Mystery, Classicism, Elegance: an Endless Chase After Magic

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An essay in honor of Bruno Ernst, Hans de Rijk, and Brother Erich – Escher's three deepest appreciators

A Non-artist's Non-artist?

I am turning the pages of the large volume *M.C. Escher: His Life and Complete Graphic Work*, which I bought many, many years ago. I quickly flip past *Metamorphosis, Sky and Water, Drawing Hands, Relativity, Waterfall, Belvedere, Print Gallery*, and many others – the familiar works that first grabbed me with a sudden, irresistible, visual pull (most of them awarded a full page or at least a half-page in that book), works that truly intoxicated me half a lifetime ago – and my eye is instead caught by much smaller images, images of Mediterranean seascapes or Italian hilltowns, images of a tree or a snow-covered barn, images that seem far simpler and far less eye-grabbing, far less interesting than those for which M.C. Escher has become world-famous.

And yet, in so doing, I feel I am in deeper touch with M.C. Escher than I ever was before, and am appreciating, more than ever before, his artistry. And I use the word very carefully and very deliberately, for M.C. Escher has, perhaps inevitably, come under attack from segments of the contemporary art world as "not an artist." Indeed, in the bookshops of art museums these days, one commonly finds, along with hundreds of books devoted to virtually unknown but terribly trendy contemporary artists, a total blank when it comes to Escher's works.

Writing in the *San Francisco Chronicle* in 1979, the art critic Thomas Albright observed (though not espousing the sentiments himself):

Always regarded more coolly by the art world than by the populace, Escher's quirky visual paradoxes are frequently shrugged off by sophisticated contemporary connoisseurs as so much academically executed, illustrative trickery, a more hip version of Norman Rockwell. [1]

Even more pointedly, a recent review in *The New York Times* of an Escher retrospective in the National Gallery in Washington, D.C. snidely described the printmaker to whose exhibit the gullible, unsavvy Washington public was flocking as "a non-artist's non-artist" [13]. Why would harsh judgments along these lines emanate with high frequency from the pens of the self-appointed Creators and Conservators of Art in the Western World?

Behind the Bandwagon of Cool Dismissal

I can't presume to fathom all the reasons that underlie this collective behavior, but I can still speculate, and so without fanfare, here are some of my guesses as to why a large segment of today's art world pooh-poohs M.C. Escher:

- Some artists and would-be artists are consciously or unconsciously jealous of Escher's popularity and effectively say to themselves (a little like Aesop's fox who couldn't reach the tempting grapes), "Anyone who is that popular couldn't possibly be worthwhile";
- Some artists and would-be artists see in Escher's works "nothing but mathematics" and this "regrettable" link would – by definition! – instantly preclude its having anything to do with Art;
- Since Escher's prints use few colors, and are very precisely executed, they are pigeonholed as being not rich, spontaneous, and sensual but, rather, as austere, constrained, and cerebral (and of course "cerebrality" is the kiss of death in today's art world);
- Various Escher prints were pirated and illegally reproduced on psychedelic posters and rock-album covers in the 1970's and 1980's, a fact that for some people stigmatized his art as a whole, leaving an overall impression that Escher is the artist of preference of the "sex, drugs, and rock-n-roll" crowd;
- Escher standardly called himself a "graphic artist" or a "printmaker"; given, then, that he had confessed of his own free will to his crimes and thus revealed his sinful nature, how could anyone persist in calling him "artist"?

The five negative stances that I have just sketched stem, in the main, from voguish waves that have swept through our culture in the past few decades but that are far from universal; indeed, I have observed numerous times that sophisticated adults from other cultures (e.g., from Eastern Europe or Asia) respond with the same unabashed enthusiasm to Escher prints as I did, when I first saw them.

An Epiphany in the Office of Otto Frisch

The first time I laid eyes on an Escher print is as vivid in my memory as the moment I first heard that President Kennedy had been shot. It was January of 1966, I was twenty years old, and my father and I had just driven up from London (where my parents were spending a year) to the idyllic university town of Cambridge, where he had been invited by his colleague Otto Frisch to give a physics colloquium. Frisch, a gentle elderly Austrian Jew who, as a refugee first in Copenhagen and then in England during World War II, had played a major role in unraveling the secrets of nuclear fission, met us on the ground floor of his building and escorted us upstairs to his office. I walked in and in a flash was bowled over by a stunning drawing in a large dark-brown wooden frame (Fig. 1). I saw white birds flying one way, black birds flying the other way, the two flocks



Fig. 1. M.C. Escher, Day and Night, 1938. Woodcut

meshing perfectly together to fill up all space. As my gaze drifted downwards, I saw the bird-shapes distorting and turning into a diamond-like grid of black and white fields. To the left of the fields, I saw a peaceful village by a river, basking in bright sunlight, while to their right, I saw a mirror-image village by a mirror-image river, calmed by soft starlight.

I found myself plunged into the mythical world portrayed, and was charmed by the idea of walking back and forth on the little roads linking these two villages, thus easily sliding, in a mere five minutes, between noon and midnight. As I pondered the birds blithely flying above, I wondered, "How could two flocks of birds fly right *through* each other, without even the tiniest space? For that matter, how could they even breathe, with no air between them? And how could three-dimensional birds, roughly half a meter in length, turn into twodimensional fields, roughly 100 meters on a side?" None of this symmetric picture made any sense, but at some other level, it made *perfect* sense.

I asked Frisch, "What is this?" He replied, "It is a woodcut by a Dutch artist, and I call it 'Field Theory', though its real name is 'Day and Night.' Do you like it?" I replied, "It is amazing!" Frisch then said, "I recently visited the artist, whose name is Escher, in his studio in Holland, and I have his address. If you would like, I'll give it to you, and you can write to him." I eagerly took the sheet he gave me, and in the meantime pondered the nickname that Frisch had given the print.

"Field Theory" was clearly a piece of physics wordplay, since that term is another name for relativistic quantum mechanics, and I knew that one of the key principles at the heart of field theory is the so-called "CPT theorem," which says that the laws of relativistic quantum mechanics are invariant when three "flips" are all made in concert: space is reflected in a mirror, time is reversed, and all particles are interchanged with their antiparticles. This beautiful and profound principle of physics seemed deeply in resonance with Frisch's Escher print, with its left–right reversal (the mirroring of space), its interpenetrating black and white birds (particles and antiparticles), and its interchange of day and night (which could be taken metaphorically as tampering with time, perhaps symbolic of a flip in the direction of time as one crossed the picture). Moreover, the weird transitional shapes that floated somewhere between pure birdness and pure fieldness had a quantum-mechanical flavor of entities that are neither particle nor wave, and yet are somehow *both*.

MCE: Outcast Poet

Although I am not a mystic, I am nonetheless subject, as are most humans, I would surmise, to occasional flashes of mystical feelings, to a certain irrational sense of cosmic magic and mystery – and somehow this astonishingly original print and Frisch's little piece of wordplay, linking it with the ultimate laws of the universe, touched me very deeply. It is also interesting, and not at all a coincidence, I would say, that when my father and I visited the Frisches at their home later that afternoon, what Frisch chose to play for us on the piano was the Italian Concerto by J. S. Bach, who was by far Escher's favorite composer, and whose name, over a dozen years later, I would link, in the title of my first book, with those of Escher and of Austrian logician Kurt Gödel [8].

There is, I feel, some intangible quality shared by Escher's oft-explored themes of symmetry, reversal, paradox, interpenetrating worlds, flow and metamorphosis, and ultimately, the overall strangeness of the world, by Bach's ever-fertile contrapuntal manipulations of several interwoven voices, sublimely exploiting inversion, interlocking patterns, and multi-level complexities, all in the honor of an unseen and mysterious Creator, and by the vast and subtle intellectual structures of mathematics and physics that unmask the most hidden secrets behind the scenes of Nature. When a human creation of any sort – visual, musical, or intellectual – is capable of making millions of humans powerfully resonate to the strange and awesome harmonies lurking in the world around them, it seems to me that that creation epitomizes *art*, in the best sense of the term.

There is something sad, to me, in the fact that so many in the fad-prone art world – though by no means all! – cannot come to grips with the fact that a "mere" graphic artist could have had such an impact on so many people; I find it perverse that, far from lauding this individual, they instead feel compelled to disdainfully turn their backs on his visual creations, to badmouth his style and his achievements, and to expel him symbolically from their community. When the art world chooses to reject one of its most creative members merely because, in exploring idiosyncratic ideas, he managed to engage the imaginations of millions, it seems to me a world that has lost its bearings. But the art world will not, of course, admit that pettiness might play a role in its haughty attitude. No, a loud protest will be raised that Escher was nothing but a mediocre, run-of-the-mill artisan, perhaps skilled as a draftsman, but with almost no sensitivity to line, color, composition, characterization, themes, or anything else that matters in art. He was a trickster who played surface-level games based on fooling the eye, but he had nothing creative or profound to say.

It is at this level that I would like to engage the art world – on its own terms – and in this essay I shall do so, but in order to set the stage, I have to begin where I myself began, which is with my own very meager correspondence with M.C. Escher, first in early 1966 and then in the spring of 1967.

Getting to Know Escher's Output and Style

Within a week or two of my visit to Frisch's office, I had written a short letter to Escher at his home in Holland asking about the possibility of obtaining a print of *Day and Night*, to which I promptly received a terse but amicable reply saying that it was available and its cost was \$70. Well, being but a simple student and having no serious income to speak of, I found this was a bit steep, and so I decided against the purchase. However, Escher did tell me in his note that a book of his works was scheduled to appear within a few months, and so I decided to wait for that. Something like a year passed, and finally, with a certain amount of difficulty, I managed to obtain one copy of this book from a small press in Germany. It was filled with magic!

I need not dwell here on my reaction to all the prints reproduced in it, but suffice it to say that on some level, perusing the book felt like reading a science-fiction adventure filled with paradox and illusion. Many of the prints grabbed me intensely, but perhaps my favorite, aside from *Day and Night*, was *Up and Down* (Fig. 2). I could not help but inject myself straight into the picture, imagining myself as the boy sitting on the stairs.

Each time I looked at *Up and Down*, in my mind's eye I would see the boy stand up, walk down a few stairs, then turn right and go down the little flight leading to the basement of the tower, open the door, and then start to climb inside the tower. He would go up one floor, then another, then a third, and then – in some indescribable manner – would find himself upside-down, below ground level, in the basement of the tower he'd just climbed (or one indistinguishable from it). (If you doubt my claim about orientation, compare the windows on the two sides of the tower.) He would then flip himself right-side-up, exit the basement door, and emerge at the bottom of the small flight of stairs, proceed up them, only to find himself back again at the level of the sandy courtyard he had just left.

Would he see himself – or his clone – sitting on the stairs? No, I reasoned, because presumably, the clone-boy would have simultaneously made the same trek (or rather, "the same" trek), and hence would not be around to muddy the fragile waters of personal identity. In fact, the truth of the matter is that the



Fig. 2. M.C. Escher, *Up and Down*, 1947. Lithograph

two clones would have passed each other, though going in opposite directions, halfway up (or down) the tower. I like to think that perhaps the spiral staircase inside the tower is walkable on both sides (much as are two of the straight stairways shown in *Relativity*, page 265), allowing two people to use it at the same time without having any awareness of each other. Of course gravity would have to work in a very subtle way inside the confines of the tower (but then, think of how much subtler gravity's workings must be in *Relativity*!).

Another type of delicious *frisson* came each time I imagined the boy standing on the ground-level patio tiles just to the right of cellar steps, and peering over either of the U-shaped stone arches, one low and one high. (He might have to hoist himself up to peer over the higher one.) Just what would he see? Would he have to hold on for dear life, lest gravity suddenly rip him from off this tiled ceiling and send him reeling downwards to crash head first on the very same tiles, yet three floors below him?

I must say, I loved the mythical setting of this print, especially its warm Mediterranean ambiance: the sandy courtyard, the palm trees in their little circular plots, the archways lining the courtyard, the staircases, the balconies ... I myself grew up in an environment that shared much with this style: the campus of Stanford University, with its sandstone buildings, hundreds of arches, squaretiled passages, tiled roofs, palm trees, and so on, and so perhaps I had a natural affinity for such scenes, but in any case, I was enchanted purely on the architectural level. It was only some years later that I came to realize that Escher had borrowed many elements of these decidedly non-Dutch scenes from villages in such places as Malta, Corsica, Sicily, Sardinia, mainland Italy, and Spain.

Disappointment and Captivation

I want to make very clear that I was by no means charmed equally by all the prints in this first book. Truth to tell, I was rather turned off by the ugly gnomelike creatures in *Encounter*, the sinister skull at the center of *Eye*, the bizarre rind-like strips in *Bond of Union*, the frighteningly huge praying mantis in *Dream*, and so forth. Moreover, I was distinctly frustrated by the relative simplicity of the shapes and the repetitiveness of some of the tessellations, such as *Whirlpools*, *Circle Limit I*, *Flatworms*, and others.

And then there were some images that, though they intrigued and charmed me with a subtle and novel poetic flavor, still disappointed me for their lack of overt paradoxicality. I'm thinking, for instance, of *Rippled Surface* and *Puddle*. The former, however, kept attracting my eye with its elegant stylization of how ripples distort reflections, clearly revealing its creator's fascination for the geometry that pervades physical phenomena.

As for *Puddle* (page 8), I warmed up slowly to its underdone poetry, defined by the mingling of many distinct worlds – the moon, the clear sky, the trees, the mud, the smooth water, and of course the invisible humans, the details of whose recent comings and goings on foot and on wheels were clearly legible to the intelligent eye. So much to take in! The round, round moon, split in two by a spit of mud jutting out into the shallow water ... The budding leaves, near and far, on the tree branches ... The parallel zigzags of a truck's tire marks, extending into the puddle ... The crisscrossing bicycle tracks ... The walkers' tracks, leading in opposite directions ... And forming the upper-left and lower-right edges of the puddle, two footprints defined by the outline of the water itself ... This image was permeated by an almost Buddhist sense of calm and serenity, and soon seemed in its own way just as wonderful as the mind-bending strangeness of *Drawing Hands, Verbum, Metamorphosis*, and others.

Spreading Like Wildfire

Once I had absorbed the contents of this first Escher book, I could see I was dealing with a visual poet whose mind could be carried far along a number of very different directions, and that my first impression had just scratched the surface.

Naturally, I eagerly showed my copy of this exotic book to friends, and to my surprise, several of them asked me if I could get copies of it for them. So I went back to the bookstore that had gotten my copy, and ordered five more. As soon as they arrived, they were snapped up, and then more friends asked for copies. I ordered another ten, and before long, all of those were gone as well. I could see that this little-known Dutch artist had a profound appeal to people of many sorts – especially those who liked intellectual stimulation flavored by strangeness and mystery.

Own Print

Having thus realized that these works had an uncanny power to churn up inquisitive minds, I decided that maybe it would be nice, after all, to have a full-size Escher print on my wall, just as Otto Frisch had had – and so roughly a year after my first letter, I wrote to Escher once again, this time inquiring about the prices of about ten of the prints in the book he had told me about. Once again, his reply was prompt and to the point. *Day and Night* was still – thank God! – in print, but over the course of just one year, its price had gone up from \$70 to \$125. Whew! I gritted my teeth and wrote out a check for that amount (plus a shipping charge of \$5), and within a couple of weeks, it arrived in a stiff cardboard mailing tube, in perfect shape once unrolled.

As for the other works I had asked about, some were out of print and some were still available, but I chose to forego purchasing any more, since my budget was very limited. Of all the works that I could have obtained then, the one I most regret is *Puddle*, which at the time would have cost me another \$100. Of course, given today's sky-high prices, that sounds like a joke. Too bad – but at least I did come to own one genuine Escher print with his name penciled in at the bottom, and also the words "Eigen druk" – "Own print." And indeed, to this very day – and to this very night – I still own that very print.

"Gödel, Picasso, Bach: a Preposterously Gauche Bagatelle"

My own personal involvement with Escher took a special turn in the mid-1970's, when I was writing a book focusing on a kind of quasi-paradoxical abstract vortex that I called a "strange loop" – a notion that I had first encountered in

mathematical logic, but whose implications seemed to me to be vast, and in particular to reach out as far as the nature of human consciousness, at whose core I felt I identified such a structure. As I was writing my book – initially given the working title "Gödel's Theorem and the Human Brain" – I noticed that whenever I would write of these "strange loops," one or another visual image would creep into my brain, yet at such a subliminal level that for weeks I was virtually unaware of it. Finally one day, while riding my bicycle, I woke up to the fact that Escher pictures were haunting my mind as I was struggling for words to convey the nature of these bizarre structures, and I realized that it would be distinctly unfair to my readers if I failed to provide *them* with the same concrete imagery as I myself was using in order to visualize these abstractions. And so I decided that my book would have to include a fairly large sampling of Escher pictures.

Since I had already livened up the book by writing verbal dialogues that playfully imitated contrapuntal pieces by Bach, I decided that the strong presence of these two wonderfully deep artistic spirits merited being recognized in the title, and so I switched my book's title to *Gödel*, *Escher*, *Bach* – and then, feeling this was a bit austere and cryptic (as well as too foreign-seeming), I appended the subtitle *an Eternal Golden Braid*, which, with its swapping of the initials "G" and "E," did indeed take the first step in creating a potentially infinite braid composed of the three letters "G," "E," and "B."

Most of the Escher prints that I discussed in *GEB* were of the "spectacular" type – those that threw paradox straight in your face and forced you to grapple with it – but there was one chapter in which I spoke about a few of Escher's more subdued prints, such as *Dewdrop*, *Three Worlds*, *Rippled Surface*, and *Puddle*, in fact likening their spirit to that of Zen Buddhism.

For a number of years after finishing *GEB*, I felt that I had essentially "shot my wad" as far as Escher was concerned – I had had my say, and had nothing more to say to anyone about the art of M.C. Escher. But slowly, I kept hearing from various people about their disdain for Escher's art. I will always remember a curator at a museum in Washington, D.C., who told me of her great admiration for my book *Gödel*, *Escher*, *Bach*, but insisted nonetheless that I had made an egregious error in choosing Escher as my featured artist; had I known more about art, I surely would have replaced him by Picasso, whose spirit, she explained, was far more in line with those of Gödel and of Bach. How could I have ever seen fit to place a mediocrity like Escher, a mere cipher, on the same plane as that of the titans Gödel and Bach?

I could barely believe my ears. Contrary to her supposition, I was in fact very familiar with Picasso, and though there were some works that appealed to me (and many more that did not at all), I found the spirit of his art to have little if any relationship to the ideas in which my book was grounded. Moreover, I had to chuckle internally at her other supposition, which was clearly that I had begun my book by asking myself the question, "Let's see, now ... I want one mathematician, one artist, and one musician – so which individual from each category shall I pick?" What a distortion of *GEB*!

Far Out, Maurits Baby!

Even my late wife Carol, who was without any doubt one of my staunchest supporters, wavered a bit in her feelings about Escher, although she was by no means a total scorner of his art. (In fact, she was happy to have our dining room decorated with several Escher prints in elegant frames.) When I pressed her about her mixed feelings about Escher, she explained that she had originally seen his art exclusively on psychedelic posters in day-glow colors and so, although she now knew better, she just couldn't divorce it from the world of hippies who would gape wide-eyed at it, drop their jaws, and religiously mutter, "Like wow, man! It's a mind-blowin' turn-on!"

Indeed, in 1969, Escher bitterly complained, in a letter to his son George and daughter-in-law Corrie in Canada:

The hippies of San Francisco continue to print my work illegally. I received some of the grisly results through a friendly customer over there. Among other things, such as virulently colored posters, I was sent a forty-eight-page programme or catalogue of the so-called "Midpeninsula Free University," Menlo Park, California. It included three reproductions of my prints alternating with photographs of seductive naked girls. [2, p. 131]

These words are both amusing and poignant to me, since the San Francisco midpeninsula was precisely where I had grown up and still spent every summer in those days, and I had a couple of friends who were deeply involved in the socalled "MFU" (an institution whose philosophy ran violently against my grain). In fact, I keenly remember how I had run across that specific "course catalogue" and been disgusted with the way in which Escher – someone who at the time I practically regarded as my own "personal property" – was garishly mixed in with tasteless pornography and trendy psychobabble.

I readily admit that, had my first associations with an artist come from perusing such a trashy, trendy catalogue, I very likely would have been turned off just as Carol had been, but I tried to convince Carol, who had specialized in art history at Indiana University, that Escher was not just some sleazy fly-by-night artist who was out to make a quick buck off of trendy young folk eager to gawk at superficial, sensationalistic imagery, but rather, he was someone driven by an insatiable curiosity and a deep sense of esthetics, and whose work had sadly been pirated and exploited in the crudest of contexts. Looking back, I suspect that it was probably in my attempts to convey to Carol my sense of M.C. Escher as *poet* that I first started to perceive Escher's art on a new level, and to articulate why he was so different from a number of latter-day imitators who in the meantime had come along.

We will come to all that in a moment, but before we leave the topic of how Escher's visions lit many people's fires, I cannot resist including a small anecdote that I read in an article by Kenneth Wilkie in the *Holland Herald* concerning the unlikely interaction between British rock star Mick Jagger and the Dutch artist early in 1969 [14]. The former, hoping to splash an Escher print on a forthcoming record cover, wrote the latter a note that began as follows:

Dear Maurits,

For quite a time now I have had in my possession your book [Graphic Works of ...] and it never ceases to amaze me each time I study it! In fact I think your work is quite incredible and it would make me very happy for a lot more people to see and know and understand exactly what you are doing. In March or April this year, we have scheduled our next LP record release, and I am most eager to reproduce one of your works on the cover-sleeve. Would you please consider either designing a "picture" for it, or have you any unpublished works which you might think suitable ...

As has already been attested to in previous pages of this essay, Escher was no slouch as a correspondent, and just a couple of weeks later he replied as follows to Jagger's assistant, Mr. Peter Swales:

Dear Sir,

Some days ago I received a letter from Mr. Jagger asking me to design a picture or to place at his disposal unpublished work to reproduce on the cover-sleeve for an LP record.

My answer to both questions must be no, as I want to devote all my time and attention to the many commitments made; I cannot possibly accept any further assignments or spend any time on publicity.

By the way, please tell Mr. Jagger I am not Maurits to him, but

Very sincerely, M.C. Escher.

Sublime Minimalism

One of the defining characteristics of good poetry is *terseness*, and another is *elegant ambiguity*, or otherwise put, *polished polysemy* – the cramming of a number of meanings into one well-wrought phrase. I would say that the concluding sentence of M.C. Escher's reply to rock star Jagger fits those criteria perfectly – it is terse and it packs in two meanings beautifully! But there are, needless to say, other media than that of language in which Escher created poetry possessing both terseness and polished polysemy.

Consider the lovely miniature woodcut *Fish*, executed in 1963 (Fig. 3). There are but two complete fish in it, one white and one black, while around them are small fragments of ten additional fish (five white and five black, of course), making twelve *in toto* – three columns with four fish apiece. But the fading-off into undulating watery forms is carried out in the most exquisite and the most symmetric of fashions; even the pair of little wave-fragments seen at the very



Fig. 3. M.C. Escher, Fish, 1963. Woodcut



Fig. 4. M.C. Escher, *Plane-filling Motif* with Fish and Bird, 1951. Linoleum cut

top are echoed precisely at the very bottom. If ever a work of art merited the title "poem," this is it! It is a paragon of compression and concision, and its visual polysemy – the black-fish/white-fish oscillation – is as elegant as could be. To my mind, this miniature represents what creative genius at its absolute peak is capable of, and as such, it is a study from which many artists, young and old, could learn a great deal.

Another miniature that exudes the same sort of subtle charm is *Plane-filling Motif with Fish and Bird*, a linoleum cut done in 1951 (Fig. 4). At first, one might tend to see in this nothing more than a competent though rather uninspired drawing of four identical fish. Only if one's attention jumps from the four white shapes to the central black shape that they collectively define does one discover what is really going on here: a lone bird flying in the opposite direction leaps out at the eye. At the eye, indeed! Yes, I suspect that had Escher not drawn that tiny tell-tale circle at the eye, the central bird would be so subtle as to elude nearly all viewers. Sheer poetry, once again.

Two other similar studies are worth pointing out and briefly commenting on, as well. *Horses and Birds* is a wood engraving done in the fall of 1949, while the Asselbergs' New Year's greeting card, a woodcut, dates from roughly a year earlier. In the first of this pair, one sees four horses – and yet the fourth one is so cloudlike as to be nearly ethereal; likewise, one sees four birds, but the fourth one has nearly been absorbed into the grass. And in the second of the pair, the sea scene, we clearly recognize five black boats, with a sixth black shape (directly above the lowest fish) constituting the "ghost" of a boat; and in perfect complementarity, we clearly recognize five white fish, with a sixth white shape (directly below the highest boat) constituting the "ghost" of a fish.

There are several touches in the latter study that enhance its charm, such as the increasing realism of the boats as one moves upwards, and the symmetrically increasing realism of the fish as one moves downwards. Thus, for instance, one might say that the "symmetric analogue" to the sharp teeth of the very lowest fish is the person seated in the back of the very highest boat. These details, like the seagulls in the sky and the jellyfish in the sea, did not have to be added, if all the artist were interested in were a trompe-l'œil effect; but Escher loved the extra detail, the fine touch that in some sense might have seemed irrelevant but that undeniably added flavor.

A Time-reversed Artist's Life

I now wish to slide gradually backwards in time, and in so doing to demonstrate what I think is a remarkable reversal of the usual progression in an artist's life, in which youth's first passionate outpourings are often brilliant and catchy, but in which the fact of aging tends to lead to an ever-increasing level of subtlety and an ever-greater idiosyncrasy of language, which, perforce, usually "speak-s" to a smaller and smaller audience. Somehow, in the case of M.C. Escher, the progression seems to have followed precisely the opposite course – namely, whereas the output from his earlier years is imbued with a subtlety that seems to elude most people, it is the products of his later years that seem brilliant and catchy, and that have seized a vast public's imagination.

Intimate Interlacings of Independent Universes

I have already waxed lyrical about the several interwoven worlds in the 1952 woodcut *Puddle*, and in *Gödel*, *Escher*, *Bach*, I echoed Escher's own words about the mingled worlds in the 1955 lithograph *Three Worlds*, so I will not do that here. I would instead focus on a seldom-discussed print, the wood engraving *Double Planetoid*, which dates from 1949 (Fig. 5). What we have here is a wonderful science-fiction image of two totally independent yet mutually interpenetrating worlds, one inhabited exclusively by human beings, the other populated exclusively by reptiles of the lizard/dinosaur variety. Each world is, on its own, a perfect tetrahedron – the most elementary of the five regular Platonic solids, having just four vertices, and for its faces having four equilateral triangles.

For the human-populated tetrahedron, the vertices are flag-capped castle towers, and each face contains an essentially circular bridge chaining its three towers together, so that people can freely walk from one "kingdom" to another. Indeed, the careful onlooker will soon spot several individuals in transit from one castle to another, as well as other denizens who sit or stand high on the balconies, and chat or contemplate the scenery.

At the same time, there is another tetrahedral world whose vertices consist of four rugged mountain-peaks, which one might imagine reaching by strenuous rock-climbing, scrabbling up the steep slopes and grabbing at cactus branches –



Fig. 5. M.C. Escher, Double Planetoid, 1949. Wood engraving

but of course this world is exceedingly hostile to humans, and there are none in it to thus tempt fate. Who would want to risk being trisected by a tyrannosaurus or trampled by a triceratops? A careful look at this wild world will reveal several different kinds of dinosaurs, and – in slight violation of my reptiles-only theory a few lines back – a mountain goat perched high on a promontory!

Escher leaves totally to the imagination of the viewer the nature of the relationship of these worlds to each other. Their *physical* interaction is mediated by a set of arches and galleries, which allow the dino-world to pass right through the architecture of the human world – and complementarily, by a set of caves and grottoes, which similarly allow the human world to pass right through the dino-world. Not in a single point do the two worlds ever actually touch each other! What an ingenious geometric creation!

But what we do not know is the answer to the questions: *Do the denizens* of one world see those of the other? Are the two worlds mutually ignorant, or are they aware of each other? I do, I admit, have a hunch on this. It seems to me that on one of the high walkways I can just barely make out a person with outstretched arm, pointing something out to a companion, and it would appear that it is most likely a scary, scaly lizard much larger than either of the people, scaling the alpine heights of one of the four mountains – and so, if I had to bet on

it, I would guess that the people are aware of their co-denizens, but they never try to cross over, and perhaps the dinosaurs, too, are dimly aware of strange creatures lurking near them, just as aquarium fish might be dimly aware of people through the glass of their tanks.

Meanwhile, this double world dangles serenely in the blackest of space, with its inhabitants presumably enjoying a very earth-like existence, replete with normal gravity, air, wind and rain, the passing seasons, and of course an abundance of food, fights and rivalries, languages, dialects, passports, armies, wars and diplomacy, flirtations and marriages, temptations, intrigues, infidelity, illness and mortality, and even – for how could it be otherwise? – the rudiments of science as well as art a-plenty. And thus, mightn't one conceivably come across an Escher print – perhaps *Double Planetoid* itself – hanging on the stone walls of one or more of the grand little castles?

This print provides us with an extremely blatant case of intermingling worlds, but Escher's early art is filled with subtler examples of this same kind of vision. Consider the 1939 woodcut *Delft from the Tower of the Oude Kerk* (Fig. 6). What we see here is a panorama of Delft rooftops, interrupted by the pleasingly carved stone railing of the tower, with its flat upper surface and its graceful curved arches. Which world is dominant here? Which is the subject of the study? On the one hand, the lovely medieval town would seem to be the main focus, with the railing being an unwanted but unpreventable intruder (as if the incorrigibly honest artist had no choice but to include the railing in his rendering of reality, simply because it was *there*!); and yet on the other hand, the lovingly detailed portrayal of the railing itself, with all its cracks and flaws, draws one's attention



Fig. 6. M.C. Escher, *Delft from Oude Kerk Tower*, 1939. Woodcut



Fig. 7. M.C. Escher, Venice, 1936. Woodcut

quite away from the town, and one's gaze can well dwell on the nearby stone instead.

The truth of the matter is, however, that there is a perfect balance between the two worlds, and that the actual subject of the study, as in *Double Planetoid*, is *coexistence* – in this case, the coexistence of near and far, of light and dark, of solidity and airiness, of one's *own* world (for we can imagine reaching our hand out and touching the railing) and the world of *others* (for we can imagine the people walking the streets of Delft, carrying out their daily duties of shopping, stopping, talking, and walking), but *they* and *we* belong to separate worlds, and never the twain shall meet.

A similar foreground-world-versus-background-world effect gives great interest to the 1936 woodcut *Venice* (Fig. 7), wherein we see, across the serene lagoon, a lovely church steeple rising high above the water, but our view is partially obscured by the wondrous Venetian curvilinear arches, recognizable instantly from their Byzantine-influenced minaret-like negative spaces, and just above them, their four-leaf-clover-shaped holes. Once again, which world is being "foregrounded"? And once again, the answer is that the true point of the image resides in its duality, its ambiguity, its oscillatory nature, never resolved.

Similar near-and-far double-world oscillations are found in the 1937 woodcut *Porthole* and the 1933 wood engraving *Cloister of Monreale*, Sicily (see page 79). The latter in particular features an exquisite interplay of extreme light and extreme dark, with the sun's rays streaming diagonally across the courtyard, and with delicate swirling lacery adorning the quadruple stone column in the very foreground.

One final example of this "subgenre" that is so characteristic of M.C. Escher's style is provided by his 1933 woodcut *Pineta di Calvi, Corsica* (Fig. 8), which depicts a village perched on a rocky outcropping, seen from across a lake or river, but our clear view of the village is constantly being challenged by the darkest of dark pine trees – trunks, branches, foliage, and cones. We the viewers



Fig. 8. M.C. Escher, *Pineta* of Calvi, Corsica, 1933. Woodcut

belong to one world – dark, cool, lush, and sinuous – while the far-off village constitutes a world apart – bright, scorched, dry, and rectilinear. Intimate commingling of these opposites is the point of the study.

M.C. Escher's "Magical Realism"

Pineta di Calvi is one of those prints from a period in Escher's life that I consider absolutely magical. I got my first whiff of this facet of Escher when I gazed in fascination at the abruptly plunging hillsides of his 1930 lithograph *Castrovalva* reproduced in the sampler of his work that I obtained in 1966, but since that print had no true companions in the book, it felt more like an exception than a trend, and so I built up only the most rudimentary mental image of M.C. Escher *qua* landscape artist.

It was not until several years later – in fact, in May, 1972, when I got hold of a more comprehensive catalogue of Escher's graphic work, *De werelden van M.C. Escher*, edited by J.L. Locher – that I saw dozens more of these astonishing southern landscapes, and started to realize what a distorted image of Escher's



Fig. 9. M.C. Escher, *Roofs of Siena*, 1922. Woodcut



Fig. 10. M.C. Escher, *Bonifacio, Corsica*, 1928. Woodcut

artistic personality had been given to me, and of course to many others, by exhibits and books that focused so sharply on his paradoxical, illusion-centered works, while ignoring almost totally his deeply lyrical side.

Let me give a personal example. In the same year that I first saw *Day and Night* – in fact, just three months later – my parents and sister and I took a threeweek trip through Italy, a few days of which we spent in the spectacular ancient hilltown of Siena, in Tuscany. I fell in love with that town, feeling it was the most romantic place I had ever seen – indeed, I ached in the most acute manner to savor it with a romantic partner. Well, it was only some six years later that I discovered how much my artistic and yearning reaction to Siena was shared by Escher, who made several poetic studies of its narrow, hilly streets and its ancient, haphazard architecture, such as his 1922 woodcut, *Roofs of Siena* (Fig. 9). These studies caught precisely the mood that I had been infected with, yet that I myself could never have possibly verbalized, let alone captured in an image.

The amazing charm of Italian villages that grow up nearly organically fused with the rocks and mountains on which they sit was an endless source of inspiration for Escher, and he made many studies of these miracles of collective invention, showing how they merge so intimately with the nature all about them. Two examples of this obsession of Escher's are his 1928 woodcut *Bonifacio, Corsica* (Fig. 10), showing a village perilously poised high above the sea on the very edge of a cliff that bends inward below it, and his 1929 scratch drawing *Town in Southern Italy*, showing a hillside village set at one end of a long valley that recedes far into the distance, where one sees a snowy mountain chain looming (Fig. 11).



Fig. 11. M.C. Escher, *Town in Southern Italy*, 1929. Scratch drawing (lithographic ink)



Fig. 12. M.C. Escher, Morano, Calabria, 1930. Woodcut

These are the kinds of scenes that have since time immemorial inspired poetic imaginations in the most powerful manner, and yet I have never seen anyone capture quite as clearly their magical feel. Perhaps the most stunning portrait of an Italian hilltown that I have ever gazed upon is Escher's 1930 woodcut *Morano, Calabria* (Fig. 12), which he made from a photograph he'd taken a few months earlier [2, p. 46]. If one compares the photo with the final print, one sees all sorts of devices he has used in order to turn reality into a poem. Metaphorically speaking, Escher quotes very literally, but at the same time he feels free to put in ellipses and to insert his own italics, and in this subtle manner, he turns elegant prose into exalted poetry.

In addition to appreciating the rugged beauty of crag-nestled villages, Escher had a particularly strong affinity for trees and forests, and their softer beauty, too, he was able to turn into quite amazing poetry. Take, for instance, his 1932 wood-cut *Carubba Tree*, executed in the exquisite Italian hilltown of Ravello, perched high above the Amalfi coastline, southwest of Naples (see page 18). The play of light and dark here recalls the wonderful stylizations of waves and mountains done by Japanese printmakers such as Hokusai, but the particular gestures and devices are Escher's alone.

As we continue our roughly time-reversed projection of Escher's life, we arrive at his surrealistic 1921 woodcut *Wood near Menton*, which has a marvelous, wild, fiery magic to it, mixing pure geometry with the strangest and snakiest of curves (Fig. 13). This, too, is among the Escher prints that I would most have liked to own. It reminds me a little of the experimentations of Escher's compatriot, the painter Piet Mondrian, as he slid slowly but inexorably down a slope leading from pure, old-fashioned representationalism, through a personal type of impressionism, finally to wind up at an unforeseen and unpredictable destination – namely, the highly geometrical abstract style for which he gained



Fig. 13. M.C. Escher, Wood near Menton, [1921]. Woodcut

his greatest fame. Midway along this slide, Mondrian produced beautiful surreal visions of trees and forests with marvelous curvilinearities to them, but such visions he eventually left behind; among them were dozens of attempts to capture the "essence of treeness," which I find strangely parallel to this study by Escher.

There is a type of literature that first sprang up in South America and that has since spread to other parts of the world, known as "magical realism," exemplified by the works of Colombian novelist Gabriel García Márquez. The hallmark of this brand of fiction is the scattering, among a perfectly normal series of events, of occasional paranormal occurrences, which are recounted quite blithely and straightforwardly, as if they were just as real and just as ordinary as the events that frame them. For some reason, I have never liked reading novels in this style, and yet, in an admittedly inconsistent fashion, I seem to fall lock, stock, and barrel for the visual way that M.C. Escher found of blending the purely real with the fantastic or the magical. I can't account for this rather irrational discrepancy of my literary and artistic tastes, but there it is anyway.

To conclude this brief discussion of M.C. Escher's visual version of magical realism, and in so doing to unwind the clock even further, I would cite the untitled 1919 woodcut that in my books is simply assigned the stark label *Tree* (Fig. 14). With long and swirly tendril-like branches weaving in and out among one another, this tree stands alone in a vast, barren field, with an eerily glowing moon looming behind it; in the foreground, a baffled human cowers in apparent fear and awe at the miraculous sight. The tree seems to be radiating some kind of magical "vibrations," to use a voguish but apt word. There is a mythical and timeless quality to this strange, unexplained scene. What could Escher have had in mind? Although there is nothing overtly paradoxical or illusionistic here, the



Fig. 14. M.C. Escher, Tree, 1919. Woodcut

artist is playing at the verges of rationality, and in this image, one can almost foresee (thanks, needless to say, to knowing the answer!) the directions in which its creator is predestined to travel over the course of his artistic lifetime.

Of an Artistic Corpus and of its Parts

We could travel back still further in time and see how M.C. Escher already, in some of his even more youthful prints, was flirting with mystery and magic, but it is time to draw the line. I confess that it has not been easy to select which prints to discuss, and that I would have liked to give many more examples, but oftentimes concision, though challenging and painful, is the wisest choice.

And so... What Escher works do I most enjoy looking at today, after having been an MCE aficionado for – horrors! – well over thirty years? The truth of the matter is that these days, I find most pleasure in gazing at his earlier works – his fabulous (in the sense of "fable-like") Italian landscapes, and his studies of interpenetrating worlds – although to be sure, those old latter-day stand-bys *Day and Night, Up and Down, Reptiles, Liberation*, and *Relativity* will never cease to enchant me.

But would I have ever come to appreciate the beauties of those early works, those works that exhibit no "in-your-face" impossibilities or absurdities, were it not precisely for the latter works, the ones that everyone has come to feel are synonymous with the name "M.C. Escher"? That is a probing question. However, an even more probing question is whether I would ever have *encountered* them at all, had he not become world-famous for his later works. And once we open these

questions up, we are led to dealing with some of the most fascinating issues in the philosophy of art and the meaning of esthetics.

To help us grapple with these issues, I will propose two hypothetical variants of M.C. Escher. For convenience's sake, I'll call them "M.A." and "M.B." Like M.C. Escher (but instead of him!), M.A. Escher was born in 1898 in Holland, and lived exactly the same life as did the former – same, that is, until the fateful year 1936, when, tragically, M.A. was struck on his bicycle by a passing train, and died at age 38. Thus all that M.C. Escher had created up till that age, but nothing beyond it, would be the artistic legacy, the full artistic corpus, of M.A. Escher. Sadly, *Day and Night, Metamorphosis, Belvedere*, and all of those beloved works would simply never have seen the light of day (or night!), all because of the railroad-crossing signal that failed to go off.

Now as for M.B. Escher, he too shared the life story of M.C. all the way up till 1936 (and once again, with all the same artistic output), but then, unlike the ill-starred M.A., M.B. kept right on going strong until the ripe old age of 73 (just as did M.C.) – but here's the key difference between B and C: not even once during his whole long life did artist M.B. Escher feel any temptation to explore overt paradox, tessellation, impossible worlds, dimensional conflict, or any of those themes that today we would tend to identify by the label "Escherian." Instead, M.B. Escher trod the straight and narrow pathway over the next few decades, refining his technique ever further by churning out great numbers of prints of rugged Italian landscapes and charming Italian villages, poetic studies of Spanish and Maltese and Dutch countrysides in the four seasons, Zen-flavored miniatures featuring commingling worlds, and perhaps the occasional study in which elements of order and of chaos are tightly juxtaposed.

The question now arises: What would have been the artistic fates of M.A. Escher and M.B. Escher? Would anyone today know of either of them, or care about them? And in particular, would *I*, had I somehow come into contact with the works of either of these hypothetical artists, love them as I love M.C. Escher's, and would I have felt it was worth my while to spend a good chunk of my time singing their praises in a longish essay?

I must admit, it strikes me as pretty doubtful that the works of either artist would ever have reached my attention, or would even have attracted that much attention outside of those who were *a priori* inclined to be interested in the artist's works – namely, his close friends and relatives, people from the towns that he lived in and drew, and lastly, that small clique of people who always enjoy purchasing inexpensive prints in minor galleries here and there. Very probably, no internationally distributed art book would feature even so much as a single print of M.A. or M.B. Escher.

But why would this be? Aren't M.C. Escher's early prints – the ones that in this essay I have been so oohing and ahhing over – found in widely distributed books? Have they not become justly famous? And so, given their merit, would they not have found their way to publication come hell or high water? Of course, the answer is "no." Would we wish to read biographies of the child who *would* have become Einstein had he not died of typhus at age nine? Of course not; we

are interested in reading about Einstein's early childhood precisely because and only because of what he in fact *would* become and *did* become. Would we wish to read a biography of Albert Einstein, the careful horticulturist who faithfully tended the Basle Botanical Gardens for fifty years after deciding that physics was fun but flowers were *more* fun? Of course not; we are interested in the life of Albert Einstein *only* if he is the Albert Einstein who *didn't* drop physics, and then went on to discover two varieties of relativity, to postulate the photon, and so on and so forth.

The biographies of the nine-year-old prodigy and the dutiful Swiss botanist are, of course, caricatures of the M.A. and M.B. scenarios, since both M.A. and M.B. *did*, by hypothesis, grow up to adulthood and produce considerable bodies of respectable art. However, reaching adulthood and enjoying modest success is one thing, while having a huge skyrocketing career is quite another. There are many artists in the former category, few in the latter. One can hardly dispute the tautology that what M.C. Escher is famous for is the set of works that people know him by, and it seems most likely that Dame Fame would have passed him right by had he either expired on the railroad tracks in 1936, or merely gone on to do "more of the same" for another three or four decades.

And so I think that the question of fame is fairly unambiguous and uncontroversial: M.A. and M.B. would most likely have been very minor figures in the world of art, if not virtually unknown, by this, the year 1999. But saying that and stopping there sidesteps the perhaps more interesting question of whether their works would still have exerted on me, Douglas Hofstadter – had I by hook or by crook come to know them well – that same effect, that same sense of magic and mystery as I now perceive in them. What would I think – indeed, what would I *see*? – when one fine day I chanced to run across the works of M.A. or M.B. Escher on the walls of some small Dutch museum, or flipped by accident to them in the pages of an obscure but finely produced art book?

This is a rather tricky counterfactual scenario, but here's my take on it. I suspect that although I would still like the prints quite well and would feel that they resonated with my own personal love for such things as Italian hilltowns and intermingling worlds, I would probably fail to see the extra levels of magic that I in fact see lurking in them "between the lines," extra levels of meaning that clearly come from my seeing these prints not simply as "some artworks by some Dutch artist," but far more particularly as *works that emanated from the selfsame eye and the selfsame hand of M.C. Escher, paradox artist par excellence.*

In fact, this is in itself a seeming paradox: that my reactions to the wonderful early prints of M.C. Escher are not due solely to the forms and ideas that he put into them when producing them, but are also deeply due to *the artist that he later became and that I came to love*. It is because I fell in love with *Day and Night* and *Up and Down* (etc.) that I can now look at prints like *Pineta di Calvi* and *Morano, Calabria* and see much more magic in them than is, so to speak, "on the surface." I think to myself (mostly unconsciously, to be sure), "These landscapes are by the artist who made *Day and Night* and *Up and Down* and so forth, and I know well that *that* artist had a profound sense for hidden magic, and I can see

glimmerings of that same sort of hidden magic lurking in these two prints, even though it's not in-your-face magic. And therefore these prints, by virtue of being imbued with a subtler version of the same magic as their later-born superfamous cousins, are even deeper and therefore even better than those are!"

Although I have phrased this in an exaggerated, naïve-seeming way, I actually think that such an opinion would be well-founded and utterly reasonable. For the truth of the matter is, we never perceive anything in a purely context-free manner. If you don't play chess, you surely don't see a chessboard in midgame the way a grandmaster does. If you know no Indian music, you cannot form a sophisticated judgment of pieces of Indian music that you hear out of the blue. If you cannot read English, your perception of this page of text is surely very different from that of the woman sitting next to you in the subway train, who (unlike you) is actually *reading* and *understanding* this very sentence, and perhaps snickering at the thought that to someone else, it might look like no more than black marks on a white background. And likewise, if you know no late Escher, your perception of *Pineta di Calvi* and *Morano, Calabria* and such works is inevitably going to be very different from that of someone who knows late Escher well (and who realizes that the different bodies of work are by one and the same person).

For me or for anyone else, perception of the magic that lurks in (or behind) M.C. Escher's early prints would be greatly facilitated and catalyzed by prior experiencing of the magic in his *later* prints. Indeed, perhaps that is the *only* route to seeing their magic.

Musings About the Inevitability of an Artistic Lifecourse

This linkage that I am proposing between "early Escherian magic" and "late Escherian magic" does force one to ask: Are they really *the same* magic? Would the latter necessarily have emerged from the former? Was Escher's artistic pathway inevitable and in effect predestined (barring railroad-crossing disasters and such things)? When we look at early Eschers and late Eschers and claim to see "the same spirit," is it like looking at photos of a teen-age boy and the old man he grew into, and recognizing the same impishness (or the same melancholy spirit) at both ages? Or could intervening events – chance events – have made some crucial difference? Could there really have been an "M.B. Escher," who never found the pathway to paradox – or, if he found it, then never found it tempting?

I wonder, for instance, about Escher's fateful – or *was* it fateful? – 1936 trip to the Alhambra in Granada, Spain. It's easy and tempting to surmise that had M.C. Escher not made that visit, he would never have become obsessed with the "regular division of the plane" and never have done the tessellations that became perhaps his most celebrated trademark. But the truth of the matter is somewhat more complex. In the first place, already at age 22 or 23, in the years 1920–21 when he studied at the School for Architecture and Decorative Arts in Haarlem, MCE had experimented cautiously with periodic patterns in the plane, as well as with patterns of right-side-up and upside-down faces that together filled up the plane in a figure-and-ground manner. Indeed, Escher himself wrote, "Long before I discovered in the Alhambra that the Moors had an affinity for the regular division of the plane, I had already recognized it in myself." ([2], pp. 162–163, and [5, p. 103]) So there was already in young Escher a latent propensity for studying interwoven planar patterns.

Moreover, his 1936 visit to the Alhambra was not his first visit there, for he had visited it in the fall of 1922 as well. Both times he was impressed by the beauty and intricacy of the tiling patterns on the walls (and ceilings and floors!), but only after the second visit did he catch on fire with these ideas. And yet, most tellingly, Escher's own account of why his artistic passion changed course at roughly this stage in his life does not refer to his rediscovery of the bewitching tilings of the Alhambra, but rather, to the fact that in 1936 he and his wife and sons finally left Italy for Switzerland, then moved to Belgium, and eventually settled in Holland – environments he found rather bland, and about which he wrote, "I found the outward appearance of landscape and architecture less striking than those which are particularly to be seen in the southern part of Italy. Thus I felt compelled to withdraw from the more or less direct and true-to-life illustrating of my surroundings. No doubt this circumstance was in a high degree responsible for bringing my inner visions into being." [6, p. 7]

Escher himself also commented on why he had not pursued his early interest in tilings and tessellations: "In about 1924 I first printed a fabric with a wood block of a single animal motif that is repeated according to a particular system, always bearing in mind the principle that there may not be any 'empty spaces' I exhibited this piece of printed fabric together with my other work, *but it was not successful*." [italics added]. (See [2, p. 55] and [5, p. 84].) Thus we see that somehow inside M.C. Escher, even from his earliest artistic explorations, there was a latent tendency to explore the ideas of the mature Escher, but a critical factor – and this is perhaps to be decried – was the nature of the public's reception: warm or cold?

In the end, then, it is not easy to tease apart nature from nurture, in the origins of Escher's search for visual magic. However, I personally am of the opinion that one *does* in fact see the seeds of the man in the child, or, as the saying goes, "The child is father to the man." And thus, although I myself concocted the hypothetical M.B. Escher who coincided with M.C. Escher till age 38 but then never explored the further pathways that M.C. Escher did, I intuitively recoil at this scenario, feeling it is in truth incoherent. The real Escher was profoundly predisposed to react to visual mystery and strangeness, and it was, in my opinion, *inevitable* that he would discover many paradoxical visions. For this reason, my fictitious M.B. Escher, although on the surface perhaps a plausible individual, seems to me to be, on deeper and longer reflection, a severe contradiction in terms.

To be sure, once M.C. Escher had become sufficiently well-known, then people came to him and presented him with ideas that he would otherwise never have heard of, and in this sense his life's artistic pathway did not come *entirely* from within, and was not fully discernable in or predictable from his youthful efforts. Thus, for instance, in 1959 Escher received an article from the British scientists L.S. and Roger Penrose in which they wrote of "impossible objects" and showed drawings of impossible triangles and staircases and such, and from these sparks Escher swiftly created several prints based on them.

Similarly, in 1958, the geometer H.S.M. Coxeter sent Escher an article on symmetry reproducing some of Escher's tessellations, but also containing a section on hyperbolic tessellations. Escher described Coxeter's text as "hocus pocus," but the figures filled him with excitement. Indeed, he wrote to his son Arthur [2, p. 91], "I get the feeling I am moving farther and farther away from work that would be a 'success' with the 'public', but what can I do when this sort of problem fascinates me so much that I cannot leave it alone?" It seems, then, that even fear of failure with the public could be overcome when there was a sufficient amount of inner fire inside his brain – and much the luckier are we all for that!

The Verdict of the Miserable Generations to Come

I never met M.C. Escher personally; the closest I could say I came to doing so was when I met his son George at the Escher Congress in Rome in June, 1998. celebrating the 100th birthday of M.C. Escher. George gave a wonderful talk in which he displayed the fruits of his own passionate search for patterns. The patterns consisted, in this case, of eight cardboard cubes taped together in such a manner that, once all the tape was in place, the resultant constructions could be flexed along their taped edges so as to flip back and forth between two different configurations, each forming a perfect $2 \times 2 \times 2$ cube. There were thousands of possible taping-patterns, and George had systematically explored each and every one of them and had come up with about a dozen or so wildly different solutions, each of which had some wonderful way of turning itself inside out and yet winding up in the end as the same overall shape. The details of this quest, however, are not at all my point; all that I wish to point out is that George had devoted months and months to studying these bizarre objects, and out of his intense devotion to this obscure but elegant puzzle had come some marvelous and totally counterintuitive discoveries, which he demonstrated to us all.

At the end, clearly anticipating the question that we all had formulated in our minds, George remarked, "You may wonder what in the world this puzzle and its solutions have to do with Father. On the surface, nothing at all. But what we have in common is this very down-to-earth manner of grappling with a purely mathematical puzzle, turning it into a practical exercise, and exploring every nook and cranny of it in our completely nontheoretical, totally experimental way, trying one thing after another after another. In such a way, we acquire a deep intimacy with the domain, and can make many fascinating discoveries. Whether they have

any importance is of doubt, but we cannot help ourselves. I, just as my father was, am driven by a perhaps silly but absolutely insatiable curiosity. And that is how all this has to do with the artist whom we are here celebrating today."

M.C. Escher, as a young man of 24 suffering the sweet torment of watching too many inaccessible pretty girls prancing all about, no matter where he turned in the wildly romantic city of Siena (as I myself would suffer as well, 44 years later, at nearly the same age and in precisely the same place!), sought refuge from the constant tantalization of Eros in the only way he knew – by plunging himself into his art – and this is what he said, in a letter from Siena to his very close lifelong friend Jan van der Does de Willebois [2, p. 24]:

Many wonderful prints are springing from my mostly industrious hands – but the question as to whether they contain any beauty, that I shall leave to be answered by the miserable generations to come.



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