# Cristian Pașcalău Double-Crossing Images: Intentionality and Representation in the Work of M. C. Escher 

## Abstract

This article studies some aspects of the Dutch graphic artist M.C. Escher's work. We focus mainly on how intentionality and representation convey a key for interpreting Escher's utterly impossible world. Having been somehow rejected by artists, Escher was acclaimed by scientists instead, especially by some of the outstanding scholars working in the field of geometry, who enable us to grasp a mathematical perspective in our analysis, but keeping always in mind that his prints are not only a subject of scientific interest, but artistic productions with high aesthetic value. We undertake an inquiry into his peculiar mode of creation within a loose mathematical (Coxeter, Penrose, Schattschneider, MacGillavry), pragmatic (Searle), and fractal (Mandelbrot) framework, and also briefly refer to a contemporary filmmaker inspired by his work (Grimonprez), by briefly analyzing one of his visual essays, namely Double Take.

## Keywords

M.C. Escher; Tessellation; Duality; Symmetry; Relativity; Fractal Geometry; Crystallization; Impossible Objects; Lithography; Woodcut; Self-Similarity; Self-Reference.

## Cristian Paşcalău

Babeş-Bolyai University, Cluj-Napoca, Romania babelrealm@yahoo.com

> What I give form to in daylight is only one per cent of what I have seen in darkness
> (M.C. Escher)

The concept of Intentionality forms the subject of Searle's pragmatic approach in the philosophy of mind. For Searle, intentionality is not essentially a linguistic feature, for it belongs to a deep level of consciousness. Intentionality is an intrinsic feature of certain mental states, and it develops contents that can be linked to concepts like perception, desire, belief, love, hate, causality, meaning, or reference. The intentional content is undoubtedly linked to the object or the state of affairs that would best satisfy that mental state. The relation of an intentional mental state to the object or the state of affairs is the relation of representation. The present article aims to step into the most brilliant, stylized, longing for perfection artistic world, namely M.C. Escher's lithography, woodcut, and tessellation work. We aim to explore some of the key concepts that underlie Escher's systematic approach to infinity and geometric forms shaped by means of reflection, duality, symmetry, relativity, hyperbolic plane, and fractured, fluid multiple perspectives. Escher created an impossible world

seemingly apparent to the games of language envisioned by Wittgenstein, in
which all the simplifying concepts (among them: reality, matter, space, time, surface, expansion, reference, coherence) are captured in language and stored in order for the members of a linguistic community to know what they are talking about and in what terms they do so. It is without any shadow of a doubt that no social dimension would subsist outside a clear frame of discourse which any idiom provides and helps delineate a perspective on the world. Language is a category with which any individual can build his own perspective on the world, within the wider perspective of his community.

The simplifying concepts of space, time, reality, or matter, among many others, offer a feeling of safety, of an explanatory ground on which we are able to build our knowledge. We take these concepts for granted, as they are, and this enables us to guide our efforts of understanding towards other conceptual horizons. The world we live in is external to our knowledge, and individuals, as entities living in the world, are external to their own knowledge. Thus we establish a double relationship with the world: on the one hand, the world contains us as subjects, the world acts upon us and we act upon the world (even in the case in which we act upon ourselves); on the other hand, we are external to the world, and we attempt to know the world, either in order to be more efficient in the process of acting upon it, in transforming nature to the extent of our biological and/or spiritual needs and desires, or in order to understand the world and ourselves, for that matter. As we do not aim to cope, in our study, with the problem of language in the matter, but only with that of images transposing inner visions, we will focus mainly on what the graphic artist has to offer on this account. As Escher deals
thoroughly with the relation between the real and illusory realms of consciousness, he argues that:

As far as I know, there is no proof whatever of the existence of an objective reality apart from our senses, and I do not see why we should accept the outside world as such solely by virtue of our senses. These reality enthusiasts are possibly playing at hide-and-seek; at any rate they like to hide themselves, though they are not usually aware of it. They simply do it because they happen to have been born with a sense of reality, that is, with a great interest in so-called reality, and because man likes to forget himself. ${ }^{1}$

The best systematic introduction to the work of the Dutch graphic artist M.C. Escher is, most certainly, the one that the author himself has prepared for the editions of his album "The graphic work of M.C. Escher". The text aim is to introduce the viewer to specific creativity issues raised by some of Escher's prints and, implicitly, to the core of his entire work. What matters for Escher is not merely the chronological aspect, but rather the structural connections that can be established between prints that cover different phases of creation. The ten sections are entitled as following: 1. Early Prints; 2. Regular Division of a Plane; 3. Unlimited spaces; 4. Spatial Rings and Spirals; 5. Mirror Images; 6. Inversion; 7. Polyhedrons; 8. Relativities; 9. Conflict Flat-Spatial; and 10. Impossible Buildings.

Although the sections mix a diversity of criteria, subtle references to a dual thinking are made almost everywhere, and this becomes the main criterion for detecting a hierarchy among the prints and the phases of creation. For instance, Sky and Water gives the author an opportunity to comment upon the polarities and the hidden

## $\overline{\text { Intentionality and Representation in the Work of M. C. Escher }}$

complexities his dialectic work generates and, above all, emphasizes the troubling and persistent suggestion of some latent doubles that, apparently having been ignored at a first glance, substantially contribute to shocking one's system of perception, when finding oneself engaged in eye-contact with the image. If it is practically impossible for one to deal simultaneously with the convex and the concave planes contained by a print designed for the single purpose of creating optical illusions (such images are found in any book of Physics), it will be far more difficult to bear in mind all the oppositions contained in a print which was specially designed to continuously generate the idea of opposition, of paradoxical simultaneity. In respect to this particular print, Escher states:

In the horizontal central strip there are birds and fish equivalent to each other. We associate flying with sky, and so for each of the black birds the sky in which it is flying is formed by the four white fish which encircle it. Similarly swimming makes us think of water, and therefore the four black birds that surround a fish become the water in which it swims. ${ }^{2}$

The print we are discussing is one of Escher's most popular prints, and indeed, it fully justifies such praise and prominence. Various factors combine to place this amongst his finest works, which we are now discussing. As the title suggests, the composition is built upon an abstract idea of sky and water. The obvious suggestion is that birds and fish should represent this connected concept. As such, this print has echoes of a similar idea of representing sky and water, shown previously in a "side-byside" manner, which can be seen in two of his earlier non-tessellation examples, namely The Fifth Day of the Creation, of 1926,
and Buoy, between MarchJune 1931. Therefore, pre-
 sumably with this concept at the back of his mind, Escher then went about illustrating this with an appropriate tessellation. There is a delightful economy of effort about this print, with none of the unnecessary "excesses" of the later Sky and Water II, in which there is an "overabundance" of orientations motifs that essentially detract from the composition. Perhaps somewhat surprisingly, given its superb aesthetic properties, the print occurred very early in his tessellation studies, after only two years of practice, and is therefore not, as may reasonably have been thought, the product of vast years of experience. This print, as well many other prints, is a striking inventory of doubles, whose mutual share of mystery increases the fascination which is constantly and subsequently generated by the common objects or qualities that are shape for representation: sky-water, whiteblack, high-low, clear-diffuse, flat-space, alive-dead, concrete-abstract, finite-infinite, known-unknown etc. Thus a frenetic state of paradox emerges, in the manner in which the viewer wants his helplessness in the process of decoding to last longer and longer, on the measure he solves or grasps some of the polarities contained therein. This helplessness gives aesthetic pleasure to the intellect for it emphasizes the illusion of a never-ending development of contradictory situations. All the images that are mainly built on oppositions encompass an almost impersonal train of development, which is in fact another trap in which Escher leads those who contemplate his work. After all, the most efficient means to emphasize mystery is to place it within the most obvious things. Escher once stated if you want to express something impossible, you must keep to certain rules. The element of mystery to which you want to draw attention should be surrounded and veiled by a quite

obvious, readily recognizable commonness.

Typically for Escher, even his earliest sketches, brought to life on the occasion of his travels to Italy, show this magnetism of generating the double inbetween the realm of reality and illusion. The Dutch artist does not seem to aim for more than representing some objects, but in doing so, he rapidly brings the contemplators on the verge of ambiguous feelings and experiences. Reality and its image in the mirror and the illusion of an object reflected by the light of a sphere that is drawn on a sheet of paper generate something resembling a feeling of hope for nonexistence. And this is the kind of equivoque that was embraced by mannerist creators from all ages. Escher often discusses the problem of reality and its essence, its inner truth, stating that we rather deal with unreal worlds, and that we cannot be sure whether there is a real world or not. In fact, we do not live into a real world at all, for we are afflicted by an urge and we have a longing for the impossible, the unnatural, and the supernatural.

Taking into discussion the sources of inspiration for his symmetrical compositions, in his book entitled Symmetry, Herman Weil states:

Once one's eyes are opened, one will be surprised by the numerous symmetric patterns which surround us in our daily lives. The greatest masters of the geometric art of ornament were the Arabs. The wealth of stucco ornaments decorating the walls of such buildings of Arabic origin as the Alhambra in Granada is simply overwhelming. ${ }^{3}$

In June 1936, Escher was ending his last voyage of studies, in Granada and Cordoba. This last voyage was in fact essential for the latter development of his
work. In Alhambra, at La Mezquita, Escher would systematically copy Arabic mosaics. This fact has a particular meaning that recalls a correlative interpretation for it comes on the ground of a keen interest towards developing symmetrical graphic forms, leading Escher's work to a significant change. Eight Heads, a woodcut stampedprint from 1922, was already announcing, in clear cut terms, the great symmetrical development of Escher's work that began after 1937. Similarly, Castrovalva, Tower of Babel, Goriano Sicoli, Genazzano, as well as most of the landscapes of a "recognizable world" (J. L. Locher : 14) contain, altogether, Escher's preoccupation for crystallizing the visible, hence for bringing a certain serenity assessable to a feeling of ecstasy when one contemplates these crystallographic accumulations. From this point on, we can identify the intentionality of his early process of structuring emotions through philosophy and, thus, his intuition of mathematics. If Escher made a clear delineation between the early prints, those created before capturing the revelation of the Arabic mosaics, and the latter ones, the reason would be his persistent inclination towards perfection and the pleasure of considering and reconsidering everything through geometry, even his own life. Having the key of a coherent work, which practically grew within itself, Escher gave up a troubled past, marked by different graphic experiences, a past in which selecting a method was actually made by pure chance. As we may know, many creators who reached their artistic maturity are so often tempted to minimize the meaning of their early works. So Arabic mosaics were bound to appear in Escher's vision. In one way or another, Escher had to reach the science of symmetry. The Spanish mosaics were among the many possible generative factors and, therefore, they constituted the most fascinating way for him to lead his work towards geometry.

## Intentionality and Representation in the Work of M. C. Escher

However, even if geometric constructions nourished his work, Escher did not specifically aim to attain mathematics. The mathematical instruments contained by most of his works were just a way of expressing his train of thought. On this account, G. W. Locher talks about the "structural sensation" he perceives when contemplating Escher's works. This sensation is constantly being generated by the possibility to anticipate the reality of the basic structures, which are mostly dialectic. The continuous gliding between unity and contrast and between contrasts themselves plays a primordial role in the scenery prepared by the artist. For that matter Locher argues that Escher's work encrypts a dialectical structuralism.

The psychological process involved in thematic developments is stressed by Escher himself in respect to his lithography entitled Predestination:

An aggressive, voracious fish and a shy and vulnerable bird are the actors in this drama: such contrasting traits of character lead inevitably to the denouement. A regular pattern floats like a ribbon in space. Lower down, in the middle, this picture strip is made up of fishes and birds, but by a substitution of figures, there remain on the left side birds only and on the right fishes. Out from these gradually fading extremities, one representative of each sort breaks loose - a black, devilish fish and a white bird, all innocence, but sad to say irrevocably doomed to destruction. The fate of each is played out in the foreground. ${ }^{4}$

This lithograph is interesting in that Escher uses for the first time a device whereby a single outline can represent two distinct motifs, namely of a bird and fish. Such instances of this feature are most rare,
for the obvious reason of the outline having to represent
 an additional motif. Furthermore, purely by chance, the motifs portrayed here, of birds and fishes, form a natural opposite in terms of their respective abodes, from which for compositional purposes such combinations are ideal. As to the print itself, this is one of the better ones in terms of clarity of idea, as there is no obscurity in what is occurring here. Essentially, birds and fish develop from their respective frameworks, forming a series of loops, which by their very nature lead to an inevitable outcome whereby the motifs collide, with the ferocious fish grabbing the bird, a set of circumstances dictated by the composition, hence the title of Predestination. In contrast to the usual scenario in real life of birds eating fish, the roles are reversed here - this neatly illustrates the "lack of morality" concerning tessellation motifs, as the motifs dictate the outline, despite a somewhat less than savory outcome at times, as with the above.

Escher wrote in relative detail of the intricacies of this print. It became suddenly clear that he was dealing with a cruel and voracious fish and a wild bird, a bird which felt, even in the state of embryo, the sharpness of the fish teeth on the back of its neck. Nothing remains for the author to do than let this dramatic scenario take its course. It's very sad, but he could not have done anything more or anything less. As Escher stated, let us comfort ourselves with the fact that, in general, fish are eaten by birds, not the other way around.

The feeling that any event captured in his drawings occurs unavoidable, but its results are something quite normal, quite logical, is often argued by the artist in his essays. The artist is compared to a spiritualistic medium, amazed by what he sees under his hand:


## Cristian Paşcalău

The artist still has the feeling that moving his pencil over the paper is a kind of magic art. It is not he who determines his shapes; it seems rather that the stupid flat shape at which he painstakingly toils has its own will (or lack of will), that it is this shape which decides or hinders the movement of the drawing hand, as though the artist were a spiritualist medium. ${ }^{5}$

Commenting on the cycles of his creation, as such a work cannot be but cyclical insofar as it starts from a theme and explores it in the same manner mathematicians explore the solutions for their problems, Escher states in regard to the regular division of a plane:

This is the richest source of inspiration that I have ever struck: nor has it yet dried up. The symmetry-drawings on the foregoing and following page show how a surface can be regularly divided into, or filled up with, similar-shaped figures which are contiguous to one another, without leaving any open spaces. The Moors were past masters of this. They decorated walls and floors, particularly in the Alhambra in Spain, by placing congruent, multi-colored pieces of majolica together without leaving any spaces between. What a pity it is that Islam did not permit them to make "graven images". They always restricted themselves, in their massed tiles. to designs of an abstract geometrical type. Not one single Moorish artist, to the best of my knowledge, ever made so bold (or maybe the idea never occurred to him) as to use concrete, recognizable, naturistically conceived figures of fish, birds, reptiles or human beings as elements in their surface coverage. This restriction is all
the more unacceptable to me in that the recognizability of the components of my own designs is the reason for my unfailing interest in this sphere. ${ }^{6}$

Escher places his work under the mathematical angle of investigation. However, this over-clarity of Escher's method contains an infinite enigma. In the seventh decade of the past century, when his work was entering into public attention, it seemed an isolated individual's extravagant preoccupation. There were only mathematicians who had treated the Escher case with all the due importance ever since the beginning of his creation of fascinating lithographs and woodcuts. However, the passion devoted to interpreting Escher's work on strictly mathematical bases is somehow exaggerated, for such an endeavor puts behind the very reasons why Escher uses mathematics to elaborate works of art. In addition to his concepts of duality and symmetry, Escher develops a high sense of paradox, which in fact reflects upon his approach to infinity captured by his graphic design method. There are troubling happenings that structure the very process of endless kaleidoscopic doubling of simultaneous realities and truths. This fact alone bears in itself the source of an immense artistic beauty and becomes the object of contemplation and aesthetic delight. The hallucinatory graphics Escher transposes into images creates paradoxical states of duality and self-concomitance, by means of metamorphosing nonbeing into being, the high into the low, or the interior into the exterior. After all, the entire surrealist art (even the term surreal is eloquent enough for an unconscious manifestation, for a revelation of hidden intentions) is structured by the sensation of striking beauty which emerges from this phenomenology of spirit.

Those inner articulations of antinomies represented on one and the same print were

## Intentionality and Representation in the Work of M. C. Escher

frequently studied by mathematicians. However, as double truths have marked mannerist art for centuries, it is absolutely clear why Escher declared himself astonished by the keen interest of specialists in the area of mathematics and geometry for his works. He is aware of the fact that he makes no science at all. Nevertheless, he acquires a unique perceptiveness for discovering groups of symmetry in nature ${ }^{7}$, but he never really aims to classify his discoveries for didactic or scientific purposes. Escher was always keen on games which contained any type of symmetrical construction. His chance to create chimeras and make them look plausible directly derived from his perspectives on infinity and from his passion for paradoxes. It is stated that in his adolescence, he was shocked by a sequence from The Invisible Man, namely the precise moment in which the invisible man takes the bandage off his face, which was the shell of something else, of something immaterial. The scene marked him for life and explains many of his latter ideas about the art of graphics.

As Escher states with a sense of self irony, all his work is a game, a very serious game. The relationship between creation and games is a theme which was studied long enough. In mathematics, for example, there are many situations in which the scientists find themselves closer to the field of art than to that of science. This explains why, from all the researchers who placed Escher's graphic games under mathematical angles of investigation, only the so-called "funny professionals", with a term of Martin Gardner's, were proved to fully understand the intricacies of the Dutch artist's work, content, significance, and inner truth. One of these funny professionals was H.M. Coxeter, whose brilliant academic path is filled with books dealing with game and science at the same time. It is clear that the fine design, the atrocious irony, and the philosophical paradoxes of Escher's prints
are a good reason for Coxeter to express his genuine inter-
 est in them. In his Intro-
duction to Geometry, Coxeter shows a great enthusiasm for the idea of game, for the innumerable intellectual satisfactions brought by logical and geometric games. For instance, the Moebius strip is a recurrent theme for Escher at his artistic maturity peak. The logical impossibility of the band to convey a ring surface which is inside and outside at the same time was long exploited by many artists, prestidigitators, and even entrepreneurs ${ }^{8}$. What are, mathematically, many of the drawings created by Escher at his artistic maturity? The structure represented by his objects often resembles a sphere, conveying the idea of perfection in nature and the mathematical model for the idea of perfection ${ }^{9}$. They also resemble cubes, tetrahedrons, octahedrons, icosahedrons, or dodecahedrons. It is no coincidence that ever since Leonardo Da Vinci, whose destiny was fulfilled with the friendship of the important mathematician Luca Paccioli, that the painters and graphic artists' passion for geometry increased progressively, relying on a meaningful pattern of creation ${ }^{10}$. In respect to such images of regular crystals as depicted in prints like Double Planetoid, Tetrahedral Planetoid, Sphere Spirals, Concentric Rinds etc., Escher argues that:

They emphasize man's longing for harmony and order, nut at the same time their perfection awes us with a sense of helplessness. Regular polyhedrons are not inventions of the human mind, for they existed long before mankind appeared on the scene. ${ }^{11}$

These drawings, as well as others (Stars, Gravity, or Contrast - Order and Chaos) indicate the intentionality of his preoccupations by means of emphasizing primordial forms of spatial geometry and

combinations of each of them. In fact, his entire graphic production, built
upon spatial situations and conflicts raised between the flat and the spatial, reveals its inner truth in combining polyhedrons, spheres, or cylinders. Even if we investigate the Italian landscapes that were created before 1937, we will discover the constant basic attraction for constructions with nondissimulated geometry. We could say that Escher is not interested directly in people, but rather in the constructions they imagined in the course of history. In the end, the Italian towns as represented in Escher's landscapes reveal themselves as crystallizations, as blocks of sensible mineralogy, which is subtly controlled by intelligence.

All the drawings that indicate, at the end of his life, some sort of aesthetic testament, constitute, at the same time, a deeper insight on the regular division of a plane, which stands nothing more and nothing less than for the progression of Escher's primal ideas. This fact proves that the great artists manifest conceptual patterns, and that ideas preexist, waiting for the conditions and the opportunity to prove their strength.

In regard to the infinity of numbers, Escher explains:

If all component parts are equal in size, it is impossible to represent more than a fragment of a regular plane-filling. If one wishes to illustrate an infinite number then one must have recourse to a gradual reduction in the size of the figures, until one reaches - at any rate theoretically - the limit of infinite smallness. ${ }^{12}$

Coxeter thinks that after 1956, the exercises of the division of a plane turn on to a significant qualitative change, which is

## Cristian Paşcalău

from the domain of infinite isometric groups to the one of infinitely similar groups of figures. Each operation can thus be described in terms of algebra and geometry. For instance, describing a print like Swirls reaches at Coxeter a highly specious expression. Judging things from this point of view, it could much be written about all Escher's prints, but that would mean to overbid the directions of development for Escher's work. What the Dutch artist intents to emphasize through his drawings is by far simpler and, at the same time, much more fascinating. Here is how he explains the lithography Three Spheres, a print which for a mathematician would represent an excellent opportunity for a study in the theory of forms:

Three spheres, of equal size but different in aspect, are placed next to each other on a shiny table. The one on the left is made of glass and filled with water, so it is transparent but also reflects. It magnifies the structure of the table top on which it rests and at the same time mirrors a window. The right-hand sphere, with its matt surface, presents a light side and dark side more clearly than the other two. The attributes of the middle one are the same as those described in connection with no. 51 [Hand with Reflecting Globe]; the whole of the surrounding area is reflected in it. Furthermore it achieves, in two different ways, a triple unity, for not only does it reflect its companions to left and right, but all three of them are shown in the drawing on which the artist is working. ${ }^{13}$

It becomes well understood that Escher does not talk about mathematics anymore, but instead about a specific philosophical way of perceiving objects, the relationships between objects, the relationships between

## Intentionality and Representation in the Work of M. C. Escher

objects and the human spirit. His entire work is filled with paradoxes, intensely and richly requiring the spirit. Without being a mathematician, his preoccupations for the science of symmetry made him a subject of interest for mathematicians, to the point that a congress in England was dedicated to him. Without being directly preoccupied by philosophy, his drawings impress through the quality of ideas. In his drawings, among which the most impressive are Day and Night, Liberation, Cycle, High and Low, the antinomies expand many of the possibilities implicitly contained, bringing forth new series of revelations that reach the endless realm of philosophy. Escher is rather pessimistic about his means of expression, as the visionary contents he grasps from the depths of his consciousness are often difficult to be articulated in his prints. The artist confesses the frustration of not being able to fully develop his visionary projects in terms of a failure in the relation between intentionality and representation:

If only you knew the things I have seen in the darkness of night, at times I have nearly driven mad at being unable to express these things in visual terms. In comparison with my vision, every single print is a failure and reflects not even a fraction of what might have been. ${ }^{14}$

Escher longs for creating images that never end. Nowadays, television conveys such visual loops of images that never end. Obsessed with de/reconstructing our corrupted visions of media, celebrity and appearance, Johan Grimonprez, an acclaimed Belgian media artist, assembled a bewildering gaggle of Hitchcock lookalikes, staggering in girth and exacting in attitude, in a quest to find the most accurate specimen. The extent of such an endeavor is matched only by its fiendish yet stylish plot -
recording them both in and out of character - whilst the
 would-be doppelgangers replay a selection of the trademark cameo appearances that Hitchcock made in his own flicks. The result could be seen as a dethroning of the Master of Suspense or as a celebration of iconography.
"If You Meet Your Double, You Should Kill Him", this is the recurrent motto for disposing of Hitchcock professional look-alikes. As in dial H-I-S-T-O-R$Y$, where a story that was intended to happy endings leads into the opposite direction, exploring terrorism and airplane hijacking, Double Take exploits the idea that television and commercials create never ending visual loops in which the spectators are trapped, and develop a mirror effect that would haunt the viewers at different levels of perceptiveness. Hitchcock's image is used to play the role of a mirror for the Cold War as a long laceration in history.

The prescient dial $H-I-S-T-O-R-Y$ (1998) shows how terrorists use the media, and vice versa, fostering a state of panic and paranoia in the citizenry; in Double Take the same psychological relationship is transferred, then doubled: to the US and USSR during the Cold War, to Alfred Hitchcock and popular culture. The strategy in both films recalls an assaultive barrage comprised of images and sounds both familiar and alien, edited not mainly to provide information, but to provide a feeling for history. Evoking a specific cultural zeitgeist, they speak to the need to see history at a distance, but at the same time to speak from inside it. In dial H-I-S-T-O-R-Y this feeling is driven home through copious quoting of Don DeLillo's White Noise, a postmodern novel approaching the idea of inevitable fragmentation and fierce consumerism. In Double Take, it's inscribed in the voice of Hitchcock, in his lead-ins and promos - or a voice double of Hitchcock, who sometimes

speaks while a physical Hitchcock double appears on screen.
By adding these other levels, Grimonprez complicates the telling of history. The film is content - indeed, it is inherent in the terms of its dialogue between the present and the past, between fiction and documentary - to shapeshift, like the Master himself who kept three sizes of suits because of his frequent weight changes. Grimonprez takes pleasure in allusion, showing how the mind strives to make sense out of coincidence - the mode of the paranoid, who is often the most grounded because of a constant questioning and reevaluation of "reality." He composes a formal, visual poetry that nods to YouTube, with leaps across times and spaces, a poetry that can only be finished by the viewer upon the realization - with a final image of Donald Rumsfeld's infamous riddle about knowns and unknowns - that the commoditization of fear for political gain is happening again, only the Other has changed. For it is true that history is written to make sense of the present and, also, as DeLillo wrote, "Nothing happens until it is consumed."

Entire history becomes the subject of meaning deconstruction and reconstruction. In the way we actually construct our reality, or document that reality, there are always fictions that proliferate, there are always things that you project, and the way that we construct reality is based on fictions and paradigms that coexist. Sometimes when you see a film that's fiction, it grabs you, because the violence is there, you get moved, closer to what the feeling really is. I like to put those things on their head, because they affect and inform one another. Now CNN dramatizes the news. The war is a complete fiction, but the news is supposed to be "documentary." It's so crucial to question those boundaries. In this respect, dial H-I-S-T-O-R$Y$ was trying to explore the shift at the end of

Cristian Paşcalău
the ' 70 s and beginning of the ' 80 s when television reporters took the video camera into the field, and bit by bit our relationship to video imagery shifted completely. Therefore, television becomes a mirror as well. When images come back from Iraq, it is a mirror that we do not want to acknowledge. Then it comes back to haunt us on another level. The power of image is a tough one, and artists like Escher or those working in the media were very much aware of that.

Double Take seems to be a post-internet narrative, as storytelling has changed since the internet, even Hollywood films have become much more complex, and it has to do with how people's minds have adapted in a way to this situation. Double Take analyzes the relationship between two media that coexist. The motif of double realities or double layers of illusion that come across and, at some point, mix together is very much exploited in Escher's themes. The Moebius strip can stand for the present endless shift of paradigms in the field of visual culture and the way in which its narrative conveys a sense of defragmentation. For instance, Hitchcock appears in Double Take as a combination of persona and the characters of his films. The obsessive behavior of images being repeated is like the drop-in style, but when they are repeated they are set in a whole different context, paradigm shifts, new patterns or labels appear, and narrative is continuously set in motion. It is like a perpetuum mobile that comprises all the images transfixed into a maximal projection of intentionality with different levels of representation. It is much like in Magritte's painting "This is not a pipe", where the self-reference is denied only to give the perception of counterfeit distortion. Moving image plays the role of a messenger and, at the same time, that of a traitor. It is a double reality of self-concomitance that makes visual artists come across in pursuit of consciousness reborn.

In fact, what is common to Escher's geometrical highly stylized vision of duality and symmetry and media artists who deal with the double-crossing images in a multilayered field of post human structure of the actual reality is the gap between the uniqueness of intentionality and its distinct multiverse representations in the act of infinite interpretation, as the interpretation itself becomes object for shaping thought in terms of satisfying the taste of the public. M.C. Escher argues that the result of the struggle between the thought and the ability of express it, between dream and reality is seldom more than a compromise or an approximation. It is this struggle only that made all the artist's efforts to converge towards a unique spark of vision, leading his work to express both the obsessive quest for meaningful representation and the absurd irony of impossible full revelation of intentionality. This is the main issue for all the visual and media artists who try to convey an aesthetic feeling of never ending story, of leaning towards the infinity of image.

## Bibliographical references

Bool F.H., Kist J.R., Locher J.L., Wierda F. (eds.), M.C. Escher: His Life and Complete Graphic Work, New York, Harry N. Abrams, 1982 (second edition: Abradable Press, 1992)

Bruno, Ernst, Escher, M.C., The Magic Mirror of M.C. Escher, Berlin, Tasken, 1976.

Coxeter, H.S.M., "Crystal Symmetry and its Generalizations", in A Symposium on Symmetry, Transactions of the Royal Society of Canada, Vol. 51, Issue 3, section 3, pp. 1-13.

Coxeter, H.S.M., Introduction to Geometry, second edition, New York, London, Sydney, Toronto, John Wiley \& Sons, Inc., 1989.

Coxeter, H.S.M., "Angels and Devils", in The Mathe-
 matical Gardner, Edited by David A. Klarner, Prindle, Weber and Schmidt, 1981.

Coxeter, H.S.M., Emmer M., Penrose R., Teuber M.L. (eds.), M.C. Escher: Art and Science, Amsterdam, North-Holland, 1986.

Dunlap, R.A., "Fivefold Symmetry in the Graphic Art of M.C. Escher", in Istvan Hargittai (ed.), Fivefold Symmetry, Singapore, New Jersey, London, Hong Kong, World Scientific Publishing, 1992, pp. 489-504.

Dusen, B. Van, Scannel, B.C., Taylor, R.P., "A Fractal Comparison of M.C. Escher's and von Koch's Tesselations", Fractal Research, 2012, pp. 1-16.

Escher, M.C., The Graphic Work of M.C. Escher (introduced and explained by the artist), New York, Ballantine Books, 1975.

Escher, M.C., Escher on Escher: Exploring the Infinite, New York, Harry N. Abrams, 1989.

Geis, Darlene (ed.), M.C. Escher, 29 Master Prints, New York, Harry N. Abrams Inc., 1981.

Hofstadter, Douglas, Gödel, Escher, Bach: An Eternal Golden Braid, New York, Basic Books Publishers, 1979.

Horne, Clare E., Geometric Symmetry in Patterns and Tilings, Woodheat Publishing, 2000.

Locher, J.L. (ed.), Escher, M.C., Broos, C.H.A., Coxeter, H.S.M., Locher, G.W., The World of M.C. Escher, New York, Harry N. Abrams Inc., 1971.

Locher, J.L. (ed.), The World of M.C. Escher (New Concise Nal Edition), New York, Harry N. Abrams, 1974.

MacGillavry, Caroline H., Symmetry Aspects of M.C. Escher's Periodic Drawings, Utrecht, Oosthoek, 1965.

MacGillavry, Caroline H., "The Symmetry of M.C. Escher's Impossible Images",


Computers and Mathematics with Applications, Vol. 12B, Issues $1 \& 2,1986$, pp.
123-138.
Mandelbrot, Benoît, The Fractal Geometry of Nature, New York, Freeman, 1982.

Mansfield, Susan, "Escher, the Master of the Impossible Art", in The Scotsman, 28 June 2015.

Noordhof, Paul, "Imagining Objects and Imagining Experiences", Mind \& Language, Vol. 17, Issue 4, 4 September 2002, pp. 426-425.

Penrose, Lionel, Penrose, Roger, 'Impossible Objects: A Special Type of Visual Illusion", British Journal of Psychology, Vol. 49, Issue 31-33.

Poole, Steven, "The Impossible World of M.C. Escher", The Guardian, 20 June 2015.

Schattschneider, Doris, Wallace, Walker, M.C. Escher: Kaleidocycles, Pomegranate Artbooks, 1987.

Schattschneider, Doris, Visions of Symmetry: Notebooks, Periodic Drawings, and Related Work of M.C. Escher, W.H. Freeman and Company, 1990.

Schattschneider, Doris, Work of M.C. Escher, W.H. Freeman and Company, 1990.

Schattschneider, Doris, Emmer, Michele (eds.), M.C. Escher's Legacy: A Centennial Celebration, Berlin, Heidelberg, New York, Springer-Verlag, 2005.

Schattschneider, Doris, "Lessons in Duality and Symmetry from M. C. Escher", in Reza Sarhangi \& Carlo H. Slequin (eds.), Bridges Leeuwarden: Mathematics, Music, Art, Architecture, Culture, London, Tarquin Publications, 2008, pp. 1-8.

Schattschneider, Doris, "The Mathematical Side of M.C. Escher", in Notices of the American Mathematical Society, Vol. 57, Issue 6, June-July 2010, pp. 706-718.

Schattschneider, Doris, "M.C. Escher: A Mathematician in spite of Himself', Structural Topology, Issue 15, 1988, pp. 9-22.

## Cristian Paşcalău

Searle, John, Intentionality: An Essay in the Philosophy of Mind, Cambridge, Cambridge University Press, 1983.

Seckel, Al, Masters of Deception: Escher, Dali \& the Artists of Optical Illusion, Sterling, 2004.

Weyl, Hermann, Symmtery, New Jersey, Princeton University Press, 1966.

Wieting, Thomas, "Capturing Infinity: The Circle Limit Series of M.C. Escher", Reed Magazine, March 2010, pp. 22-29.

Wilkie, Kenneth, "The Weird World of Escher", Holland Herald, Vol. 9, 1974, pp. 20-43.

## Notes

${ }^{1}$ M. C. Escher, "On Being a Graphic Artist", in Darlene Geis (ed.), M.C. Escher, 29 Master Prints, New York, Harry N. Abrams Inc., 1981.
${ }^{2}$ M. C. Escher, The Graphic Work of M.C. Escher (introduced and explained by the artist), New York, Ballantine Books, 1975, p. 9 .
${ }^{3}$ Hermann Weyl, Symmetry, New Jersey, Princeton University Press, 1966, p. 109.
${ }^{4}$ M.C. Escher, The Graphic Work of M.C. Escher, p. 11.
${ }^{5}$ Cf. Steven Poole, "The Impossible World of M. C. Escher", The Guardian, 20 June 2015.
${ }^{6}$ M. C. Escher, The Graphic Work of M.C. Escher, p. 7.
${ }^{7}$ Some specialists insist to confer a top priority for Escher in the domain of symmetry. A relevant research on this matter was made by Caroline H. MacGillavry in her 1965 book entitled Symmetry Aspects of M.C. Escher's Periodic Drawings, in which 41 stamps were investigated. Caroline MacGillavry demonstrated that Escher, out of pure intuition, made use of all the known types of symmetries long before any specialist in the field have had systematized them. Caroline

H. MacGillavry succeeds, by systemizing all the prints created by divisions of a plane, to develop the idea of an absolute theoretical priority of Escher's in regard to the researches in the field of polychromatic symmetry made by scientists all over the world.
${ }^{8}$ It is well-known the case of the endless furniture abrasive belts.
${ }^{9}$ In science, one of the revolutionary theories that expand the postmodern view over the complexity of nature is fractal geometry. Fractals give account on the complexity of a reality that goes far beyond the principle of solidity. Nature is a system of forms and substances whose complexity is transfixed into concepts like space, time, surface, extension, reference, coherence, or materiality. The term fractal, introduced by Benoît Mandelbrot, coins any object having irregular shape, which can be fragmented so that its fragments as parts would contain, holistically, the whole, namely the parts being self-similar with the whole. In nature, fractals are considered to be the mountains with rugged cliffs, the corolla or the roots of a tree, the snowflakes, the clouds on the sky, the waves of the sea, and even the entire Universe. We could state that if an object of a rather geometrical complexity is watched
from a certain distance, by applying a zoom and by repeating the zooming to infinity, the image that would appear is the same. Practically, fractals imply "that the degree of their irregularity and/or their fragmentation is identical at all scales" (Benoît Mandelbrot, The Fractal Geometry of Nature, New York, Freeman, 1983, p. 1).
${ }^{10}$ Coxeter does not lose the opportunity to remind the importance Da Vinci and Dürer gave to basic polyhedrons when elaborating their compositions. The list of artists who, being seduced by geometry, have experienced the galactic harmony of polyhedral forms and the contemplative loss subsequently generated by their purity is quite long. But it is only Escher who managed to follow constantly and steadily the way of mathematics in achieving such an impressive work.
${ }^{11}$ Cf. H.S.M. Coxeter, The Mathematical Implications of Escher Prints, in The World of M.C. Escher, New York, Harry N. Abrams Inc., 1971.
${ }^{12}$ M. C. Escher, The Graphic Work of M.C. Escher, p. 9.
${ }^{13}$ Ibid., p. 12.
${ }^{14}$ M. C. Escher, "On Being a Graphic Artist", in Darlene Geis (ed.), M.C. Escher, 29 Master Prints, New York, Harry N. Abrams Inc., 1981.

