

## HIDDEN SIGNS? POSTCRITIQUE TO SOLOMON MARCUS' FINAL ARTICLE

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### 1. PROBLEMS AND QUESTIONS

Professor Solomon Marcus'<sup>2</sup> (1925–2016) final article was called “Hidden signs. The literary face of the non-literary texts” (2016). This final article was his presidential address meant for the *World Congress of the International Association of Semiotics (IASS)* in Sofia, Bulgaria (2014). In the IASS Proceedings, Marcus' article was not presented as a scientific essay with hard semiotic content but retained the sketchy outlines of his lecture notes. The message demonstrated Marcus' lifelong activity to work in both mathematical analysis and formal linguistics to encourage the system of mathematical poetics. In his last article “Hidden signs”, he was, in his own words, “not so enamored of my own opinions” (2016: 3), which were less formal statements. He presented “Hidden signs” as a tentative hypothesis leaving the final experiments open to the greatest range of possible conclusions today.

Marcus' primary goal was, in a broad sense, the interactionism of works of literature with non-literary, scientific discourse, but the process of thinking and writing about the interactions was larger than the historical analysis and included the logical means of inquiry. To prove the hidden meanings of “hidden signs”, I will make in my brief comment some observations on details of Marcus' “quasi-general agreement” (2016: 1ff) to reinterpret the historical episodes and shape the logical implications of the loaded word “hidden signs”.

Marcus' main proposal was to advance a strategic plan to confirm the one-to-one correspondence between the “natural” form of literature and the “artificial” scientific fields. Marcus' standard view was not directed to discussing the ambiguity of languages invigorating both fields; rather, he defended the metalanguage of technology taken from physics, biology, economics, chemistry, geology, and other

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<sup>2</sup> Professor Solomon Marcus will be henceforth cited as “Marcus”. This abbreviation is a practical device, but meant with respect and regard.

scientific fields. His main interest was pure and applied sciences, which never lose touch with the poetic foundation of language. His methodology was unorthodox, since he did not subdivide the total field into the repulsions and mixtures of science and literature as published in the standard article “Literature and science” (Slusser and Guffey 1982). Marcus’ projective method follows the ground of apparent truth, logical validity, and reasonableness.

Marcus’ quasi-argument was a milestone in semiotic history, but alas! the published article had a chaotic form with Italian letters and interviews confusing the analysis. The main points of his article was that Marcus opposed Roland Barthes’ article “From science to literature” ([1967]1968) but he opposed in terms of theory, influenced as he was by Italo Calvino’s theoretical essays written in 1968–1970 (published in *The Uses of Language* (1986: 29-58), while using Northrop Frye’s classifications in from *Anatomy of Criticism* ([1957]1973) to evoke literary responses. To give satisfactory answers, the postcritical reading is not a critical approach but articulates a constructive approach to textual details involving sameness but also difference (Mullins 2017) to invite the readers to justify Marcus’ fictional argument.<sup>3</sup>

#### PUZZLING REMARK

Marcus’ rejection of Barthes’ article “From science to literature” ([1967]1968), would signify that he was still indebted to and stimulated by the French rational formalism of philosophy of science, mainly Gaston Bachelard and Pierre Teilhard de Chardin. The speculative vision of human sciences cross-fertilized, for Bachelard, a balance of physical and scientific (chemical) advances as the creative power of logic and literature. Bachelard’s dialectical rationalism of physical anthropology (and paleontology generally) includes the way how the rational reason creates the total spirituality of non-rational experience. Since the world seems a discontinuous and absurd problem of forms and shapes, the subjective statement of scientific truth eventually grows into generalized tradition of cultural truth.

Bachelard’s insights were based on the magical function of the voice of Greek and Latin mythologies as they survived from ancient to contemporary logic and literature to influence French science ([1938]1957). In ancient mythology, the “hidden signs” had for Bachelard “*un sens manifeste et un sens caché*” (1952: 7), that is, hidden to the open meaning of human life. Bachelard’s goal was to signify the “hidden signs” into the ancient elements of Nature – earth, air, water, and fire – into contemporary philosophy. These “hidden signs” were regarded as a jigsaw puzzle to be solved by contemporary interpreters (scholars, readers). Reformed with mathematical formation, the human mind translated the jigsaw puzzle extending the conscious essence of physical laws and the unconscious sense of spiritual ideas into a new approach.

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<sup>3</sup> The process of simplifying and expanding the problems continued my previous comments on Marcus’ article “Eight types of translation in the scientific language” [1975], see my article “Science in translation: Memorial to Solomon Marcus (1925-2016)” (Gorlée 2019).

Marcus must also have known the evolutionary works of Pierre Teilhard de Chardin. He brought together the disparate cultures of individual man into the self-conscious mind of human thoughts. His evolutionary progress was directed against the standard opinion of Catholicism. Teilhard de Chardin was a paleoanthropologist and Jesuit priest, but speaking out his ideology about cosmic evolution brought him into conflict with the orthodox Christian view of evolution. Marcus' aphorism of "hidden signs" is similar to Teilhard de Chardin's identity of man as a living element taking part in the evolutionary process. His works *Le phénomène humain* and *La place de l'homme dans la nature: Le groupe zoologique humain* added to the limited human "noosphere" the terminal layer of cosmic consciousness. Teilhard de Chardin's writing shared in the divine "biosphere" of God, which he baptized as "Omega" (written in 1941, published posthumously in 1955, 1956).

In the aftermath of Bachelard and Teilhard de Chardin, the dialectical rationalism takes on the imaginative mind of human reason and scientific experience into one unity of intermediate wisdom. Whereas Barthes opposed real science (psychology, sociology, and others) in the pseudo-sciences of "heraldry", "semantics", or "victimology" ([1967]1986: 3), he drove each discipline more deeply into its own specialization, negating the others. Marcus negated Barthes' concept of pseudo-certainty by the transactional theory of literary and non-literary evolution. To strongly advocate the togetherness of technology and imaginative thinking, Marcus' plan was to achieve the physicohistory of literature-with-science. His reflections were not described in the light of critical paradigms in possible differences, but giving the total truth of literature and science by playing the sophisticated kind of game against Barthes' article.

In Marcus' game model, he substituted for the formal list of real facts some (partially) unknown fiction, implicit in them. The historical analysis was playing the fictional universe to guide reality into a combined conclusion. Marcus' analytical reasoning was basically deduction to reach "automatically" with the help of "mathematical" symbols the absolute certainty of truth. But in these commentaries, he presented himself as an inductive thinker with political, economic, technical, and other arguments to give a striking example of the unexpected ambiguity of the available subjective scientific interest and perspectives in the modern era, negatively labelled by Barthes as pseudo-certain sciences (2016: 1, 5).

## 2. HIDDEN SIGNS

Marcus' title "Hidden signs" (2016: 1) associates adjective with noun in a contradictory compound with ambiguous meaning. Now re-cycled into "Hidden signs?" with a question mark, the theoretical situation of this compound word could be displayed in a mathematical diagram to stress the interconnectedness of algebraic logic. According to Saussure's system of linguistic signs, French structuralism sought to comprehend the "real" meaning of "hidden signs" by

focusing on the phonetic signs to be recognized as “palpable” words in the compound of sentences. The rhythmic stress of both sounds cannot be inferred directly from the adjective and the noun, because these elements are indirectly weakened in the compound and remain semi-obscure elements.

The difference between the two segments suggests that the main stress on the second element (signs) is greater than the accent of the first element (hidden), which falls into an unstressed word. Yet with the internal alliteration of vowel [i] in both elements, the rhythmic stress is reversed: the first word (hidden) has a high accent, while the second word (signs) has a low accent (Halle and Keyser 1971: 15-18). The dual pattern explains the alternative frames of open and closed signs, but the meaning of “hidden signs?” remained elusive, possibly explaining nothing at all. The formalist concepts and methods of French structuralism seemed to struggle with the differences between language and science. The word of “hidden signs” is perhaps too difficult to define. The exercises of verbal gymnastics sought to give relevant information, but no essential forms appeared. Without giving an alternative conjunction, Marcus implied that symbolic logic would support the disjunctive “lines of development” (2016: 1) into a single definition.

The ambiguity of “hidden signs” allowed no simple or unitary definition. The structuralist scholars resisted any proper label to explain the methodology and define the theoretical differences, so that the structuralist technique was writing tentative signs (see Macksey and Donato 1970). It seemed that the meaning of the decentered and undecidable compound “hidden signs” depends entirely upon the context of the interpretation surrounding the compound. The contextuality and intertextuality of the segments clearly provokes the differences of intensity between the contradictory segments. To calculate the synonym of the compound was, for Marcus, the algebraic task to search for an atomic synonym for the “hidden signs”. It seemed that finding this extreme meaning was the *reductio ad absurdum*.

However, when examined through Peirce’s logical semiotics, the meaning of “hidden signs” (or even “hidden signs?”) can be positively united into a wholeness. The object of the double sign with the question mark may give a closer look at the possible mobility of limits, frontiers, and barriers (Larsen 2007) to re-double the single or double signs into Peirce’s interpretants. Interpretant-signs supplement the previous sign with many forms and shapes. To point to the rational stages of the interpretative process, Peirce’s three interpretants can be immediate, dynamical, and logical forms; but the individual outlook of the interpreter’s mind can also give the emotional, energetic, and final interpretants. Both series of categories color the competitive learning of the associative and statistical scheme of signs to develop into Peirce’s semiosis.

The mixed reformulations of “hidden signs” turn the ambiguous and contrastive configuration of Peirce’s psychoanalytical knowledge into the varieties of intercombinations of feeling-with-logic. Marcus concluded that the intersemiosis

between various signs was the cause-consequence relationship between the premises to form the pluralism of the diagrammatic compound “hidden signs”. This conclusion “blindly” follows the controversial procedure of “objective” deduction, to give certainty. But it seemed that Marcus’ actual reasoning was the “subversive” reading in rational induction enacted in the imaginative tone of Peirce’s abduction (discussed in Gorlée 2016: 57-61).

#### CRYPTIC REMARK

Despite the problems in defining the compound, “hidden signs” still works as Thomas A. Sebeok’s “vital signs” (1985). Sebeok’s epigram activates the alternative paradigm to solve the academic clash of “two cultures” into one scientific-and-humanistic field of research (Snow [1959]2001; see Slusser and Guffey 1982: 196). While Snow separated exact sciences from cultural humanities, eliminating the antagonism from scholarship, he was in fact “censuring Britain for undervaluing applied sciences in education and politics, in contrast with Germany, the United States, and the Soviet Union”, and was “making a case for industrialization as the path to social as well as economic prosperity” (Riskin 2020: 50). Snow called for the economic and political power of engineer-capitalism as general rule of society. Sebeok reconciled, however, the supposed division into the interactively pedagogical methodology of anthroposemiotics and biosemiotics, as vital branch of semiotics (2001: 62f.). For Marcus, this learning reform transformed the disharmony of language and sciences into the “harmony of the whole Universe” provided only that “we face the facts” (2016: 3).

These facts should start for Marcus with historical linguistics to make a careful linguistic analysis from the past (Eco 2009). Although the analytical codes and conventions underlying the figurative list can show a line of scientists to admit (that is, to believe) the search for the “vital signs” in history, the real problem is for scientists the exploration of literature and sciences to make a constructive change. Indeed, Umberto Eco’s semiotic book *The Open Signs* (translation from the Italian original *Opera aperta*) gave to the conflictive ambiguity the openness and closedness of poetic language in the “new structures (hidden, ignored, or yet to be established *ex novo*) to move in different directions” (1975: 16). Eco’s avant-garde manifesto moved Marcus’ personal opinions further to Calvino’s “sea of objectivity” (1975: 150f.) to inspire the final point of his argumentation (2016: 3-6).

#### REASONING REMARK

The argument of “hidden signs” expressed the two-sided (or three-sided with the question mark) lines of Marcus’ spontaneous keyword to associate language-with-culture. Although Marcus’ experimental hypothesis did not mention the semiotic doctrine of Peirce, Peirce’s visions are easily appreciated in Marcus’ operations (2016). The ambiguity of “hidden signs” was for Peirce not the “mechanical result

of the operation of blind law”, but was a “boundless machine” (CP: 1.162) to structure the physico-physical action into a meaning that was a mechanical not measurable approach—that is, not one meaning but rather a variety of meanings as a variety usable for any possible world.

The statistical mosaic of linguistic units serves as a learning situation defining the “hidden signs” in what is called the first step, the social step of the mathematical calculus. In fact, the experimental inquiry can rewrite the fragmentary proposition into a mathematical or statistical re-construction to be interpreted from science into a sense of literature. This signifies that “From marks to diagram, from table to graph, from graph to statement, and from statement to statement—each is a translation” (Callon 1995: 51). For Marcus, the “hidden signs” function as a contradictory and even subversive sophism (CP: 5.337), in which the assertion of the literary-and-scientific history can be re-phrased by a counterargument of the paradox by the appeal of mathematical reasoning (CP: 1.52-1.54). To give a correct method, the “starting-point of all our reasonings” was the open reasoning of formal logic in sociology, but the hidden elements represented the informal “sense-impressions” of human psychology (CP: 8.144, see 5.213-5.263). The intersemiosis between both elements extends Marcus’ hidden thought-sign into Peirce’s psychoanalytical interpretant-sign of feeling-with-logic.

Actually, Peirce wrote in his man-sign metaphor (CP: 5: 310-317) that the human mind is the intellectual “sign developing according to the laws of inference” (CP: 5.313). Although the “man-sign acquires information” received from various external and internal kinds of information (including art and science), Peirce added that the consistence of man-with-words also works in linguistic words (CP: 5.313). Peirce concluded that “men and words reciprocally educate each other; each increase of a man’s information involves and is involved by, a corresponding increase of a word’s information” so that “the word or sign which man uses is the man itself” (CP: 5.313). The parallelism of relations between man and sign is (at least for Peirce) the same procedure as happened in the “mechanized” thinking of art-with-science.

#### POLITICAL REMARK

When Marcus pursued the individual problems of psychoanalytical knowledge, the objectivist point of science approached in the country of Romania was mobilized by “Western” methods and objects. Roland Barthes’ (1915–1979) official report “The politicization of science in Romania” (written in 1949), which was addressed to the Minister of Foreign Affairs in Paris (2018: 118-123), informed the ministry about the political situation in Romania. Since Barthes worked as a French attaché in Bucharest, he argued in his diplomatic dispatch that following the political take-over of Romania by the Soviet Union, Romanian science and culture had to officially obey the cosmopolitan or universal rules to help develop the people’s democracy; the rules were exposed in the “eastern”

mandate of Marxism-Leninism. Further, Barthes' report argued concretely that Romanian scientists needed to defamiliarize their personal interests in the estrangement of Western thoughts to work towards their objective goal: to exclude the "alien" bourgeois classes and attain the ultimate goal of the Communist conviction (Barthes 2015: 121). Science in Romania was expressed in those political times to dismantle the double movement of Marcus' "hidden signs".

Since Romanian language is one of the Romance languages, French humanities was in those days the pioneering main source of Western scholarship. By using the title of "hidden signs", Marcus fiercely opposed Barthes' "claim of a radical opposition between science and literature" (2016: 1, 5). Barthes' early essay "From science to literature" (published in 1967, republished in 1986) suggested a new way of reading and interpreting texts in structuralism. The poetic text was an open text to structure the message from the architectonic analysis to make a formal hypothesis. Barthes clearly criticized the historical and biographical claim to consider how contemporary works of art must express their own liberties against any form of superimposed rule. To write was, for Barthes, the personal freedom to describe the world for its own sake. The personal freedom was raised to the formal level of structural thought as associated with literary science not with scientific literature.

### 3. LITERATURE AND MYTH

In the ancient world, Marcus felt a close affinity for mythical signs in literature and science (2019: 1-3). Firstly, Marcus mentioned the array of mythological figures in the Bible, further Plato's *Dialogues*, as well as Herodotus' *Histories* as the foundation of later work. The cultural icons of Adam and Eve, Moses, Noah, Job, as well as Jesus Christ, Mary, Mary Magdalene, Paul, and other biblical figures tell the ancient mythology of Judaism and Christianity. Human reading maintains present the emotional, religious, and cognitive metaphors in the development of ancient cultures. Today, the technical exegesis of science transcribed to the truth of the religious stories to recover the modern version of myths into mythemes. In the course of time, the old sacred writings were transformed into secular (not religious) legends. The biblical parables are seen as "hidden signs", regarded as quasi-literary legends, which carry the old illusion towards the homelike, but poetic, fairytale.

The interpretation of the Bible chronicled the moral and "technical" myths with personal examples. Following the "open" division of Calvino (1968: 50-61) as well as the "hidden" classifications of the literary theoretician Frye ([1957]1973: 71-128), Marcus re-mentioned how the communication of the biblical legends pointed to the religious belief without mentioning which mythology he followed. The Christian scriptures give the *dramatic personae* in reference to biblical

patterns meaning to give personal salvation to the fellowship of believers. Judaism, however, walked the biblical way in the rabbinic tradition of the Torah. Judaism followed the legends of the former prophets to learn through living and learning the divine mysteries of human lives, as inscribed in the Torah. Judaic life is an apocalyptic movement of human “happenings” or “events” to engage with darkness and illuminations of the speculative mysticism, as described by the Kabbalah (Gorlée 2020: 60, 71-82).

Jewish mysticism is not viewed as a horizontal path of biblical heroes depicted in written legends, but gives a pathway to learn the divine certainties and uncertainties of human life. The “holy tongue” of the Jewish covenant guides man and woman up to God to return and tell the others of a new universe to obey “blindly”. The “hidden signs” of biblical myths stand for the magical observances of reason and faith. In liberal (not orthodox) Judaism, the “hidden books” gave to the apocryphal texts the mythical solution to fabricate our weaknesses and master the general truth of paradise. This would controvert the stories of biblical scripture into the mythical symbols driven by the new faith to give new reason. It seemed that Marcus’ biblical storytelling was included in the technological fact and poetic fantasy to play the game of science fictional romances (Barnstone 1993, Slusser and Guffey 1982: 196-203, Miller 2017: 43-46; see Suvin 1979, 1988, Frye [1957]1973:48f).

Returning to the heroes of ancient time, Marcus foregrounded the Greek historian Herodotus of Halicarnassus (480?-420 B.C.). Herodotus travelled extensively through the countries of the Greco-Asian world, including the Egyptians and the Babylonians to write his extensive travelogues in the nine books of *Histories*. He told mainly the narrative history of the Persian Wars (500-449 B.C.) under King Cyrus and King Darius I against the political rise of Persia (Iran) to sovereign from Persepolis, Babylon, and Nineveh the extensive lands and their cultures of the whole of Asia Minor as far as the kingdom of Judea and the Egyptian border. The Persian Empire was fighting against the Greek city-states in a long struggle between the culture of the Orient and the culture of Greece. Herodotus had travelled through these countries, talked to well-informed men, and assembled great qualities of material about the ancient world. He wrote the *Histories* with long details and stories of all sorts to get to know the cultural facts of these countries. He knew that philosophy and science, mainly the astronomical observations developed from mathematics, were the roots of the learning of Babylon and Egypt. Herodotus organized scattered facts and ideas into coherent systems, but had in his time no coherent technique for getting order in human knowledge to separate facts from legends.

Plato’s (427-347 B.C.) logical analysis in the *Dialogues* happened during the working relation with Socrates, but started not as critical philosophy but rhetorical disputation. Plato discussed social conflicts resolved by his students to teach the upperclass students to think for themselves to practice the art of Athenian democracy.

After Socrates' death, Plato's *Dialogues* became not dialogues but philosophical monologues (such as *Critias*, *Timaeus*, and *Phaedo*) pronounced during the lectures of the Academy. His lecture courses were oral classes pronounced to his students – later revised, interchanged, and completed in written form. Plato's technical skills moved from sensible logic to the logical world, combining affirmatively the intellectual idea with an ironical expression in language (see *Cratylus*, *Theaetetus*, *Sophist*, *Symposium*). Plato's variable arts of the "hidden signs" fabricated the tool for the human mind to make practical inferences and make conclusions. Plato's conceptual exercises include comments about Greek mythology. Today, the human brain can freely correct (and self-correct) these logical and literary thoughts to make contemporary conclusions.

The mythical evolution of literature developed into Homer's dramatic epics, the *Iliad* and *Odysseus*, whereas the scientific progress developed from the 6<sup>th</sup> century B.C. to the analytical truth of early mathematics, for example in Thales and Pythagoras. Literary creations found the poetic metaphor to reach from mythological vision to fictional meaning. In antiquity, the Platonic logos of the dialogues gives the rhetorical meaning of literary compositions to cover the scientific progression of meanings of literature (Kerferd [1967]1972). Greek philosophy runs the risk of searching for a simple pattern when the truth was a calculus of quasi-formal imaginaries of human and divine forms of reason. The mathematical science gives the formal grammar in dividing reasoning into the logical machine of functional graphs, numbers, equations, formulas, propositions, measurements, and geometrical sentences (Gardner [1967]1972). The knowledge of science is captured in diagrammatic reasonings expressed in mathematical language. The literacy of scientific language makes possible the interpretation of the self-contradictory "hidden signs" to give a definite position without symbolic (or mythical) doubt to conform to the truth.

After Aristotle, Plato, Homer, and other ancient thinkers, Marcus wrote about Euclid's *Elements* who inspired the lines of scientific, theological, and philosophical thoughts. Further he mentioned the characteristic names of Archimedes, Euclid, Augustine, Aquinas, Copernicus, Galilei, Spinoza, Descartes, Kepler, Newton, and Leibniz (Marcus 2019: 2-7) to laud their merits for future scientists. From Renaissance, the decay of literature in the philosophical and scientific developments of upcoming ages implied major changes. The closed world of sciences with respect to the literary world became a mixed "cocktail of myths, sciences, and literature" (Marcus 2019: 5).

Marcus' mythology of literature and sciences was regarded as a learning device in which the "ordinary" narrative of signs can turn into the development of the "extraordinary" fiction of future interpretants. The learning device weaves the interactions between literature and science into one whole, where human emotionality and logical rationality play the role of verbal interplay of literature and science. Today, the dramatic reasoning of myth in action is the modern mytheme (interpretant) telling the story of the lyrical legend into the tensions of the sign tale (sign) which charted the decline of dramatic epic into the union of the technological and mathematical fields.

## PSEUDO-SCIENTIFIC REMARK

The technical learning of traditional sciences – in astronomy, alchemy, chemistry, physics, philosophy, medicine, and biology – has disregarded the boundaries of time, place, and language to emphasize the modern-day information of mathematical or statistical bioinformation seen in biology, economy, psychology, sociology, geology, and anthropology. Not to mention the postmodern pseudo-sciences in so-called psychotechnological studies of cultural studies, political science, folklore, psychoanalysis, feminism, gender studies, parapsychology, and other pseudo-sciences of Barthes' terminology (Hess 1993, 1997; see also the historical development of Thorpe 1967, Barricelli and Gibaldi 1982, Gibaldi 1992).

## PSYCHOANALYTICAL REMARK

Marcus transcribed the mythical narratives into technical and mathematical symbols, following the evolutionary process entirely averse from Barthes' article "From science to literature" ([1967]1986), repeated again in "Mythology today" ([1971]1986) as well as elsewhere. But Marcus' interpretation of myth is somewhat removed from Claude Lévi-Strauss' earlier article "The structural study of myth" (1955, re-edited in 1958: 206-231), in which he introduced the linguistic model of anthropology associated with cultural studies. Like Barthes, Lévi-Strauss (1908–2009) was not a real structuralist scholar, but a "subversive" thinker. Lévi-Strauss described social myths in themselves against the rule of traditional grammar. In his many analytical studies, the study of myths forms the tensions of a cultural story about catching the meaning of individual myth, but without comprehending the total meaning of the mythology.

Marcus kept far from defining the term of myth as the story of a personal dream or fancy, nor as objective fairytale or popular legend. Agreeing with Lévi-Strauss' vision of mythology, Marcus claimed that the mythological stories have no unity or coherence in themselves, but possess the projective trend to decipher the irregular course of the meaning of the object. The listener or reader can read and interpret the myths to set a truth-value on the stories, depending on the difference of time and place. The individual man (woman) gives *from inside* the symmetrical model to guide the mythological logos of the culture. Contemporary legends are mythemes to tell something of the spirit of the original myths, since the source draws from the divine will of the gods to steer *from outside* the human endeavors of life. Marcus seemed to follow Susanne Langer's dualistic concept of myths and mythemes coming into play as the ritual play of "substitute signs" ([1942]1948: 46-48), such in the signs and symbols upgraded into the individual details of human lives into the legends of life-symbols (Langer [1942]1948: 144, 147). Since the primitive myth has been lost or forgotten in time and space, Marcus division of truth and untruth in mythical narratives has indeed been borrowed from Lévi-Strauss, but changed into mythemes or cultural legends.

Beyond elaborating the labyrinthine sign of ancient rituals for human behavior, modern mythemes needed to be more uniform than merely offering the historical enumeration of separate myths, as Marcus offered. Mythical narratives developed the natural phenomena of their culture to build the story of psychoanalytical mythology. Marcus developed how human ideas were developed by culture and society to make new mythemes, but he was fully aware of applying the changes of outward reality to the intrinsic value of myths. Reality is steadily re-freshed with new social and political circumstances to exchange into new mystic acts in literature and sciences. The general feeling of mythological stories changes with the invention of literature in lyrical, poetic, dramatic, and epical genres to focus with irony and parody on the modes of comedy, narratives, and tragedies (Frye ([1957]1973: 158-239). Beyond Lévi-Strauss' cultural concept of myths, Marcus also included Calvino's literary tripartition into comedy, eroticism, and fantasy (Calvino 1986: 62-73) combining the expressive reasoning of language with technological arguments to accommodate literature with science, or science with literature.

#### 4. FINAL THOUGHTS

Marcus argued that "three centuries, from the 17<sup>th</sup> to the 19<sup>th</sup> century, but still persisting in the 20<sup>th</sup> century" (2016: 5) proclaim that all sciences have progressed significantly, while fatally undermining the old myth of narrative art, which has through scientific progress inevitably decayed. To remedy the ultimate degradation in Western faith, Marcus was influenced by the psychoanalytic writings of Italo Calvino (1923–1985). He followed Calvino's arguments, mainly opposing Barthes' conflictive article "From science to literature" by giving the enumerative list of scientific scholars ([1967]1986, see Calvino 1986: 28-36). Literature is to be judged in a cross-cultural understanding of the complexities of the algorithms of the human brain. Like Marcus, Calvino's belief was well read in the classics (1986: 125-195) but when he lived in Paris, Calvino co-worked with the literary theorists Barthes, Lévi-Strauss, Queneau, and other distinguished structuralists (Calvino 1986: 300-306, 146-161, 315-330; see also Barthes 2018: 73-75, 156-164, 164-170). Actually, Calvino's literary reflections on literature did not associate with the structuralist group, he followed his own intellectually playful games telling his stories in *Cosmicomics* ([1968]1982). Calvino's sense of literature was firstly written in the magical style of literary writers, following José Luis Borges and Gabriel García Márquez, but was secondly infused with the spirit of Raymond Queneau's systematic use of formal constraints in writing. The mathematical constraint governed Queneau's narrative of *Exercices de style* (1947).

Calvino is full of wordplay, which is his game of reasoning in writing. He characterized fictional literature as interactive with emotional collages and technical

“videogames”. The virtual scenes animate lifelike imagery, but the fictional rhymes, puns, grammatical slips, and other intertextual linkages form graphic displays drawn from technological unreality. Calvino lived as a writer in the world of fantasy, while the mathematical reality of literature impressed the new medium of video to travel through the virtual neighborhood and document incongruities to change the vision of the environment. The critical discourse of reality and unreality (Calvino 1986: 101-121) reflected the actual structure of the human mind itself. The brain lived by myths and mythemes, but creative writing also contains the tension of human psychology to cross-fertilize the pronounceable and unpronounceable in fashionable attitudes.

The critical effect of Calvino’s video writing would be “mathematical logic [as] the one Science, slowly consuming all the others”, but between mathematics and literature “there will always drift a cloud of unknowing” (Calvino 1967). Calvino created for the readers the “wonder and surprise” (Marcus 2016: 6) of a compelling irreality in video art. Calvino’s speculative mythology called for artistic forms, in which literature “breathes philosophy and science but keeps its distance and dissolves, with a slight puff of air, not only theoretical abstractions but also the apparent concreteness of reality” (1967). Within Calvino’s world of fiction, science interacted splendidly with poetic literature.

Calvino theorized his game of literary studies in his book *The Uses of Literature: Essays* (1984: 29-58, see Marcus 2016: 6). He suggested that the harmony of powers in literature can be restrictive to a pseudo-scientific standpoint, so that unreal universe is made of magical fiction. Calvino agreed with Frye’s central statement that any poem may be examined by a critic not only as an imitation of nature, but as an imitation of other poems ([1957]1973: 95f; see Calvino 1986: 51). The cultural (that is, artistic) intertextuality of literature joined scientific and technological imagination together, but this movement was no creative play of “surprise”. The study of the deeper levels of the human soul look beyond himself to the algorithms of future knowledge. In Marcus’ words, literature is “the *state of wonder* in contemplating what happens in the new discovered world of the infinitely large and the infinitively small in the new discovered worlds of (...) Internet” (2016: 6). Marcus settles that scientific terminology gives the technological “invention and discovery” to change literature, developing from “asymmetry to symmetry” and in this voyage discovering the poetic thinking of scientific discoveries (2016: 6).

The kaleidoscope of fine arts (literature, but also sculpture, music, dance, and so forth) and sciences (mathematics, chemistry, physics, philosophy, and so forth) express the same kind of communicative methodology of language to develop the vital processes of energy in nature and culture. Art and science focus on independent frontiers and barriers to interact the patterning of multiple meanings between the diversity of narrative literature and scientific writings. The emotional (that is, psychological) effort of cultural phenomena was clearly accomplished in

the sciences of biology, medical sciences, psychology, geophysics, anthropology, law, and economics. The interactive fusion of sciences is the fiction and reality of the world's cosmology to believe in the unseen or spiritual semiosis converted in the intersemiosis of Marcus' "hidden signs".

These confused signs are characterized as provisional images or events expressing variants and invariants as a variety of functions in time and space. The philosophical logos can make vital errors and mistakes, but literature reaches in semiotics to the visual signs of icons and indices, seen in Calvino's videogames. Yet literature does not touch the reality of general truth (as in Peirce's symbolicity). We can conclude that Professor Solomon Marcus supported the unorthodox experience of ethical and political issues to "save" the modified world view of fiction through the mathematical approach of sciences to give the truth. The cultural state of the world can lead to spiritual inaction but could also inspire scholars to contribute with fresh arguments to establish new statistical actions to operate "blindly" on the meta-literary language of literature-with-sciences.

Having reached the conclusion of Marcus' performance interacting literature and sciences, the imaginative or poetic sign remains an open sign informing without any troubles to the readers or listeners; yet, the diversity of good and bad signs move with the politically-correct trends of science. Literature engaged in the cultural diversities of scientific thought challenges with new cultural phenomena. The "open" scientific terminology uses technical terms borrowed from contemporary cultures to describe here the "dark" signs of narrative art across cultures (Eco 1989: 14-16). The avant-garde openness and closedness of art and sciences can turn into the ambiguity and imprecision of narrative mythemes, making that the tentative "hidden signs" merely relate to semiformal or non-formal object but without any transcendental temptation of any symbolic meaning of truth.

#### QUASI-LOGICAL REMARK

Marcus transcended the structure of structuralism. He escaped from the old analytical grammar of rhetoric to analyze linguistic materials in a critical speech. Structuralism was an intellectual criticism in the hands of structuralists, but lacked the dialectic design of dissimilarities to find in the didactic tension of the common similarities in the dialectical parallelism (implicit in the articles written by Barthes, Eco, and others in *The Critical Moment: Essays on the Nature of Literature* 1963). Structuralism worked with an unorganized matter of structure and a rigid methodology was needed to make the postmodern crisis of human sciences a credible hypothesis. This was previewed in Jacques Derrida's early lecture (1966), when he presented "The structure, sign, and play in the discourse of the human sciences" for the interdisciplinary symposium *The Languages of Criticism and the Sciences of Man* (Derrida 1970, assembled with the other articles and discussion). Derrida's *Speech and Phenomena* (1973) revolutionized the criticism of structuralism.

Derrida's radical performance of "Structure, sign, and play in the discourse of the human sciences" (1970) proposed a new methodology: based on Lévi-Strauss' mythopoetic criticism but generally a grammar of intellectual philosophy and mathematical science. Peirce's *Collected Papers* (1931–1958), published by Harvard University Press, would open up Derrida's interplay of linguistic elements to the quasi-logical signification. Derrida brought to the original sign the game of "freeplay" of signifiers (1970: 237f) which, despite playing the creativity of games, offers a fundamental ground for transforming (translating) the sign into Peirce's interpretant-sign. In Derrida's surplus meaning, the sign is redoubled in the pseudo-scientific "supplement" (1970: 260-264) to be re-interpreted and re-duplicated into new signifieds to carry new meanings.

The logico-semiotic works of Peirce is the hard-core reasoning mediating with the interplay of sign with object to redouble in the interpretant. Peirce's experience of the logic of science made clear the differences between the immediate object represented in the immediately present sign and the dynamical object which is both present and absent. When the human brain resolves the problems by a code-switching from sign through the object to the interpretant, the received sign is called the "hidden sign" to crumble from the formalist reason of moral and existential task into the combination of language and mathematics. In Peirce's diversity of the system of Existential Graphs (discussed in Roberts 1973), there is a cultural tendency to algebraic diversification, which "we find in nature" (CP: 6.613, 1893). Since the old culture is dead and inaccessible today, the algebraic construction goes behind the general rule to "explain diversity (...) behind the inner and outer chaos" to change the "original undiversified sign" into the new narrative story. This will illustrate today how Peirce's cultural "diversification was the first germ" of the "diversity" of our cultural universe (CP: 6.613, 1893). Marcus' "hidden" sign of rule and feeling works in Peirce's interpretant as sign of quasi-chance with quasi-law and quasi-feeling. Peirce's cultural evolution will explain how the tentative sign-with-object co-worked with both formal logic and informal art.

#### FINAL REMARK

There have been growing signs that the life-symbols of exclusion and inclusion move away from Western cultivated philosophy to a satirizing estrangement; in other words, "serious" philosophy means professional oblivion aiming ordinary statements into the industrial operation of technological science fiction (Suvin 1979, 1988). Are Marcus' pieces parodies or not? Marcus' parody of science fiction is no lighthearted fun: he made readers imitate the virtual sign into the alternative world of interpretants with an epical meaning. When Marcus transposed the technical concept into literary art and *vice versa*, the imitation played a disparity of forms and styles in many interpretants (Chambers 2010). The parody can be described as an artistic-technical imitation to reproduce from the original text a comical image

with the goal to represent to the readers false or unreliable impressions of the author's thoughts. Marcus described the technoscientific methods as he saw them in actual reality. The parody of the comedy as a game could amuse and delight, frustrate and annoy, but above all, it will disturb our human quasi-minds into the confrontation with a satirizing form of unreality (Suvin 1986).

Marcus' fresh arguments dismantled the mixed forms of literature and science by abandoning the interaction of subversive dissimilarities to divide literature and science into the "new science" with far-reaching implications for scientific methodology. Marcus' working definition created the unitary meaning of similarity arising out of the chaos of dissimilarities we live in.

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### Abstract

Solomon Marcus' final article "Hidden signs" (2016) is no coherent story but gives the sketchy outlines of his lecture notes. Marcus' call caused the listeners (sign-receivers) to play all the tricks of the intellectual background he was acquainted with. Marcus advanced mathematical poetics interacting between the "natural" form of literature and the "artificial" scientific fields, to be epitomized by mathematical or statistical rules. Literature and the sciences share the use of linguistic signs and symbols, but French structuralism refused to recognize the transdisciplinary relations of literature with sciences. Thus Marcus' mathematical poetics can be set against Barthes' negative contention by agreeing and disagreeing with the "subversive" structuralists (Lévy-Strauss and Calvino). By positioning the idea of mythical and playful interactions of science with literary phenomena, Marcus positioned this tentative hypothesis to accept the revolutionary understanding of his thoughts. The grounds of Marcus' debate accept the understanding of his revolutionary thoughts, but the postcritical response advances the intellectual conditions and political implications of Marcus' scholarship, which caused him to abandon the method of structuralism and embark on the semiotic expansion of the dynamism of Peirce and Derrida.