

Hysteria and Enlightenment

Chapter 6

Vision & Revision

“The only means by which progress can be made is Nature, for the eye is trained by contact with Nature. “.... Paul Cezanne

“ Elle s’occupait , ainsi patiemment , a decouvrir des harmonies, et je la retrouvais vers le soir, attentive, devant quelque consonance qui la plongeait dans un ravissement prolongé...” André Gide, La Symphonie Pastorale

“The reflections of specks of light off a surface are essential in producing an impression of bulk on the retina. They are called specularities...” Talk by Andy Hanson on 4D visualization in Computer Graphics, MSRI conference, Berkeley, Ca., Oct. 11, 1992.

The History (continued):

Franz Anton Messer installed Marie-Therese von Paradis in a room in the estate inherited by his wife when her previous husband died. He then resumed the hypnotherapy experiments he’d begun at the country home of the Paradis family. This may have been the same room where Mozart would stay for one night in 1781, or perhaps the bedroom where Fraulein Oesterline had languished for some many long months.

He quickly discovered that he could not unwrap even one of the 5 turns of the bandage wrapped about his patient’s eyes. The pain of exposing her eyes to sunlight was colossal. The phenomenon was new to the medical profession at the time but has

since been well documented. Here is an excerpt from a report by a Doctor Franz, published in the Philosophical Transactions of 1841:

" On opening the eye for the first time on the third day after the operation, I asked the patient what he could see; he answered that he saw an extensive field of light, in which everything appeared dull, confused and in motion. He could not distinguish objects. The pain produced by the light forced him to close his eyes immediately. "

Four days later:

" When he directed his eyes steadily towards an object, the visual impression produced by the object was painful and very imperfect, because the eye, on account of its intolerance to light, could not be kept open long enough for the formation of the idea as derived from visual sensation."

Beyond *the* physical pain, one can expect that the return of vision will be accompanied by a strong psychological shock, or trauma:

"The operation is always accompanied by some degree of mental shock, in virtue of the knowledge that the patient is confronted with a turning point in his life. In the early trials, moreover, the pain caused by the unaccustomed exposure to light has not yet subsided."

The many correspondences and cross-references between physical blindness, psychic blindness and moral blindness make for a rich banquet of metaphors that, for literary purposes, can last be drawn out indefinitely. The state of incredible pain in the presence of emerging spiritual or mystical light has often been portrayed in the writings of mystics. Here is a famous passage from St. John of the Cross:

"Yet a question arises: why, if this is a divine light, (for, as we claim, it lights up and purges the soul from her ignorance), is it called here a dark night? Two reasons may be

given as to why this wisdom is not only night and darkness to the soul, but also pain and torture.When this light of contemplation enters a soul not yet entirely enlightened, it produces in her spiritual darkness, for not only does this light overpower the soul, but it deprives and darkens its own power to act from its natural intelligence..... this divine contemplation enters the soul with a certain force in order to strengthen and subdue her; and the soul suffers so much in feeling her own weakness that she almost collapses, particularly at times when the divine contemplation enters with greater power. Both the sensory and spiritual parts of the soul, feeling as if they were under a threatening and heavy load, agonize to such a degree that the soul would take death as a relief and choice..."

When Franz Anton Mesmer realized that the efforts to cure Marie-Therese would demand as much of his resources and inventiveness as he could muster, he moved her from the main building of his estate to a suite of rooms in the clinic located in one of annexes around the grounds for his many scientific pursuits. One can think of this clinic, perhaps, as "Fisher-Posch Center for Research and Development in Therapeutic Hypnotherapy."¹

After his marriage to Frau Posch in 1765, Franz Anton Mesmer had gone on a building spree. The grounds now abounded in laboratories and studios for all his interests: Astronomy, Chemistry, Physics, Medicine, Music, and of course, Psychology and Psychotherapy. Although the main mansion had been laid out and ornamented with all the lavish grandeur of the late Rococco style, the supplementary wings, music rooms, laboratories and annexes reflected the Neo-classic style that was now sweeping across Europe from France and England.

In addition to Marie-Therese, several other patients were also living at the clinic : A Fraulein Zwelferine, age 19 , blind in one eye owing to an opaque spot or albugo on the iris; Fraulein Ossine,

¹ Research labs are generally named after the person who divies up the funds.

age 18, subject to fits of hysteria in the grand manner of Fraulein Oesterline; and Fraulein Wipior, afflicted with staphyloma, or growths on the cornea.

Let us earnestly hope that something more than a vain reaching out for profundity has encouraged the author to try to draw some sort of parallel between:

(A) the sheltering of the blind Marie-Therese, seeking her own form of "Enlightenment" in the darkened study of a Neo-classic research center on a Rococco estate; and:

(B) the multi-dimensional paradigm shift away from a view of the human condition as a baroque arena of cosmic dramas involving human, semi-divine and divine forces, to a "reductionist mentality", if you like, which sees the human condition as just one more neutral entity for scientific investigation, like the planets, the tides, colors, the atom, etc.

The frequent hysterical fits to which Marie-Therese was subject had given way to a state of relative calm. This gave Mesmer confidence in intensifying the magnetic treatments initiated at her family's country home. The numerous and repeated passes by his hands and arms over the temples, upper skull and eyes, produced a sensation, let us rather call it a climate in which the two of them were immersed, of a universal tidal force or fluid which Mesmer could manipulate at will, move about her body, concentrate in certain key locations and finally expel from her body. Mesmer may also have continued the use of magnetized pieces of metal; we know that he never entirely gave them up.

After the first week at the clinic, Marie-Therese's condition was sufficiently improved, provided that the sources of light in the room were dimmed, to allow the bandage around her eyes to be removed. Now she was able to sit quietly for several hours at a time. Franz Mesmer then set about inventing some demonstrative procedure that would convince his patient, her parents, the medical profession and ultimately himself, that the painful sensations burning along her optic nerves already represented a primitive form of vision.

A row of tall French windows stood at one end of the room. These opened up onto a balcony which looked down into a garden. When in full bloom in the late spring and summer, the garden of the Posch estate was considered one of the marvels of the Austrian capital, much admired by the Viennese and often pointed up to visitors from abroad.² Now, in these final weeks of January, 1777, it was a desolate waste. On clear and bright days, Mesmer would open one of the shutters just a crack, enough so that a shaft of sunlight could enter the room and fall upon a table placed in position to receive it.

On the tabletop was assembled a collection of light-reflecting objects, coins, trinkets, statuettes, silverware, pottery, glassware and pins. The surface of these objects reflected light at different levels of intensity that he was able to arrange in a graduated scale from very dull to very bright.³

Marie-Therese was placed in a corner of the room. Here she could sense the presence of the objects on the table without being affected by the shaft of light coming in from the window. One by one these objects were moved into the beam of light. The light reflected off them generated sensations in Marie Therese's eyes that ranged from a pleasant tension to irritation to real suffering; on at least one occasion these were so strong that the sharp and sudden pain caused her to faint away. These experiments gave Mesmer the evidence he needed to establish a meaningful correlation between her sensations and the perception of light.

By early February Marie Therese had become acclimated to ordinary light. She was also beginning to respond, if uncertainly, to color, motion and shape. She could not yet interpret what she was seeing, that is to say, she did not yet have 'vision' in the way that we normally understand the meaning of the word. Being unable to gauge size or distance she could not identify the shapes she saw. Picking up a potato at dinner she would swear, until it

² Rapaccini, where are you?

³ One is put in mind of the enormous range of dynamics in Beethoven's symphonies. This may have some relationship to his deafness, which may have led him to exaggerate effects of loud and soft so that he could hear them with his inner ear.

actually entered her mouth, that it was larger than her head. She was making progress on distinguishing colors, though she could not affix names to them.

The combination of long hypnotherapy sessions and coming to grips with a whole new world of sensations was very painful, difficult and exhausting. She frequently became depressed, even wishing that she were blind as before. This phenomenon is also familiar to the medical profession today, though it must have been perplexing at the time. The road to total vision, (literal or metaphorical road or vision) , is arduous. One finds several accounts of persons who gave up along the way and chose to remain in or return to the simpler, more familiar and less confusing state of partial or total blindness.

I don't know what the literature has to say about the kind of learning crisis provoked *by the possession of a new skill*, as opposed to those crises we are all familiar with stemming from the difficulty of acquiring this skill. It seems however to be a regular feature of the construction or re-construction of vision after a protracted period of blindness. Recall that even the sighted person does not see the world as it "really is:" a three-dimensional universe governed, at least locally, by the principles of Euclidean geometry: parallel lines, shortest distances, right triangles , perfect circles ,congruent shapes, transversal intersections, Cartesian graphs and so forth.

This is the world we normally encounter close at hand , (the "local context") and , more-or-less,except at astronomical distances, our measuring instruments⁴ , but the world that appears on the retina and in our mind's eye is that of a (very!) non-Euclidean hyperbolic geometry ([3], [4])

The mathematical transformations gyrating in our brains that persuade us that a person standing at the far end of the street is actually the same height as the individual right next to us, are actually rather sophisticated. Even the dullest of sighted intellects,

⁴ correcting for the earth's curvature, the refractive index of the atmosphere, the variations in the earth's gravitational field, the bending of our rulers from heat and cold, the warping of space-time predicted by general relativity , and quantum uncertainty.

is a seasoned expert at *manipulating the conformal groups that translate hyperbolic into Euclidean spatial geometry*, although one may never, in half a century of trying, be able to make most people comprehend the meaning of the phrase in italics.⁵ This branch of applied differential geometry is also part of the stock and trade of every art school graduate who has had to learn and master perspective.

From the newspaper memoir of her father:

"Once she had such a bad attack that, tearing the bandage from her eyes, she threw herself upon the sofa wringing her hands, groaning and sobbing in the utmost despair Once in her displeasure she said to me, "Why am I less happy than I used to be? Every fresh thing I see causes me an unpleasant sensation. I was far more peaceful in my mind when I was sightless!"

Such depression may be, for persons who have been blessed with vision for most of their lives, just about incomprehensible. Those of us who are sighted naturally assume that blindness must be the most horrible imaginable. Wouldn't it therefore be the deepest wish in the heart of every blind person is to be able to see? By itself such an assumption is reasonable, were it not for the almost insurmountable obstacles faced by when someone congenitally blind experiences a sudden restoration of vision.

There are multiple and severe shocks at all levels of personal identity. Particularly distressing is the sudden collapse of simple competence in basic and essential muscular abilities. Over the decades a blind person would have learned how to orient himself through rooms and even entire buildings with swiftness and accuracy, anticipating and avoiding obstacles, walking with confidence through familiar situations, and with intelligent caution through new ones.⁶ He has, perhaps only a few days before,

⁵ Piero della Francesca would easily have understood what we're talking about after an introductory course of perhaps half an hour.

⁶ A remarkable account of this is given in the biography of Ved Mehta, "Face to Face" See Bibliography

celebrated the gift of restored vision, thinking that a new life automatically takes over after the clearing away of a few minor difficulties.

Yet now he is devastated to find himself unable to walk, unable to pick up or to hold objects, unable to establish or maintain any sense of direction, or hold or use tools or utensils, or even to dress himself. Motor confusion, partial or complete, may continue to exist for an extended period as the faculty of sight labors desperately to establish its dominance. It seems to be a basic property human psychology that one of the senses must be primary while the others assume supporting roles. For most of us most of the time this sense is vision.

Taken all together: the maddening pain that springs from a renewed sensitivity to light, the inability to distinguish objects from one another or their backgrounds, the long persistence of after-images resulting in overlapping impressions of distinct objects, the thoroughly unfamiliar appearance of everyday items that in the blind state were recognizable and well-understood through feeling, sound, manipulation, the terrifying re-occurring patterns of errors in judging size, shape, distance, orientation, color, light and shade, placement, movement, the degeneration, then temporary breakdown of all motor coordination...

... combined with a new set of anxieties as to an uncertain future; the possible withdrawal of support - not only material, but the entire network of support relationships of family, friends and attendants that have been built up over the years - the cruel discovery that the restoration of vision is but the beginning of a long ordeal, with no guarantee of success at the end, but which one cannot now escape; the neat total lack of understanding by the outside world of one's inner chaos, (not excepting one's doctors, teachers and friends, being a phenomenon which even today is understood only by a few specialists);

... and, finally, the irretrievable loss of a limited, dependent, handicapped yet uncomplicated and even comfortable world of undisturbed darkness, and its replacement by an inhospitable

environment of turmoil, confusion, impotence, defeat, and permanent uncertainty...

All this would be enough to throw even the strongest psyche into violent depression. One then has some picture of the agonies and the struggles of Marie-Therese von Paradis. In that terrible period of 20 days, from January 20th to February 9th, she had little to go on beyond her own determination, and Dr. Mesmer's reiterated assurances that she would eventually be able, to see as well as anyone else. He himself had almost no experience in this domain but merely spoke from that over-weaning pride and belief in his own ideas, that streak of paranoia which is essential in the making of a successful practicing hypnotist.

At a distance of more than 2 centuries, we are obliged to take on faith the statements by Mesmer and her father, that by February 9th she no longer needed the bandage, she had developed the ability to orient herself over short distances, could distinguish simple objects, including the basic features of the human face, and could also distinguish between colors when they placed next to each other.

