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VISUAL TECHNIQUES IN POSTMODERN LITERATURE. TOWARDS AN INTERDISCIPLINARY APPROACH OF FICTIONAL PERSPECTIVE

Introduction

The present study focuses on two main theories of narrative and iconic perspective, as identified in the post-modern fiction of American and European writers. The first one is the *deconstructive* theory, showing reality as a self-referential, undecidable process, while image becomes its own mirror or a series of self-reflecting mirrors, deprived of any original source. The second one is the *fractal* theory, emphasizing the chaotic, yet ordered patterns of reality; here, image is perceived in its shattered, irregular textual and iconic design.

Both parts of the study (*A Voyage on the Deconstructive Continent* and *A Voyage on the Fractal Continent*) are conceived as multi-cultural, inter-disciplinary scientific debates, which cross the borders of literature and lead to the formation of new aesthetic, philosophic and psychological geographies. They are meant to deal at the same time with fictional examples of visual structures specifically considered post-modern, and with the scientific grounds these structures rely on.

As a conclusion of the study, post-modern fiction is to be seen as part of a wider aesthetic and existential attitude, characterized by the acceleration of perception and the hybridization of perspectives. Thus, post-modern literature may be regarded as a spectacular visual melting-pot, connected to the sensibility of both today and tomorrow.

1. A Voyage on the Deconstructive Continent

The deconstructive continent does not really exist, since visiting it for a thorough exploration implies undermining the very geography it is based on: its theoretical boundaries get diluted, its philosophical shapes become geometrically variable, while its literary topography is lost in a virtual, post-modern map. Any investigation, of whatever kind, becomes a part of the paradox which it systematically enhances by attempting to solve it. In a similar way, by means of deconstructive contamination, any critical attempt turns into a meta-critical one, itself related to its meta-meta-critical referent. This paradoxical situation may be perceived as a natural consequence of the phenomenon of *intertextuality*, such as it was defined by the members of the *Tel Quel* group (Kristeva, 1968; Sollers, 1968).

Therefore, in the post-modern age (considered as a cultural period in the second half of the 20 th century), one may discover that the very enunciation of the most elementary theoretical or critical matter is bound to cross an almost endless network of notes and references. Consequently, any account is to be conceived as an infinite set of quotations and as a *bricolage* of quotations. Even this plain, unimportant remark you are reading this very moment could be related to a substantially large number of post-modern critical references, meant to sustain it!

Although developed in the mid-sixties, the theoretical innovations brought in by deconstruction to the post-modern way of thinking and understanding art are still quite uncomfortable to us, no matter the nature of their implications: methodological as well as hermeneutical, axiological as well as ontological, logical as well as literary. Connected to fields as various as philosophy, linguistics, politics, gender and literature, deconstruction is highly illustrative for its own mixed, ambiguous status: it has been -and still is- interpreted either as current or attitude, method or position, technique or strategy (Derrida, 1972 a; Hartman, 1981; Culler, 1982 etc.).

Yet more troubling for our common sense would be the suggestion underlying the theoretical contributions of the so-called "cognitive philosophers". They assert the fact that our rational structures are based on *mise-en-abîme*-like mechanisms which we may be able to identify in a process similar to that of deconstruction; hence, there would supposedly exist some kind of a deconstructive DNA of the human mind, which we could recognize, without ever fully "decoding" its pattern (Dennett, 1978; Hofstadter, 1979).

In order to see whether deconstruction represents, in itself, a theory of perspective, or if it merely provides a technical support for such a theory, we should first define the sets of problems on which it exerts its influence, as well as its immediate consequences.

The first main problem issued by deconstruction is the questioning of concepts such as *truth* and *certitude*. Embodying one of the most frequently used post-modern principles, fragmentarism (Hassan, 1982, and especially 1990, pp. 18-23), deconstruction enforces an entropic perception of the notion of truth, itself used in order to criticize and undermine what is consensually regarded as truth (1). Since deconstruction does not call for a superior logical principle, but uses the very principle it deconstructs, truth is being considered both indispensable and optional; in other words, it becomes a *fluctuating unit*. Such theoretical grounds may sound alarming with respect to philosophy and religion; as far as literature is concerned, they are appealingly welcome. Both the pulverization of "great truths", and the relativization of literary certitudes have generated decisive cultural reaction against many long-lasting historical prejudices (the elitist prejudice, or the prejudice of the closed, inertial canon). At the same time, during the past four or five decades, understanding literature as a display of conflicting options and chaotic tensions has allowed us to reinterpret in a post-modern fashion the entire process of cultural production. To put it bluntly, by fragmenting acquired certitudes and preconceived ideas, deconstruction enabled literary historians and theorists to redefine their object of study and reconstruct it beyond any imaginable, deterministic limits.

The second main problem which deconstruction deals with in an unconventional way is that of *meaning*. No matter if they refer to linguistic or literary meaning, the deconstructive philosophers proclaim a violent dismissal of any kind of consensus (Derrida, 1972 a; Lyotard, 1979, 1986). They shatter hierarchies traditionally accepted as stable, by asserting that meaning, as well as text and reading, is being produced within a flexible process of contextualization, decontextualization and recontextualization. As a matter of fact, the discovery of the principles of semantic instability and unavailability does not belong to deconstructive philosophy, but to linguistics and literary criticism. It may start with the elementary Saussurian theory of the linguistic sign's arbitrary character, go further to the *Tel-Quel* notion of intertextuality and reach the more recent definitions of the transactional text (Holland, 1968) and of the text as reader (Prince, 1980) elaborated by *reader-response* criticism (2).

Rather unsurprisingly, most of the theoretical concepts used by *reader-response* critics, as well as by aestheticians of reception of the so-called Konstanz School, can be transferred from the field of literary studies to that of semantics. Such is the case with the "transactionality" of the literary text (Holland, 1968, p.123), the "virtuality" of the literary work (Iser, 1980, p.106) or the "indeterminance" and "unconclusiveness" of reading (Freund, 1987, pp.152-53). Consequently, from the viewpoint of contemporary linguistics and philosophy, meaning becomes a negotiable unit, largely depending on the way in which it deconstructs the very principles it is constructed on. If deconstructing a discourse implies showing "how it undermines the philosophy it presupposes or the hierarchical oppositions it is based on", while identifying within the text the rhetorical operations which provide the basis of argumentation (Culler, 1982, p.86), then the deconstruction of linguistic or literary meaning may be referred to as a potentially irrational, schizoid operation. Ultimately, both meaning and truth would turn into *concepts of perspective*, as easy to manipulate as a Rubik cube.

However, what is at stake here, the equally profound and alarming challenge of deconstructive philosophy, is not the urge to bring back into attention the ever-lasting problem of perceptive subjectivity. The essential issue of deconstruction lies at the same time in the radical questioning of the most stable premises of our conscious mental activities, and in the enunciation of a *valid alternative* for these activities. The extended version of the antique Epimenides paradox (also known as the *liar's paradox*) may be regarded as a convincing example of relativization of certitudes, which clearly disturbs our faith in the unshrugging stability of human logics:

> The following sentence is false. The preceding sentence is true.
>
> (Hofstadter, 1989, p.21)

Our ability to identify the paradox, without being able to provide a satisfactory explanation of the neuro-psychological, semantic or logical mechanisms which led to its existence, suggests that human thinking may be structured on *random permutations* on different levels. When deconstructing a paradox, one can notice that its "proper" functioning depends on the contradictory, inter-changeable relation between an informational/semantic *excess* and a similar kind of *omission*. For instance, the graphic paradox of M.C. Escher's hands drawing each other (*Tekenen*, 1948) is built up at the same time on the excess of realism of the two hands and on the pictural absence of the "real" hand creating them.

Conceived "three-dimensionally" in comparison to the "bi-dimensional" sheet of paper (pinned to a table) on which they draw each other, these two self-recycling hands miss the graphic *Big-Bang* which would either cancel, or justify their frozen *perpetuum mobile* state (3). A third, "real" hand (Escher's one, for example), drawing the other two "artificial"/ "artifactial" hands and suddenly appearing as an extension of a camera which took simultaneous shots of the lithography, its contents and the creator-operator's arm would have probably offered a partial solution to the paradox.

The same difficulties in defining a stable semantic dimension can be encountered in several short stories of Romanian author I.L.Caragiale, notably *Inspecțiune*, published in 1900. Here, the suicide of a bank employee one day before a routine financial inspection generates several contradictory suppositions among his closest friends. The mystery of the suicide is the more inexplicable as the employee, Mr.Anghelache, had an irreproachable reputation. Even more troubling is the result of the financial investigation: not only did Mr.Anghelache carefully keep all the money he was supposed to handle, but he also put an extra golden nickel in the safe deposit, "wrapped up in a cigarette paper" (Caragiale, 1960, p.190). Curiously enough, the story's excess of information -the existence of this golden coin, as some kind of a "narrative indication of the employee's honesty" (F. Manolescu, 1983, p.282) - is connected to an essential narrative omission: what logic leads Mr.Anghelache's actions? Since the dead are not to be psychoanalysed, despite all the naive efforts of the employee's friends; since the logical/narrative networks of the story have been deliberately short-circuited; since information has been suspended, without being cancelled, *Inspecțiune* remains a brilliant example of unsolvable fictional paradox (4). In a manner similar to that of Epimenide's paradox, as well as to Escher's lithography, the narrative possibly of displaying various permutations in Caragiale's short story, between the textual/semantic minimal and maximal structures, creates an overwhelming feeling of logical dizziness.

Having reached this point, we can now assert that deconstruction is, in itself, a theory of perspective. If deconstructing a sister of discourse means to simultaneously analyse it from inside and outside and if deconstructing a hierarchic sister means reversing its levels, then deconstruction is a matter of *repositioning perspectives* and negotiating a new contract with "reality". These two characteristics are also specific to postmodernism. Moreover, they have been discussed by several literary

theorists who, though they make use of different deconstructive techniques, do not consider themselves as deconstructionists (see especially Kearney, 1988; McHale, 1992).

The repositioning of perspectives which happens in deconstruction has at the same time ontological, epistemological and aesthetic implications. Both Jacques Derrida and Paul de Man reverse the traditional hierarchic relation between philosophy and other disciplines and seriously question the predominant role of philosophy; in their opinion, the first place within any systemic hierarchies is to be taken by literature (Derrida, 1967, 1972 a; de Man, 1983). They contend the hypothesis that, should truth be regarded as fiction and serious language as a particular case of unreliable language, then the historical, philosophical, psychoanalytical discourses -and not literature- ought to be treated as deviant, parasitic instances of language (Culler, 1982, p.181). Applying the category of the "literary" to any kind of language, one may conclude that philosophy, for example, represents a particular literary genre, quite close to poetry. This assumption seems less outrageous if we accept that both these fields operate with numerous meta-codifying, meta-significant elements. Ultimately, both the strict "precision" of the philosophical language and the "liberty" of the poetic language stand for the same mentally schizoid mechanism, working as a creative act. In both these situations, the deviation from the "proper" level of language (itself defined by means of fragile consensus) or, in the terms of Romanian aesthetician Tudor Vianu, the drifting from "transitivity" to "reflexivity" (Vianu, 1941, pp.15-21) refers to the effects of a puzzling split taking place within our mind's personal library. The very use of the metaphor "mind's library" in a context quite polemical to the efficiency of poetic language represents a deconstructive self-recycling cause and effect: the more we try to plead for a neutral, non-connotative language, the less we should reject the "impure" elements of poetic language. Or, to put it in psycho-cognitive terms, should we systematically look for structures of human rationality and confirmation of their validity, we would have to decompose these same structures by means of non-rational criteria, in fragments hierarchically opposed to the truths and rational certitudes they are based on.

Irrespective of the levels on which it operates, deconstruction creates an implicit and at the same time explicit theory of *hybridized perspective*, redefining the relation between reality and its representation. Its main articulations are to be found in *meta-perspectivism* (Chinese boxes and Matrioshka dolls perspectives), *self-recycling perspectivism* (Ouroboros

and Moebius perspectives) and *hyper-perspectivism* (virtual perspectives); some theorists associated them to the concept of postmodernism (Hassan, 1990, pp.18-23).

On the ontological level, deconstruction shatters and reconstructs the concept of *mimesis*, arguing that representation, and not its object, comes first. Therefore, it states the superiority of the copy with respect to the original. On such theoretical grounds, deconstructive philosophers proclaim the existence of infinite series of imitations of the imitations (Derrida, 1972 a, p.217). The original has vanished, coming to being already as an imitation, and everything begins with a reproduction. In Jonathan Culler's words:

> The mimetic relations may be regarded as intertextual: relations between one representation and another, rather than between a textual imitation and its non-textual original.
>
> (1982, p.187)

The Derridean idea of the *mimesis* with no origins clearly illustrates the deconstructive theory and method of the *affirmation which becomes its own negation*. There is no longer a pre-existing truth to be reproduced, since it has been replaced by the imitation of an imitation and the copy of a copy whose original can never be traced (5). Hence, one may shape a convincing post-modern paradigm of the "labyrinth of mirrors" (Kearney, 1988, p.17), relying on endless inter-plays and reflections.

The deconstructive hierarchical permutations also extend their influence on the linguistic and literary levels. For instance, deconstruction reverses the relation between *use* and *mentioning* and asserts that use is a special case of mentioning. No matter how eager we were to "use" certain expressions, we would simply mention them, that is, have them as quotations (Culler, 1982, p.120). The validity of this phenomenon is testified by the effects of "using" expressions such as "I love you" or "I adore you" in everyday life. Lacking originality, losing their significance because of excessive use, they belong to an infinite series of mirrored expressions, like Juliet's in *Romeo and Juliet* or Ali MacGraw's in *Love Story.*

In psychology (to take another example), the deconstructive perspective seems to embody the very basis of theory. Freud's psychoanalysis, for instance, relies on the deconstruction of several hierarchic oppositions: real/imaginary; conscious/unconscious; manifest/latent; normal/pathological. Although the first range of terms seems fundamental, it is the definition of the second one which makes the understanding of the "fundamental" terms possible (see Freud, 1904).

In literature, deconstruction deals with the mechanisms through which texts generate effects in the area of meaning and truth, undermining both these notions. Especially in his second edition of *Blindness & Insight*, Paul de Man discusses the undecidable character of textual meaning and the instability of the structures which validate texts. To him, there are no such things as *a priori* privileged principles and there are no longer any structures which may be considered exemplary for other structures; all the assumptions regarding ontological hierarchization have been shrugged:

> If we no longer take for granted the idea that a literary text can be reduced to a finite meaning or set of meanings, viewing literature as an endless process in which truth and falsehood are inextricably intertwined, then the predominant criteria used in the history of literature (and generally derived from genetic models) are no longer applicable.
>
> (1983, p.ix)

Although de Man's perception of the literary text and literary history must be considered an extensive one (because of the supposed existence of an archi-literature which determines its own particular historical, anthropological, psycho-analytical instances and so on), his suggestion to resort to forms of analysis oriented towards the dismemberment of the stable concepts of meaning and textual identity may also be directed to the field of literature, as an autonomous discipline. Hence, his theory of the critical "blindness" would become not only a means to assert the interdependence text/interpretation, but also a way to state the ontological status of *error* within the production of literature and its investigation as a particular genre:

> The critic not only says something the work doesn't say, but he even says things he himself doesn't want to say. The semantics of interpretation has no epistemological consistency and therefore cannot be considered scientific [...] The critics' moments of greatest blindness with regard to their own assertions are at the same time the moments of their greatest insight.
>
> (p.109)

The process of mapping perspective in postmodernism can not leave apart the literary consequences of deconstruction. The use of paradoxes, the recurrence of schizoid patterns, the paradigmatic value conferred to error and hybridization are at the same time causes and effects of post-modern literature. However, according to all deconstructionists, if the effect -and not the cause- is to be considered as the origin (since *it* is

what makes the cause be perceived as cause), then any post-modern hermeneutics of perspective is bound to turn into aporia and unsolvable alternance (6). The lack of any original "presence" (truth, reality, idea, meaning etc.) which analysis or interpretation could be derived from stands for the dictatorship of the *mimesis without origins* (Derrida, 1972 a) and determines what we may call the *universalization of undecidability*.

The concept of *undecidability* was discovered by mathematician Kurt Gödel, in his study "Uber Formal Unentscheidbare Satze der *Principia Mathematica* und Verwandter Systeme I". It is a part of the so-called *incompleteness theorem*. According to it, a proposition is undecidable when, having a system of axioms which govern a multiplicity, that proposition neither is a consequence, nor does it contradict these axioms; in other words, it is neither true, nor false with respect to them (Gödel, 1931, pp.173-98). Essentially, Gödel's theorem asserts that any system which is sufficiently "powerful" is by virtue of its "power" incomplete, meaning that "there are well-formed strings which express true statements of number theory, but which are not theorems" (Hofstadter, 1989, p.101). In Douglas Hofstadter's paraphrase of the theory, all consistent axiomatic formulations of number theory include undecidable propositions (p.17). In other terms, there are truths which belong to number theory that can not be proved within the system.

Transferring Gödel's theorem from mathematics and logic to literature, we may bring up several puzzling hypothesises. One of them would be related to the assumption that consistency is *not* an intrinsic characteristic of any formal system, since it depends on the interpretation it is being subjected to. However, if consistency becomes a matter of *perspective*, then literature should be understood exclusively on the basis of reception.

Among the adepts of this theory, Stanley Fish is one of the most "outrageous". His famous book of essays, *Is There a Text in This Class?* (1980), convincingly stands for the idea that the formal structures of the literary text should first be replaced by the structures of reading experience, then by the very process of interpretation:

> I now believe that interpretation is the source of texts, facts and intentions. Or to put it in another way, the entities that were once seen as competing for the right to constrain inter pretation (text, reader, author) are now all seen to be the *products* of interpretation.
>
> (1980, pp.16-17)

Another conclusion derived from the literary application of Gödel's theorem would be linked to the undecidability of imagination. Should imagination be considered undecidable, since it is neither true, nor false, then literature would be deprived of all identity, while authors, readers and interpretations could mirror themselves in an endless intertextual, inter-iconic process. In fact, this is the case of postmodernism, which asserts that the modern belief in the authenticity of image and the validity of text should be undermined. To paraphrase Richard Kearney, who shows how reproduction has managed to replace the original in postmodernism "The image which *is*, already *existed* " (1988, p.4), we may perceive the text as the space of its own recycling and literature as *its own deconstruction.* Nothing arises, without having previously existed; nothing is said, without having already been said. In a similar manner, hermeneutics is based on the paradoxical use of its own pre-existence.

Ultimately, the application of Gödel's theorem to deconstruction (or vice-versa) illustrates the implosive effects of self-reflexivity and *meta-self-reflexivity*, which lead to the dissolution of all demonstrative validities. Deconstruction, much the same as literature, proves undecidable. Thus, we reach an *unsatisfactory* theoretic model of literary postmodernism, created by its own *stroboscopic recycling.* It is at the same time a "strong" model, because of its universal invulnerability, and a "weak" one, due to the ontological, epistemological, axiological vacuum in which it is situated by its very invulnerability. *Q.e.d.*, by means of a demonstration which precedes itself in an infinite series of accolades...(7)

One last conclusion resulting from the literary use of Gödel's theorem concerns literature's capability of confering aesthetic value to its own insufficiency. More specific, within post-modern fiction, a partial, insufficient method is able to become its very narrative or character. Consequently, the deconstructive method frequently gains "aesthetic personality" in the work of post-modern prose writers. Much the same as it happened with the so-called literary *textualism* (which led to a significant Romanian fictional trend, illustrated by writers such as Mircea Nedelciu and Gheorghe Crăciun), deconstruction has shifted from theory to literary practice. As a result, nowadays it has become a literary structure, theme, motive and character. If we take into account the fact that deconstruction has turned into some kind of fictional trend, we may just as well dismiss the distinction between theory and literature. And is this not just the supreme evidence that Gödel's undecidability principle is as valid in art, as in science?

The literary applications of deconstruction are usually illustrations of a logical, semantic, iconic or narrative reversal: between *cause and effect, interior and exterior, beginning and end.* The deconstruction of these two kinds of elements/structures results in a new narrative pattern: self-referential, self-reflexive, meta-textual, self-recycling, anti-mimetic, playful, hybrid, which has been defined as post-modern (see, among many others, Hassan, 1982; Brooks, 1984; McHale, 1987). It can be related to a new aesthetic sensibility, based on simultaneity, *bricolage* and perceptive simulacrum (see mainly Baudrillard, 1981; 1983).

For the American writer Donald Barthelme, for example, the natural connections between the beginning and the end of a narrative can be shattered any time, according to a logic of infinite reversibility which allows the text to "take off the mask of its own fictionality" (Federman, 1975, p.8), without revealing an original referent. As Barbara L. Roe points out in a recent study of Barthelme's short stories, we deal with a "*double-minded*" author, who enjoys using narrative multiplications and permutations; they often stand for several mixed shifts of perspective:

> In these aural and visual complexes, a spatially designed text displaces linear plot, an ahistorical presence supersedes character, and a collage format fragments narrative viewpoint.
>
> (1992, p.xiv)

In one of Barthelme's short stories, called *The Dolt* and included in his *Sixty Stories* volume, a character named Edgar concocts a story for his written examination. During this process, he complains that his text has no substance (no "middle"), but only an "oblique" end. The story's narrator (a paranoid alter-ego of Edgar's) has his own opinion about writing texts. He complains about the same identity problems as his character and ends up his story by deconstructing its beginning:

> I myself have these problems. The endings are elusive, the middle parts nowhere to be found, but the hardest thing is to begin, to begin, to begin.
>
> (1981, p.96)

In *The Wound*, one of Barthelme's short stories in *Forty Stories* (1987), the author does not merely deconstruct the relation between the beginning and the end of the narrative, but also dismantles to such extent the relation between originary reality and meta-reality, that distinctions are no longer possible. In short, the story is being directed by a static narrative camera, while all the characters move around it. The characters (the toreador, the

mother, the lover), viewed on a meta-fictional stage inspired by Hemingway's stories, become themselves "directors": they consider the verbal images of the story which they are part of as an attractive movie, which they can play back home. Hence, the narrative perspective of Barthelme's story turns into a flexible unit, directly depending on the fluctuations of its own deconstruction: of the relation fictional story-movie, author (creator)-characters, primal reference-subordinate references etc.

Several relevant fictional applications of deconstruction are also to be noticed in the stories and novels of French author Michel Tournier. His collection of stories *Le medianoche amoureux* (1989), translated in Romanian three years later, provides many examples of deconstructive textual or iconic perspectives.

In the opening story of the volume, omonimously called *Le medianoche amoureux*, Tournier proceeds to the deconstruction of the relation between "real" life and fictional life [the term *real* is being put here within quotation marks because, in postmodernism, reality is perceived as desubstantialized, deprived of its own valid, objective nucleus (see Baudrillard, 1970; 1976; 1981; 1983)]. Two youngsters, Nadege and Oudalle, listen carefully to nineteen stories (the very number of stories in Tournier's book!) which influence their lives while being written:

> They watched with great interest the slow transformation which those successive fictions made them subject to. It seemed that the pessimistic, destructive, mercilessly realistic novelettes were meant to separate them and tear their relationship apart, while the optimistic, warm, welcoming stories, on the contrary, did their best to reinforce their relationship.
>
> (Tournier, 1992, pp.38-39)

In *Ecrire debout*, what is being deconstructed is the relation between present and past and between the present narrator and his predecessors. As a result, the former elements become the implicit cause of the later's existence: the prisoners from Clericourt send the narrator a desk "on which Balzac, Victor Hugo and Alexandre Dumas used to write in the past" (1992, p.162). By writing himself on that desk, while "standing up", the narrator implicitly becomes the ancestor of his own literary predecessors.

Nevertheless, the most interesting cases of logical deconstruction arising from the disturbances of the past-present and cause-effect relations can be related to science-fiction literature. They either belong to the post-modern current, or precede it by far (but does it really matter, when the present is bound to begin in the past and vice-versa?). We may recall

here the time paradoxes on which are based stories and novels such as those written by H.G.Wells (1895), Isaac Asimov (1955), Poul Anderson (1965), Gerard Klein (1971). Needless to say, the mechanisms of the time paradoxes and their specific functions in science-fiction literature have been analysed by various critics and theorists, with or without being associated to deconstruction. Romanian critic Florin Manolescu, for instance, asserts that:

> Imagination can resort to different strategies which allow the past or the future to become accessible realities and remove the barrier of time [...] When writers dismiss the law of time irreversibility, invent a way of escaping historical determinism and try to solve the resulting logical difficulties, time travel turns into a major theme of S.F. literature.
>
> (1980, pp.113-14)

Coming back to Michel Tournier's stories, we should discuss one of the most sophisticated examples of deconstructive narrative and iconic perspective in *Lucie*. Here, the narrator makes a seemingly uninteresting digression about the intelligence and the sexuality of women:

> The vagina rising to her head, it starts to feed on the brain.
>
> (1992, pp.128-29)

What might seem at first sight a plain "politically incorrect" statement is, in fact, a subtle deconstruction of female and textual body. Both rely on atypical inversions, both are shaped through a redistribution of causes and effects. Consequently, the female and textual bodies in Tournier's story perform a role depending on the fluctuating perspectives in which they are viewed. Thus, they become inter-changeable elements of a common body, subject to anamorphotic deconstructions.

This is precisely what happens in one of Gheorghe Crăciun's stories, *Alte copii legalizate*, where a sex scene takes place at the very point where the female body's anatomy intersects with a typographic text ripped off the bedroom's walls:

> Let the light flow into the room, but let the walls remain dirty, stained, pencil written, scribbled, pealed [...] Let her struggle, apparently helpless: shame on you! Let your white teeth clinch her golden neck and hear her yell: you crazy fool! Bite her and see her shudder in defeat, moaning with delight, falling aside and pressing your lips with her merciless mouth with sharp canines. An then tell her, later on: guess what I had in mind; what about a story in which a man lies in a room like this one and stares at the walls...
>
> (1988, p.8,13)

The deconstruction of human or textual anatomies usually reflects the post-modern writers' intention to negotiate the relation between interior and exterior, as well as their will to redesign logical, textual and iconic perspectives according to new premises. For example, what we think of as the most internal spaces of the body (vagina, stomach, intestines) would in fact be some kind of external pockets, "folded" within. Transferring this theory to literature, Jonathan Culler argues that the structure (and implicitly the perspective) of a work can be related to the process of textual/iconic "folding" and "unfolding":

> An exterior frame may function as the most intrinsic part of a work, folding within it; and vice-versa, what seems the most interior, the central aspect of a work will assume this role through the features which unfold it outside and against the work.
>
> (1982, pp.198-99)

A convincing illustration of this theory may be found in Michel Tournier's novel *Vendredi ou les limbes du Pacifique* (1967). Here, the island Robinson is shipwrecked on is not inasmuch a territory of land and vegetation, as a fictional world, a meta-island built up by the unfolding of the intertextual, multi-cultural geographies of all the fictional/mythological islands over the "real" island. Exploring the "real" island actually means searching for the mechanisms of the entire universe in a deconstructive manner:

> However, that milky night, to Robinson the lightning's effects seemed reversed [...] One would say an ink wave flowed in the cave, then instantly receded, without any visible trace.
>
> (1977, p.128)

The protagonist's sensations and perceptions are desubstantialized; they turn into ghosts of mind, created by reversing experience and memory: in Tournier's novel, memories are included in direct experience, and not the other way round. For instance, baking bread on the island allows the hero to "rediscover" (in other words, to substantialize) his own smell and touch, within a process which dismantles traditional deterministic relations: bread precedes sediment, while sediment precedes smell!

Relying on several such fragments, Robinson's story systematically folds and unfolds itself, in a textual attempt to question the very limits of language and meaning. However, language and meaning themselves are being deconstructed, by a continuous dissolution of the *signifier/signified* relation.

This makes the character's efforts to provide an acceptable, coherent perspective on himself or the events he is part of undecidable:

> For a long time, my mind was filled with enough memories to provide imagination with desirable, yet inexistent creatures. Now it's all over. My memories are bodiless. They are merely empty, faded pods. I say: woman, breasts, hips, hips moving by my own free will. Nothing happens. The magic of these words is no longer working.
>
> (1977, p.137)

One last example of a post-modern anatomical deconstruction is related to Ursula K. Le Guin's science-fiction novel, *The Left Hand of Darkness* (1969). Here, an ethnologist comes to the planet Gethen, which has an androgynous population (meaning that, at the climax of their sexual cycle, its members can become either men, or women). The story of the ethnologist's painful accommodation to the mentality and the rich feelings of the Gethenians reflects not only the theme of the lack of human communication in the future to come, but also that of actual sexual prejudices and sexist attitudes. In a wider sense, it illustrates the idea of cultural alienation.

The novel can be understood by deconstructing the oppositions male/female, left/right, light/darkness; consequently, an adequate perception of the former terms becomes impossible in the absence of the latter. According to Ursula K. Le Guin's deconstructive pattern, the androgynous anatomy can be decoded by reinterpreting the title as *Male Is the Left Hand of Female* (Scholes, 1985, p.127).

At the end of the voyage on the deconstructive continent, one may rise several objections against the deconstructive principles. First of all, the very limits of *perspective* are too loose: from *whose* point of view and with respect to *what* can we create a theory of perspective? In other terms, which is the subject, and which is the object of perspectivism? Is deconstruction an instrument of research in post-modern perspectivism, or is it simply a medium? As long as the principle of shifts among levels of investigation (logical, narrative, iconic) represents at the same time a deconstructive cause and effect; as long as postmodernism (no matter how we perceive it: as a chronological moment, a current, a movement or a wider sensibility) recycles the past and searches for the future, without explicitly drawing a line between them (see Lyotard, 1979; 1986); finally, as long as these very lines are the ambiguous result of an universal intertextual process in which in order to establish the identity of text,

interpretation and reader one has to permanently shift from one category to another, any attempt to define the notion of perspective in a coherent, acceptable way turns out to be useless. What one can still do is make successive *estimations* of post-modern perspectives, by means of deliberate incomplete criteria and instruments.

Secondly, to dismiss perception and reference on grounds of their own imperfection is to proclaim the uselessness of hermeneutics: since the premises of deconstructive reading assert that any investigated system is insufficient (as well as any method of investigation we intend to use in order to prove its insufficiency!), why should one bother reading/ interpreting literature, for instance? If deconstructive indeterminence of meaning has such high theoretical credit, can the deconstructive approach be said to have any particular valid goal, except being enuntiative? These are questions which both critics of deconstruction (Scholes, 1985) and its supporters (Culler, 1982) find difficult to answer.

However, the plain affirmation of incomplete, fallacious character of the critical act may stand for a more profound phenomenon: that of bestowing an ontological status to relativity. The manifold, acute implications of this phenomenon will be dealt with in the following part of this study.

2. A Voyage on the Fractal Continent

The geography of literary postmodernism includes a second important continent, as diffuse and extended as the deconstructive one. Chaotic, but still governed by order, dismantled, but still coherent, unmeasurable, but still mathematically calculable, relative, but still omnipotent, the *fractal* continent is probably the most elaborate form of present literature, together with the *virtual* (or *cyberspace*) one, which it matches entirely or partially. Because of its simultaneously *entropic* and *negentropic* structure, it brings up theories of a logical, iconic and narrative perspective which look shattered, dismembered in an infinite number of differently shaped shards. These splinters are connected by a seemingly random common denominator. Consequently, both the mapping of post-modern fiction and the global understanding of literature, on all its levels (fictional, critical, historical, theoretical etc.), undergo a substantial process of reconsidering and restructuring.

The key-term useful to understand a great part of contemporary fiction by means of perspectivism belongs to the field of mathematics and was discovered by French mathematician of Polish origins, Benoit Mandelbrot. It was theorized in his 1975 volume, nowadays regarded as a classic of science: *Les objets fractals:forme, hasard et dimension.*

Etymologically speaking, *fractal* comes from the Latin *fractus*, having the same lexical root as *fraction* and *fragment*; it is also related to the verb *frangere,* whose signification is close to *irregular* and *fragmented.* In one of the simplified definitions provided in *Fractals.Forms, Chance and Dimension,* a fuller, modified version of his 1975 book, Mandelbrot considers the fractal:

> [...] a mathematical set or a concrete object, whose form is extremely irregular and/or fragmented in all dimensions.
>
> (1977, p.294)

Further on, we may speak of *fractal objects, fractal dimensions and a fractal geometry,* all meant to orchestrate several universal non-Euclidean patterns, based on irregularity, hazard, amorphism and complexity. According to Alain Boutot,

> Fractal means fragmented, fractioned, irregular, interrupted. In general, the fractal theory is a theory of the fractured and broken, of granulation, dissemination, porosity and so on. The shapes it deals with are characterized by an intrinsic complexity of fundamental irregularity, which is present at all the levels of observation.
>
> (1996, p.26)

The fractal theory appeared as a theory regarding the geometry of nature. In time, its applications were transferred to several other extremely different fields, such as astronomy, economy, social theory or human anatomy. Hence, fractal mathematics allows at the same time the measuring of the clouds' dimensions in the sky, of air turbulence phenomena, of the waves in the ocean and of the pellet we can obtain by rumpling this very piece of paper. As measurable in their apparent irregularity and lack of precision are also the moon's craters, the erratic topography of a large city's streets, the shape of a river such as the Missouri, our sanguine system of veins and arteries or the oil trails leaking in the ocean from some desperate tanker (8).

Irrespective of its applications or explanations, fractals are still characterized by a feature which was called *self-similarity* (Mandelbrot,

1977, p.31) or *dilatative symmetry* (Hurd, 1989, p.1). This feature makes it possible for any section of a fractal which is magnified by an arbitrary factor to look exactly the same as the original fractal. As Leonard M.Sander points out, discussing fractal geometry implies an analysis of a *fractal growth:*

> A fractal is an object with a sprawling, tenuous pattern. As the pattern is magnified, it reveals repetitive levels of detail, so that similar structure exists on all scales. A fractal might, for example, look the same whether viewed on the scale of a meter, a millimetre or a micrometer.
>
> (1989, p.15)

Since fractal dimensions are being expressed in fractions and not in numbers, the self-similarity of fractals should be related to their fractional character. This is one of Mandelbrot's main ideas, enabling his mathematics to reshape our entire view of the surrounding universe. By finding self-similarity in a series of irregular phenomena, apparently taking place at random, by comparing the shapes of mountains, clouds, plants, soap bubbles, ice crystals and lunar cavities, by putting together the structure of the Eiffel tower, of an old branching tree and of the linguistic trees from the transformational grammar, the French mathematician provided both our scientific and our artistic world with an new ontological dimension (Mandelbrot, 1975; 1977; 1983). As Benjamin Wooley keenly remarks, Mandelbrot seems to have found some kind of a "universal meaning" (always existent, nevertheless hard to decode) plotting the boundary conditions that govern the behaviour of many potentially chaotic or turbulent phenomena: vortexes, twisters, lightnings, galactic clusterings etc. (Wooley, 1992, p.90). Moreover, the two of them discussed in the United States (where Mandelbrot settled since 1958 as one of the main scientists at IBM Research Center in Yorktown Heights, New York) the very importance of measuring the unmeasurable and shaping the unshapable. As Wooley remembers in his book *Virtual Worlds. A Journey in Hype and Hyperreality,* the father of all fractals told his listener, while eating a "highly fractal" endive:

> I did not discover the fact that clouds are like billows upon billows upon billows. Every child knows that. What I did was identify tools that turn this intuitive perception of shape into something that science can grab.
>
> (1992, p.89)

Of similar importance to the understanding of the worlds around us(including the world of literature, as shall be seen further on) is the

fractal mathematicians' success to create a geometry of the traditionally non-geometrical, that is to map in an "Euclidean" way the diffuse, dissoluted non-Euclidean shapes and forms. Territories such as the natural, living beings' one which seemed, until the seventies, irreparably disorganized, forever irreductible to mathematic formulas and equations, are being gradually mastered by mathematicians, chemists, physicists and biologists (see, among others, Stevens, 1974; Poston and Stewart, 1978; Prigogine and Stengers, 1979; Hao, 1984; Cvitanovic, 1984).

A fractal dimension is situated somewhere between two "ordinary " dimensions. For instance, Great Britain's shore or the shape of a cauliflower cut from the middle in two pieces exist between the one-dimensional line and the two-dimensional surface. That is, we are surrounded by many sinuous curves, which give the impression they fill a surface. Their mathematical measuring, as well as its graphic materialization, is mainly based on the understanding of the relation between dimension and the degree of filling of the space. In other terms, this means we deal with a scientific highlighting of a perspective problem. Such is the case, for example, when reinterpreting on fractal grounds the relation between veins, arteries and tissues in the human body: each point in a non-vascular tissue relies on the boundary between two sanguine networks; the tissue filled with veins and arteries intersecting in all points (none of which remains free) is called a *fractal surface* (see Mandelbrot, 1977, pp.77, 79; 1983, pp.150, 159). Ultimately, through the deconstruction of its own principles, fractal geometry can be considered a fractal itself, built up on the fragile boundary between two mathematic dimensions:

> Fractal geometry is a workable geometric middle ground between the excessive geometric order of Euclid and the geometric chaos of general mathematics. It is based on a form of symmetry that has previously been underutilized, namely invariance under contraction or dilation.
>
> (Mandelbrot, 1989, p.8)

The most interesting thing regarding the relationship fractals have with literature is of a general concern. Since fractal theory does not provide exact mathematical predictions, but quantitative, subtle models to describe the evolution of a system, in other words, since it has no mathematic "practical" applications (Mandelbrot, idem); since, on the other hand, fractal theory suggests a better understanding of the real world rather by checking its display of forms, than by comprising it through figures and statistics, it can be regarded as an *almost poetic* theory. Its aesthetic

relevance, resulting both from the observation of natural fractals and the computer graphics' materialization of fractal equations, have been noticed by most of the researchers in the field.

For example, Mandelbrot refers to the "plastic beauty" of the fractal world and a "new form of geometric minimal art" (1983, pp.2, 23). He also identifies its poetic interactions with realist and abstract art (1989, pp.8-11). H. O. Peitgen and P. H. Richter, two of the most famous researchers in fractal mathematics and physics, discuss "*The Beauty of Fractals*" (the title of their classic book from 1986). Mathematician Martin Golubitsky collaborates with Michael Field for a photographic album in which fractals are discovered in or associated with the Islamic art of symmetry -tapestries, stained glass, ceramics- (1992), while the aesthetician and psychologist John Briggs argues that fractals belong to "a new aesthetics of art, science and nature" (1992, p.4). In a similar manner, James Gleick, author of several popular books on chaos theory, asserts that the fractal universe is one of natural, intrinsic beauty (Gleick, 1987; Gleick and Porter, 1990) (9).

Among the most pertinent demonstrations of the logic and aesthetic impact of fractal theory, at least two are worth mentioning: Clifford A. Pickover and Ian Stewart's. The former, a researcher at IBM Research Center in New York, writes kinds of pop-up books (partly scientific, partly literary -in the absurdist manner of Lewis Carroll). They are illustrated with drawings and computer-generated pictures, which turn the mathematical inquiry of the surrounding world in true "*Visual Adventures in a Fractal World* " - that is the subtitle of his 1994 book, *Chaos in Wonderland* (see also 1990; 1991; 1992). The latter, Ian Stewart, a mathematician specialized in the research of universal symmetry, has written several...scientific comics in which he attempts to make catastrophy or fractal theories accessible to non-academic readers. Although they may be taken as frivolous (especially from the viewpoint of the scientific community) - fractals, for example, are defined as "A class of very interesting objects, whose dimension is not entire" (1982, p.24)-, they remain an extremely useful instrument to illustrate the principles of recent mathematics. In fact, Ian Stewart's scientific comics enable the literaturization of scientific fields already considered significant from an aesthetic point of view (see above). In comic strips, the fractal world gets a personal ID, mathematical calculation becomes a game at hand, whereas the new logical mechanisms on which it relies seem more accessible (as anecdotic micro-narratives).

For instance, in one of the episodes of *Les fractals. Les chroniques de Rose Polymath* (1982), Rose Polymath and her friend Gaston (two alien-looking characters, similar to the Martians in the pulp magazines of the thirties) get a strange job from an inter-galactic boss: they have to measure the exact dimension of a winding shore on the planet Ombilicus. Since it proves impossible to map its dimension by means of traditional, Euclidean geometry, the two protagonists resort to another kind of investigation, which will allow the exact calculation of the examined land; it is, of course, the fractal investigation. At the end of this new calculation, Rose and Gaston conclude that the dimension of the surface to be mapped is *infinite* (endlessly self-similar in smaller or larger folds of the original "lace"); as a result, they are being fired, because their boss intended to build a dam on the entire surface of the shore!

Apart from the deliberate theorizing of the expressive character of fractals (sometimes achieved by less orthodox scientific methods, as one may see in the previous example), there are also intuitive, rather empirical testimonies of the "beauty" of self-similar disorder. Many of them precede Mandelbrot's discovery or are contemporary to it.

For instance, back in 1965, Theodore Schwenk, a researcher in the field of water and air chaotic turbulence, suggested the existence of a natural, human and cosmic geometry based on the regularity of irregular shapes. The 1976 English edition of his work collects both photographic illustrations which we may identify as fractal today (waves, curls of the sand, vortexes, clouds, rinds), and empirical reference to the functioning of what we now call fractal dimensions:

> Plants are vascular systems through which water, the blood of the earth, flows in a live interdependence with the atmosphere. Together, earth, the world of plants and the atmosphere make *one* big organism, through which water flows like the blood of a living organism.
>
> (1976, p.14)

Less "antroposophical" and more clearly scientific are the remarks made in the seventies by Peter S. Stevens, a researcher at Harvard Medical Arena. In his opinion there is a close resemblance between the inner structure of the human ear and the spirals of snails and galaxies or between the branching of trees and the winding of rivers; this resemblance is based on the infinite recycling of a finite number of patterns:

> When we see how the branching of trees resembles the branching of arteries and the branching of rivers, how crystal grains look like soap

> bubbles and the plates of a tortoise shell, how the fiddle heads of ferns, stellar galaxies and water emptying from the bath tube spiral in a similar manner, we cannot help but wonder why nature uses only a few kindred forms in so many contexts... It turns out that those patterns and forms are peculiarly restricted, that the immense variety that nature creates emerges from the working and reworking of only a few formal themes.
>
> (1977, p.1)

Cyril Stanley Smith, one of the most famous researchers in the field of metals, is also interested in the "beauty" of ordered chaos. At least two of his books, *From Art to Science. Seventy-Two Objects Illustrating the Nature of Discovery* (1980) and *A Search for Structure.Selected Essays on Science, Art and History* (1981) provide an illustrated aesthetics of the fractal world, relying on the understanding of the interdependence between fragmentation and continuity and on the decoding of branching structures included in the design of chaos (1981, p.54).

The research of both Mandelbrot and the theorists of chaos and catastrophies proves to be extremely valuable. Its applications help scientists refine synthetic images and study telephonic perturbations. They also enable an accurate mapping of nature's interactive dimensions and the reinterpretation of baroque architecture by reconsidering the relation between the global shape of a building and the distribution of its ornaments (10). No matter which of these segments we may refer to, the impersonal figures and equations that explain the fractal perspective are simply irrelevant when compared to its easily accessible, universal beauty:

> The beauty of fractals is accessible not just to scientists and engineers, but to everyone who has an eye for art.
>
> (Hurd, 1989, p.1)

The application of fractal and chaos theories in the field of literature may be traced in several directions. One of them is resumed in the following question: is literature, in general, and post-modern literature, in particular, a *fractal unit*? This supposition implies, on the one hand, the redefinition of literature as a field of open tensions in which the authors and their works are rather erratically placed, and, on the other, the discovery of the ordered "equation" (or "equations") to be considered their common denominator.

However, if the unifying factor is in itself the reiteration on several scales of the initial fractal pattern (namely literature), then its "mathematic" redesigning turns out to be as difficult as Gaston and Rose Polymath's

attempt to measure the shore of Ombilicus! With no doubt, understanding literature in a traditional manner (that is, as a deterministic chain of events, periods, currents, authors and works) precludes such potential difficulties: it is quite easy to find historical, linear causes, from which to establish what is literary "deviant" and "abnormal". Such a perspective hardly takes into account the erratic, non-linear characteristics of those splinters in the field of tensions which we conventionally name "literature".

To regard literature as a fractal unit therefore implies a strong argument with the comfortable way in which traditional literary critics and historians, including many Romanian ones, categorise authors and texts on stable, authoritative historicist grounds (see, among others, Călinescu, 1941; Simion, 1978-1989; N. Manolescu, 1990; Ulici, 1995). Actually, literature should not be considered a wax museum where the public are bound to wear gloves and protection glasses in order to visit it. Maybe it should be viewed as *a space with chaotic geometry* (some kind of an infinitely branching fractal, on an infinity of scales), whose dimensions, styles, configurations and centres are being simultaneously and alternatively multiplied. The result would by no means lie in the construction of a literary monument, but in the shaping of a discontinuous, conflictual architecture (similar to the deconstructive one), capable of transforming the museum in a series of changing holograms (I. Manolescu, 1996, pp.196-200). Such a specific post-modern synopsis would help the designing of what theorist Jim Collins calls *intertextual arenas*, namely:

> [...] tension-filled environments that have enormous impact on the construction of both representations and the subjects which interact within them.
>
> (1989, p.27)

The fractal perception of literature may be regarded as one of the major goals of post-modern theorists, even if they do not explicitly resort to Mandelbrot's mathematical vocabulary and instruments. We should quote several such examples in an endless series of definitions or estimations of postmodernism's features. For instance, the chains of postmodernism established by Ihab Hassan include the terms *anarchy, hazard, dispersion* (1982, pp.184-85) and *fragmentation* (1990, p.18); the strategies of postmodernism identified by David Lodge are related to *discontinuity* and *hazard* (1977, pp.220-45); Douwe W. Fokkema's analysis of post-modern conventions follows the relation *continuity vs. discontinuity* and situates *inclusiveness* and *assimilation* at the core of the post-modern semantic

universe; last but not least, the simultaneously *closed and open, entropic and negentropic* character of post-modern literature is asserted and illustrated by Gerhard Hoffman's examples (1996, pp.132-69).

Hence, even the terms *postmodernism* and *fractal* have something in common, due to their mutual semantic ambiguity and the lack of critical consensus around their definitions. With respect to *postmodernism*, this ambiguity is still obvious more than half a century from the first use of the term:

> Nothing concerning the term is free from debate, nothing regarding it is satisfactory.
>
> (McHale, 1989, p.3)

On the other hand, the lack of consistency in the definition of the *fractal* is being stated by its inventor:

> Although the term *fractal* is defined in Chapter 3, I continue to believe that one would do better without a definition.
>
> (Mandelbrot, 1983, p.361)

A second way in which fractals could be related to post-modern literature is that of reconsidering the latter as a *fractal dimension.* From this perspective, post-modern literature can be perceived as a fractal geometry working between two dimensions: one of the cultural past (which it systematically recycles) and the other of the future to come (which it anticipates by means of its most experimental forms). Between the two dimensions, postmodernism permanently negotiates its origins, while its genealogical determinations remain suspended in a paradoxical, blurred temporality (Lyotard, 1979). Therefore, we deal with an infinitely diverse dimension, whose fragmentations and foldings reflect on different scales the *same* repetitive, self-similar features. Ultimately, post-modern literature could be seen as an *intermediate* fractal dimension, among an infinite number of other possible fractal dimensions (history, mentalities, culture, the history of literature etc.).

To understand post-modern literature as a fractal dimension also raises a problem of reading. Should post-modern novels be regarded as a literary dimension of ordered chaos? Then any reading would be necessarily related to each of the dimensions in the proximity of the post-modern one. In other words, reading becomes a compelling intertextual, inter-cultural, inter-iconic act. Or, to put it in scientific terms, it becomes an inter-fractalic process.

On the other hand, if post-modern literature does not alter its self-similar features irrespective of the scales we decide to view it on, then two different ways of reading become possible: we may read a novel starting from whatever other post-modern one; or we may read the same novel starting from whatever point of its narrative. That is, in postmodernism, we may read one *single* infinite novel, made of a series of other novels belonging to the post-modern age or to any other cultural period, or we may read a large number of separate novels, starting from *wherever* we wished and ending *wherever* we wanted (11). Both options are equally valid. Actually, the virtues of such a *fractal reading* (quite similar to the *accelerated* post-modern ways of reading, like browsing or scanning) are mentioned by many of the theorists in the field. John Briggs, for example, opens his book on *Fractals. The Patterns of Chaos* contending that:

> Chaos and fractals are non-linear phenomena, so you are hereby invited to avoid reading this book linearly. Try weaving your own fractal path through the text. Perhaps you started to do that when you first picked the book up. Jumping around might seem a little chaotic, but that's the pattern under discussion here.
>
> (1992, p.11)

Finally, a third way in which a close connection between fractals and post-modern literature can be accomplished is by identifying and defining a *fractal perspective* in post-modern fiction. In general, no matter the place or level we intended to view it from, the relation between literature and fractal theory is based on a problem of perspectives. The reinterpretation of links between authors, texts and periods leads to a new kind of perspective in literary history, whereas the reconsideration of proportions in the relation reality-image emphasizes a new aesthetic sensibility, consistently illustrated in post-modern fiction. One deals here with a theory of logical, narrative and iconic perspective, relying less on the endless deconstructive mirrorings and more on the *chaotization* of concepts such as reality and image. One also has to find out the "subliminal" patterns which reassemble these concepts.

In such particular cases, the decoding of the post-modern narrative can be achieved by searching the fractal details (that is the most fractured, "accidental" and the "less significant" iconic and narrative guidelines) which reconstruct *on a certain perceptive scale* the wrinkled pattern of the whole. Most of the time, the scale resulted from reading the text in a fractal manner is simply a small fragment of a logical, psychological, philosophical, historical, literary, mediatic reality and so on, itself shattered

to infinite pieces. Moreover, one must not forget that *between* the dimension of the whole and its pieces there are always other various fractal dimensions.

The most convincing examples of fractal perspective in post-modern narrative come from American fiction. With Thomas Pynchon, the narrative is conceived as a fractal dimension dependent of the interaction of two principles: the textual entropy and negentropy. Between brownian disorder and reordering, between chaotic dismemberment and reassembling, between increasing and decreasing, Pynchon's narrative thermodynamics fluctuates in one of the most weird fractal patterns. For instance, in his short story *Entropy*, published in 1960 and included in the volume *Slow Learner* (1984), the narrative itself is a fractal dimension whose patterns are released by the interaction of two spatial, iconic and thermodynamic dimensions: it connects two flats (situated one above the other and "sealed hermetically") to the chaos of the outside town. By breaking a window, which may be seen as an act of destroying the symbolic seal between order and chaos, the balance between the two dimensions is lost and the characters resignedly await a new and final form of equilibrium, that is the thermic death of the universe:

> [...] she turned to face the man on the bed and wait with him until the moment of equilibrium was reached, when 37 degrees Fahrenheit should prevail both outside and inside, and forever, and the hovering, curious dominant of their separate lives should resolve into a tonic of darkness the final absence of all motion.
>
> (1985, p.94)

A similar phenomenon takes place in Pynchon's novel *The Crying of Lot 49* (1965), where by means of a device called *The Nefastis Machine* the universe of thermodynamics is connected in a chaotic and ordered way to the informational one, while the narrative appears as a fractal feed-back mechanism between these two universes. Without being described as such, the fractal condition of Thomas Pynchon's narrative has been approximated by some critics and theorists who have associated it to *interface fiction* (Schaub, 1981, pp.103-20; partly, McHale, 1992, pp.236-37). Thomas S.Schaub, one of the most thorough investigators of Pynchon's work, identifies several kinds of fictional interfaces in the American writer's novels:

> Pynchon's characters exist in the conditional space between the facts of their situations and the meaning these facts could have. The readers of

> Pynchon's texts fill the same ambiguous space, because his stories do not have an ending to tie form and meaning.
>
> (1981, p.103)

Besides, the oblique, fractal relation reader-printed word- text, where meaning is often a medium, is usually mastered by characters who are engineers: they work on the interface between events and their explanation (John Nefastis, in *The Crying of Lot 49*; Tyrone Slothrop, in *Gravity's Rainbow* and so on).

The fractal perspective on which Pynchon's texts are "engineered" a decade before Mandelbrot's discovery results not only from the architecture of narrative interfaces, but also from the fictional distribution of fractal objects or images. They are themselves a part of a larger random pattern. Thus, in *Gravity's Rainbow* (1973), the trajectories of the falling German V2 rockets in Second World War London design a chaotic, yet ordered pattern: their points of impact tend to regroup in clusters similar to the galactic ones (1975, p.222), while in *The Crying of Lot 49* one of the protagonists, Mucho Maas, finds the human face to have symmetries similar to those of the Rorschach spot (1979, p.11).

Nevertheless, the main fractal feature of Thomas Pynchon's fiction results from the interaction between dimensions and the degree in which the narrative space is filled. From this point of view, the deconstruction of the originary *mimesis* in an endlessly regressive series (from which the "model" has vanished) is followed by a pulverization of this series in chaotic shards: the relation "reality"-image is no longer dependent on the phenomenon of infinite mirrorings. Actually, it is caught in a dispersive process through which mirrors reflect the shattered splinters and make up an intermediate picture of the patterns among them. What in visual arts is the relation between the positive and negative space of a drawing, painting or video [see, among others, Hofstadter's analysis of Escher's graphics (1989, pp.63, 67)], in Pynchon's fiction becomes a way of narrative structuring, with disturbing logical and iconic implications.

For example, in the novel *Vineland* (1990), the fractal shards of a window through which the protagonist, Zoyd Wheeler, jumps (in order to cash an annual cheque for mentally disabled people) are being recomposed in the imperfect splinters of the different narrative episodes. This leads to both a disordered and a precise narrative/iconic pattern. From a logical perspective, the novel looks like a schizoid mixture of episodes (see also the name of the protagonist!), whereas from an iconic perspective, it has

the appearance of a random, multi-dimensional space. The element which unifies the fractures in the text is embodied by the presence of an omnipotent supra-narrator, some kind of a fractal God of the narrative; this textual God is shattered in an infinite number of pieces, but its mere presence allows him to control the conventions of dispersion, of dispersion within dispersion and of dispersion among other dispersions. Thus, by means of an authorial pantheism working on all possible scales, the post-modern narrative displays its multiple perspectives within a general pattern whose existence is emphasized by its very infinite imprecision.

Persuasive illustrations of fractal objects and dimensions are also to be found in John Barth's novels. In *The Tidewater Tales* (1987), the tides of the ocean in Chesapeake Bay and the narrative's tides in which Katherine and Peter Sagamore are, in turn, characters and fictional authors, tell more than a story of symbolic coincidence. In a similar way, the increase and decrease of Katherine's sexual lust during her pregnancy and the increase and the decrease of the told stories' intensity stand for a chaotic, still ordered pattern of textual and iconic movement. Moreover, although the movement of the waves seems as hard to represent as the foetal slidings inside the amniotic liquid, John Barth suggests both these two submit to the same geometry of aleatory coincidences:

> [...] a perfectly unlikely chain of perfectly fortunate coincidences.
>
> (1988, p.115)

The same fractal "coincidences" appear in the novel *The Last Voyage of Somebody the Sailor* (1991), where the repetitions of "chaotic" narrative and iconic details work on very different scales. For instance, a similar fractal unit is to be perceived in the pattern of the Atlantic Ocean, of the ocean of stories on which Sindbad's metafictional alter-ego, Somebody the Sailor (himself a meta-meta-fictional projection of newspaperman Simon "Baylor" Behler) is sailing, and of the placentary ocean in which Simon was born. Another fractal unit is represented by the neighbouring presence of the chaotic Maryland shore and of the scorchings on the toast Simon eats during breakfast:

> The scorchings on the egg-yellow field of my French toast made a false-colour map of our tidewater county.
>
> (1991, p.30)

Obviously, both Thomas Pynchon and John Barth's fiction witness a chaotically ordered relation between their narrative foldings and the

foldings of different fictional objects (such as scorchings on a toast, scorches on trees, fragments of windows and so on). It is the same relation as the one between the branching of a tree in nature and the vascular geometry of the human body. However, we should not necessarily confer objective status to an always interpretable reality -since it depends on the *perspective* through which the observer "reads" it; we also need not mechanically apply a pre-established reading mode, turned into an universal remedy. According to scientists, in the absence of the creator of this world, no one can grasp the correct relation between observers and the object of their observation:

> Are symmetries intrinsic patterns of nature or artefacts of human perception? To this question, there is no universal answer.
>
> (Stewart and Golubitsky, 1992, p.259)

Actually, the problem raised nowadays by the fractal geometry of post-modern literature is the problem of the ontological redefinition of the surrounding universe. Nevertheless, we should not associate such an endeavour with an attempt to submit the world to forceful aesthetic patterns, nor should we adopt it as a unique ontological code, since the world does also exist *otherwise* than sensed by our human perception (for instance, cats can "smell" colours, while bees have an ultra-violet spectrum "sight"). The fractal theory simply provides one of the many possible answers to the question: can chaos be ordered? -or, in other terms, are we able to measure the "unmeasurable"? Through it, universal asymmetries have been found a repetitive symmetry; at the same time, scientists and artists have drawn a transitory boundary between chaos and order, so as to illustrate the spectacular character of natural and artistic creation.

At this point of the analysis, we may discuss at least two important issues: is the fractal "material" unlimited? and, if so, what would the role of literature in ontologically redefining the world look like?

The examples concerning fractal applications selected from post-modern American fiction are enough for an affirmative answer to the first question. However, recent Romanian novels such as those written by Mircea Cărtărescu and Sebastian A. Corn prove the same thing.

In Mircea Cărtărescu's novel *Orbitor* (1996), almost every micro and macro-cosmic structure is bound to represent a fractal unit: from the atoms in the body of the narrator (himself named Mircea), to the particles of stellar dust; from the wings of the Lorenz butterfly which haunts the protagonist's dreams and fantasies, to the random architecture of

underground pipes in Doamna Ghica district; from the chaotic geometry of streets and avenues in Nicolae Ceaușescu's Bucharest, to the neuronal mind patterns of the protagonist's teen-aged friends:

> Our cerebro-spinal body is the very proof we are worms of a large astral being.With its marrow like a root and with its two brain hemispheres like two plumpy cotyledons, it looks exactly like a small plant in its first blooming stages.
>
> (1996, p.61)

In other episodes of Cărtărescu's novel, the suggestion of a universally extended fractal network is even more poignant, while the narratological effect proves rather *realistic*, than phantasmatic:

> We live on a small piece of limestone from the cosmic sclerosis. A small, compact animal, a single particle, a billion times smaller than the nucleus of the sun, gathered in a unifying force the entire pattern our mind perceives at the time when it is allowed to perceive it. Inside, it had bubbles of space and strings, milky galactic streams and the planet's political map and the unpleasant smell of the neighbour's mouth in the tram and Jezechiel's vision on the shore of the Chebar and each molecule of melanin in the freckles under the left eyebrow of the woman you undressed and made love to the night before and the wax from the year of one of Artaxerxes' ten thousand immortal warriors and the bunch of catecolamynergic neurones in the rahidian bulb of a badger sleeping in the forests of the Caucasus.
>
> (1996, p.57)

In Sebastian A. Corn's science-fiction novel *Aquarius* (1995), the action simultaneously and alternatively takes place in the real, historical America of John Kennedy and in the diffuse geography of the liquid tissues interacting in the president's body and mind. These mysterious tissues are also populated with primitive humanoids, cyber-spatial sects and fractal assassins. However, the assassination of president Kennedy in his "real" dimension does not cancel the existence of the inner fractal dimensions, but reinforces it in other mental dimensions piled inside the president's mind. Moreover, the narrator's conclusions become an infinitely branching fractal unit:

> Actually, a conclusion regarding common things is no longer possible; it has been replaced by a set of multiple conclusions. Piled over the logics of biology, should it really exist. Should it be rational. A restart of Mandelbrot's way of establishing *tendencies,* although starting from simple cause-effect st*atements.*
>
> (1995, p.209)

The same examples may also provide an answer to the second question concerning the ontological redefining of the surrounding world. The fractal view of literature upon the universe is essentially a fictional transcript of a new kind of existential sensibility, where the dispersion of experienced facts is equal to that of imagined ones, logical and iconic associations between symmetry and asymmetry have a common pattern and the "processing" of information is being achieved through *zappings* from one perspective to the other.

Therefore, the discussion is focused on a new sensibility, allowing one to access perceptive simultaneity and successivity without disturbing the mind in a schizoid way. By means of systematic logical and iconic juxtaposition, interpolation and overprint, which recent psychologists and theorists of literature have identified with the mechanisms of thought (Kosslyn, 1980) or with contemporary methods of textual construction (McHale, 1987), this sensibility may be regarded as revolutionary. Its fractal elements, together with the deconstructive ones, provide multiple pathways to the realm of post-modern alternative aesthetics.

From this final, pluralist perspective, there is no question that both deconstruction and fractal theory have proved their ability to challenge our firm belief in the stability of rational artistic structures. In the future to come, one may assume the switch to variable, hyper-rational patterns of mind and art will be completed.

Notes

1. Even the term *deconstruction* suggests an undermining and a surpassing of the oppositional logic on which it is founded (*construction/deconstruction*).
2. However, we should still mention the fact that Derrida's deconstructive philosophy is conceived as an attack on the structuralist opposition between *signifier* and *signified* (1967, 1972 a). The Saussurian logical opposition is radically questioned on basis that there is no valid transcendent reason to connect a certain signifier to a certain signified, in order to assert a unique, immobile meaning of that signified. In other words, Derrida criticizes the reduction of the signifier to a stable signified, that is he disagrees with the tendency of attributing the signifier a privileged position in the process of making meaning. Instead, he asserts the existence of an infinitely regressive movement of the signifiers (Derrida, 1972 b, p.38).
3. Here, the use of the oxymoron ("frozen *perpetuum mobile*") was thought best suited to the explanation of the paradoxical logics of deconstruction in Escher's

graphics. As one may easily notice, the very deconstruction of a paradox implies the use of paradox.

4. Actually, because of its simultaneously perfect and imperfect structure, the "geometry" of I.L.Caragiale's story resembles the geometry of *impossible objects*, such as those in the graphics of Bruno Ernst, Oscar Reutersvard, Jos de Mey (see, among others, Ernst, 1986, pp.62-67).
5. In semiotic research, the process is identified by Charles Sanders Peirce. To him, the process of signifying is equivalent to an infinite regression of the signifiers ("interpretants", as he calls them) towards a logical illimitation, that is, towards an endless semiosis (Peirce, 1932, p.300; 1935, p.470).
6. In the field of logics, the profound motivations of unsolvable alternations are being analysed, among others, by Douglas Hofstadter, who tries to dismantle the epistemological prejudices they created in time (1979, 1985).
7. Apart from the deconstructive philosophical context, the problem of accolades also has an explanation in the field of cognitive psychology. It may be found in the attempts of several researchers to identify the mechanisms through which mental imagery is being produced; functionally, these mechanisms are associated with the operations of computers: both are able to "copy" and stroboscopically process all the intermediary "steps" (Kosslyn, 1980).
8. The relation between a series of deterministic causes and the random effects they generate is discussed especially by chaos and catastrophy theorists. In situations such as the evolution of stock exchange or the riots of prisoners, they are likely to detect unexpected "turbulent" effects, produced by linear causes (see, among other sources, Prigogine and Stengers, 1979, p.191; Cvitanovic, 1984, pp.3-4; Hao, 1989, p.3).
9. The fractal world can be viewed also from the perspective of aesthetics of ugliness. Several mathematicians who have created fractals without having any idea about what they meant (such as Waclaw Sierpinsi, David Hilbert or Georg Cantor) did regard them as...disgracious, monstrous or pathological (see, among other sources, Mandelbrot, 1977, p.77; Oliver, 1996, p.19).
10. Analysing the relation between *form* (*shape*) and *distribution* is essential to understand most of Escher's drawings. They may be defined as dimensionally ambiguous and perspectivally polysemantic; so may several post-modern novels (Pynchon, 1973; Cărtărescu, 1996).
11. The same kind of inter-changeable layered reading may also be applied to post-modern short stories, such as those included in the Romanian anthology *Desant'83* (1983). Here, although quite different, the stories of eighteen young Romanian writers make up something like a *Tel-Quelian* novel of everyday life.

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