understood as ideas. Continuous psychical development can be described as action of the process mind for a higher function from immediate to mediate. It changes and moves to a designated direction.

From this aspect of mind, emotion and feeling cannot be separated from thinking for an interpreting activity. It is in the process of forming a conception that the mind forms mental systems which will be connected with others.

In Peirce's theory of mind, two mental actions of resemblance and contiguity are relevant to sign's action and thus narrative form as well. Narrative as a form of representation is seen as a semiotic system, working with the cognitive aspect of signs. In particular, when one interprets the narrative form, interpreting activity proceeds in gradual steps. First, with reference to Peirce's resemblance of mental action, interpretation of narrative form involves emotional immersion because a Storyworld is described based on mimesis; even if it is vague, the narrative form gives the interpreter an opportunity to find similarity between representation of the past she/he had by way of memory and that of the present. The feeling which is its own quality provides an idea of Object.<sup>6</sup>

Then, in reference to the other mental action of contiguity, a narrative medium directs the interpreter to engage in mental activity based upon and requiring the interpreter's experience. For example, narrative medium as in a novel requires interpreter's active involvement for both well-informed readers and passionate novelists, who share knowledge about the genre of the novel. In other words, the interpreter's context is parallel to the narrative form of the text by way of the law of mental association or contiguity. At this point, feeling in general is embodied in the emotional or sensational in an active mode for reaction. Then, the narrative form turns to narrative cognition, where the interpreter encounters the narrative form as an idea or feeling through vague thinking.

There are three phases of narrative interpreting activity: first, feeling of the form by way of similarity; second, experience of the form by way of contiguity in media; third, knowing the form by way of generality of genre. Through the three phases of interpreting activity, the interpreter him/herself constructs his/her own Storyworld, combining imagination and thinking, that is reasoning and inference.

This process mind can be described as possibility and causality, ending in generality. These three can also be called narrative logic across media. From this aspect, the semiotic mind works with the narrative representational form that is manifested in diverse media and produces a general concept of the narrative form by virtue of the narrative genre.

Let me explain the three narrative categories of form, medium, and genre in relation to mental action of the semiotic mind. First, feeling is a material quality of mental action, which gives a similar phenomenon in narrative form. The form clusters narrative mind to understand based on emotional involvement, pleasure, or painful experience in such a way that the interpreter can judge the form as good or bad. This sensation or emotion is derived from memory, which is related to thinking.<sup>7</sup>

Second, emotional reaction to the form involves the interpreter's experiential context. At this stage, the interpreter becomes more interactive and dynamic in action, since the interpreter is attracted to some kind of aspect drawing his/her attention. In this sense, one can say that narrative form has a universal feature, while narrative medium has a particular feature.

Third, cognition is the faculty of thinking for interpretation and representation through mediation of two separated items. In other words, representation, involving the third state of mind, is "a sense of learning," according to Peirce (*EP* 2: 5). Therefore, for an interpreter, this stage is for constructing a Storyworld out of narrative form and medium. That is, the interpreter can narrate in his/her own context, where a very clear concept has been achieved by virtue of logic on the ground of generality.

#### **4. The triadic relation of narrative category of mind**

As I explained concerning the three categories of narrative, that is, form, medium, and genre, they are integrated with sign action based on three principles. The first is similarity, through which a mimetic narrative mode is actualized in narrative form. Form raises feeling,<sup>8</sup> so that narrative form makes the interpreter perceive with senses and emotions.

The second is contiguity, through which a diegetic mode can be actualized in narrative medium. In particular, an image from mimesis is in relation with another text from the interpreter, which encompasses it. Intertextuality enables the interpreter to experience a variety of media in actuality, making a different story in an indirect way while realistic thinking is involved. By experiencing media, the interpreter works with a causality mode of narrative formation. At this stage, the interpreter responds to a mimetic mode of a story by way of emotional reaction based on own experience in telling it.

The third principle is narrative as text-type of genre where narrative medium is embedded and reaches a general concept by means of interpreting activity. The interpreter forms his/her own Storyworld to make meaning out of the Real World or External World. As Ray Jakendoff (cited in Herman and Ryan 2005: 68) describes, the two worlds, the Real World and the Phenomenal World, are seen as similar to each other based on mental association of similarity through this interpreting activity. However, unlike the cognitive approach, the interpreting mind, or the process mind in Peirce's semiotic framework, will help cognize the world not by psychological but by logical interpretation. The triadic relation of the narrative categories that has been described so far is shown in Table 1.

These three categories are in a hierarchical order within the triadic relation. That is, the First category exists without any support as a complete entity. The



Table 1. *Narrative category of mind in Peirce's semiotic framework*

Narrative Category/Item	Form	Medium	Genre
semiotic category (principle)	Firstness (similarity)	Secondness (contiguity)	Thirdness (generality)
consciousness	feeling	effort	idea
mind	perception	emotion	cognition
sign	qualisign	sinsign	legisign
new media text	immersion	experientiality	performativity
storytelling	invitation	dialogue	assertion

Second category actualizes the First and the Third, manifesting and embodying each, respectively. Three elements of consciousness belong to each category. Feeling exists as itself and, on the other hand, efforts stand in relation to a counterpart in which feeling is manifested against the other kinds of emotion. Then the Third, which is embodied in the Second, mediates the First with the Second as a problem-solving factor.

Taking another case in narrative, narrative form is a comprehensive idea of a story. The form is based on a mimetic narrative mode, arousing emotional involvement. Second, medium working on the principle of contiguity is transposed to First and Second from another context, producing comparison in the same space. The Third genre, embodied in a medium, directs the relationship between form and medium in a designated direction. As I have described, the three categories in each item of narrative exist in the Second category, where two items are not merged into one but are interrelated independently of each other. Thus, they function in a collateral way towards the purposive action aiming at producing results and effects.

## 5. An illustration: New media text

Ryan (2001: 1–21) describes narrative as virtual reality, i.e., a semiotic phenomenon involving cognitive processing of the electronic text. This aptly illustrates characteristics of new media narrative. As I mentioned earlier, post-modern or postclassical narratology embeds a notion of interactivity featured by the user's immediate experience. As we have seen, the narrative form is associated with mental development in a procession system of the mind. The form for a Storyworld as universal character creates space and time where the author and the reader meet together. The mental function of the interpreter develops from the spoken to the written or from multimodality of emotions to interactivity among media or modes by experience. Focusing on this point, I have formulated the narrative category to illustrate semiotic mediation of

Table 2. *Embodied cognition of narrative in new media text*

Category/Text	Form	Medium	Genre
Music Video	Sensation (the audiovisual narrative)	Immersion (image > sound > word)	Ideas (possibility)
Visible Radio	Emotion (the spoken narrative)	Participation (word > sound > image)	Actions (actuality)
Blog	Feeling (the written narrative)	Interpretation (word > image > sound)	Symbols (generality)

mind in new media genre text according to the triadic model described above (Table 2).

I now explain semiotic analysis of three types of new media genre text: Music Video, Visible Radio, and Blog. Other types of new media genre may also fit in this category. I have particularly chosen these types in that each type is developed and transformed to digital media as being similar to digital narrative transformation of narrativity as a cognitive and ontological tool. These three types are different from old media such as music, radio, and journals in terms of a new concept of narrative in the digital, visual culture.

First, narrative form for a Storyworld in old media, relatively, uses a single medium such as sound, image, the spoken word or the written word. Therefore, the idea of Object or the things represented through the narrative form in a Storyworld becomes comprehensive, appearing as hypostasis of the story in a particular medium. This aspect expands the horizon of imagination which is connected to memory and thinking. That is, the form is recalled by a specific medium as in memory by similarity and then associated to the current context by contiguity. Thus, the narrative form as an idea of Object in a Storyworld can be considered the first stage of inference through a form of perceptual judgment of sensation and emotion.

As opposed to old media, the narrative form in new media uses multimedia such as sound, image, and word, so that the idea of Object appears to be presented transparently, appealing to our senses more vividly. What makes new media genre different from old media is to lead the interpreter to experience realistic thinking about the Object, which produces a real effect, being immediately represented by the narrative form. Thus, having provided narrative form with a psychological aspect of sensation in Music Video, emotion in Visible Radio, and feeling in Blog, the narrative form of each type is associated with the audiovisual, the spoken, and the written narrative, respectively.

New media theorists David Bolter and Richard Grusin (1999: 21–31) express this idea as transparent immediacy of First logic in new media. I borrow

their concept of immediacy in narrative form for the First stage of narrative involvement. The emotional involvement raises a sentimental judgment as a type of inference. This type will develop into intellectual inference of three kinds of reasoning such as hypothesis, deduction, and induction according to Peirce in which he stated we cannot perceive something directly but hypothetically or inferentially (*EP* 1: item 12). So, narrative form is necessarily related to feeling as a type of vague idea of a Storyworld in the process of thinking.

In the Second stage of inference manifested in narrative medium, Peirce's Second element of consciousness, effort, plays an important role. As I explained, new media uses multiple media, which affects the interpreter's physical engagement in experience. This is different from old media, where there is no interpreter's role in actualized narrative form in a particular narrative medium. Thus, there is no chance to experience the narrative medium such as the process of construction of a story. Unlike old media, new media allows the interpreter to participate in configuration of a story. At this stage, the interpreter's interactive behavior is manifested in immersion, participation, and interpretation in each type of new media. This aspect is explained by Peirce's principle of contiguity of mental association, where two different categories, that is, narrative form and medium, co-construct for interpretive actions.

Finally, in the last stage, the narrative genre gives a clear notion of the idea of each narrative form for a Storyworld. At this stage, unlike the previous two, it involves logical inference, that is, a higher intellectual form of consciousness. So, it is related to the sense of learning or representation (*CP* 1.381). Music Video represents its story as an idea of possibility in the visual culture of imagination. Visible Radio represents its own story as performing actions in actuality in the spoken culture of dialogic interaction. Blog also represents its own story as symbolization of generality in the written culture of thinking. Thus, the narrative mode corresponds to these representations. That is, visual culture is dominantly mediated by mimesis; spoken culture is mediated by diegesis by physical experience; and written culture is mediated by diegesis or mimesis.

Therefore, new media narrative functions to raise the reasoning system in the interpreting mind. I have slightly modified Peirce's three trichotomical systems, which function as semiotic mediation and narrative modeling in the three stages. So, for instance, the First trichotomy, where the sign exists on its own, works with narrative, presenting form as quality, medium as actuality, and genre as generality in expression. In the Second trichotomy, the sign represents the object as a form of icon, index, and symbol. The Third trichotomy, where a sign involves its interpretive power, is related to narrative interpretation. Consequently, narrative form is interpreted as an idea by way of perceptual

Table 3. *Semiotic mediation and narrative modeling in Peirce's semiotic perspective*

Item/ Category	New Media Text	Narrative Reasoning	Narrative Mode	Semiotic Mediation 1 Expression	Semiotic Mediation 2 Representation	Semiotic Mediation 3 Interpretation
Form	music video/ Youtube/ computer game	perception	mimesis	quality	the iconic	idea
Medium	visible radio/ Twitter	experience	diegesis	actuality	the indexical	dialogic interaction
Genre	blog/ hypertext	cognition	diegesis/ mimesis	generality	the symbolic	symbolization

judgment; narrative medium as dialogic interaction; narrative genre as symbolization (see Table 3).

## 6. Conclusion

Narrative as communication media involves various disciplines in cooperation, such as linguistics, cognitive science, communication studies, semiotics, psychology, cultural and media studies, and philosophy. In particular, communication between minds is a very complex matter in that mind is not stable and exists in the flow of time for development. How then can this continuous and rather unstable character of mind send and receive messages? I argue that narrative is an appropriate form of communication media in that the nature of narrative is associated with the mind in terms of imagination and reasoning or inference. The mind and narrative imitate and resemble each other. Narrative cognition is quite possible in the sense that mind entails a process from sensation, emotion to cognition as demonstrating all cognitive characteristics.

To explain this point, I have examined categories of narrative: form, medium, and genre from Peirce's semiotic perspective. His semiotic system is very complex and integrated in an inseparable way. This is a strong point in showing how narrative cognition is related to new media text. In particular, the inseparable and commensurable relationship between forms and feelings, imagination and reason, emotion and cognition, mediated by the concept of experience, is part of a useful theory to assist new media narrative interpretation. Indeed, I believe that narrative will be used as a cognition tool for the digital age generation. The phenomenon of new media is often described as immersion and interactivity where users are actively engaging in narrative

experience. However, there should be a higher function of narrative experience in order not to constrict the users to direct experience as emotional reaction, but this amounts to experience of interpretation, as Peirce rightly mentioned in connection with the particular circumstances.

Three categorical types of new media have been illustrated to show how narrative reasoning is possible by virtue of applying Peirce's three trichotomical systems. In new media, the narrative producer and consumer will produce a creative narrative construction as communication interpretant in Peirce's terms, in that the narrative minds that are connected through the work of semiotic mediation and modeling in narrative share and exchange ideas, employing narrative as communication media.

This new media text of narrativity for construction of a Storyworld will lead to a contribution to global communication by narrative medium and, at the same time, to transmission of information in historical terms as form of narrative. As a result, narrative as modeling system connects information with cognition, resulting in a communicative act where information is transformed as a basis of narrative construction in the digital age. From this aspect, I understand that the acts of transmission of information in time and communication of information in space require the narrative media which is the semiotic mediation of mental representation, connecting cognition and communication for evolutionary semiosis.

A hypothesis on narrative cognition is based on analogical thinking between Peirce's philosophical theory of mind and narrative structure of story, discourse and narration (storytelling). In particular, narrative experience is mediated by semiotic representation of the process mind in continuity, which allows one to observe interactive new media text in a particular context. So, each genre of new media text reveals its own particular aspects within the triadic relation of semiosis. The process of interpretation of text is associated with the interpreter's own meaning-making activity and at the same time it involves the communicative act itself by new media interactive text.

This is the way in which I see that this conceptual work is valuable for new media narrative communication in which the interpreter constructs narrativity in his/her own way, but at the same time they function as a semiotic agent within narrative representation of a modeling system. From this aspect, for the interpreter, individual new media texts are to be conceptualized so as to see what is presented at the perceptual level and what is represented at the cognitive psychological level. Further, the interpreter needs to discern what the assertion is in the audiovisual narration, in that the assertion takes the form of information. This is my contention that narrative as a cognitive tool for communication in the digital era offers an opportunity for making information a useful resource for the evolution of anthroposemiosis.

## Notes

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1. John Deely explains that the idea of objectivity arises by an intersubjective relation in which an individual subject is in relation to others in a social context by way of semiotic mediation. (Deely 2009: 35–37)
  2. For Peirce, the concept of continuity takes a form of generality regarded as homogeneity of connectedness of three different universes: the universes of possibility, actuality, and generality. He said, “All communication from mind to mind through continuity of being” (*EP* 2: 3). This theory is tied to an architectonic metaphysical system of synechism through which waking and sleeping or carnal consciousness and spiritual consciousness are connected, simply meaning “the tendency to regard everything as continuous” (*CP* 7.565).
  3. See Chatman (1978), Rimmon-Kenan (1983), and Herman (2009) for narrative communication and yet they approach it in a slightly different way.
  4. Perelman (1979) in new rhetoric noted that analogy and metaphor are the source of seeing the world and communicating. Whether a professional thinker or an ordinary man, it is assumed that everybody has a cognitive tool for conceiving the world.
  5. In particular, narratologists are concerned about the nonfictional aspect of narrative, focusing on narrative and time (Ricoeur 1983), narrative and internet (Ryan 2001), narrative and cognitive science (Herman 2009), and narrative and experience. (Fludernik 1996)
  6. Object is one of the components of Peirce’s sign system and the term with capital O in the text refers to the dynamic Object which is associated with the concept of the Real in Peirce’s metaphysical theory.
  7. For Peirce, precognition in the form of memory operates in iconic sign interpretation based on similarity (*EP* 2: item 22). Similarly, Vygotsky’s developmental psychology supports the idea of the connection between memory and thinking. Vygotsky said “for the young child, to think means to recall; but for the adolescent, to recall means to think” (Vygotsky 1978: 51).
  8. Langer’s study on art symbol as creative form is related to expression and emotion of human feeling. She argues that “Art is the creation of forms symbolic of human feeling” (Langer 1953: 40). Similarly, my understanding is that narrative as a form of a Storyworld, representing the Real World, raises an equivalent feeling with the art symbol.

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