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#### JEAN CHARLOT

THE theme of this article is the artist's description of the optical world in its most naked sensorial state, before this description becomes loaded with the emotional or mathematical computations bred in the artist's brain. The assumption that the painter who "merely" copies does an inferior job may arise from a failure to discriminate between the world as we know it and the world as we see it; for it is, in fact, when the artist copies most closely that he is furthest removed from the commonplace. When he copies through the eye alone he not only shuts out all the knowledge arrived at through the other senses and through scientific research or usage; he also denies the common ground between art and science—the preconceived postulates of mathematical or geometric composition. We could go further and say that the act of copying even precludes the many compromises between vision, the properties of pigments, the wrist and arm movements—all that in painting concerns craft and craftsmanship.

Putting nature on canvas is an activity similar to that of the botanist drying flowers between the leaves of his herbarium; to change live things into dead ones, to flatten things that are round, may seem to an observer of dubious usefulness. Yet the botanist, classifying the weeds of the dishevelled garden of nature, superimposes order and thereby adds to nature. Perhaps there is a similar vocation that spurs a painter to paint; his addition to the world's knowledge is bound to be of an esoteric kind, for if it could be expressed in words, the slowness, cumbersomeness and limitations of paint would make it the least desirable of mediums for the communication of this knowledge.

Vermeer sits before his easel. That the model is Fame the trumpet attests. The artist has started to paint the leaves of a

coronet of laurels. The rest of the canvas is untouched as yet. Insect-like his brush will cover this plain surface stroke by stroke as with a petit point stitch. He has no plan, if we discount the humble personal opinion which explains the choice of a model and a light. If there is logic, if there is beauty, even emotion, in the finished picture, these traits will come from the outside, seized upon by Vermeer's attentively cool eye. A Tiepolo may astonish us with a Fame flying enveloped in a rustling train of varicolored scarves, a picture whose reference to the actual optical world is as slight as the toe-marks of the diver against the springboard. The painter alone is responsible for whatever beauty there may be in the Italian picture. But the Dutchman astonishes us even more with his Fame solidly planted on both feet, the logic of his work emerging from the outside, just as it does when the jigsaw puzzle addict fits together tidbits and completes a picture whose effect he had not had in mind at the outset. Yet the plastic spectacle, gathering on the sensitized mirror that is the painter's eye, testifies in terms of optics to the ordered scheme of the world.

The painter who uses his brain to check on natural vision is greater than the painter who accepts a commonplace version of the world. Poussin beautifies his pictures with much knowledge of other arts, antique canons of beauty, poetical fables, musical tempi; he reenforces this knowledge with the rules of geometry and a philosophic climate that bind firmly together the too fluid elements of vision. One must also admire the terrific impact of a Tintoretto or a Greco, shattering the optical world and reforming it into another world after their own image. But perhaps greater than both types is the painter whose whole struggle lies in the effort to coordinate this inverted image on the inner eye and the man behind it, without reference to other sources of knowledge and without the interposition of personality. This start from rock bottom, this primary struggle featuring man and his senses naked, may be the only discipline out of which the permanent metaphysics of paint can emerge.

Whereas the outer world is in three dimensions, a conglomeration of bulks that can be impacted, circumvented, felt or built, the world which the painter knows is different; it is an optical world, smashed flat, and upside down on the dark coating of his retina. Or rather, not truly flattened, it curves along the concavity of the inner eye, is received on this spheroidal screen which corresponds in the realm of optics to the factual shape of the universe. Out of the interrelationship of these twin round worlds, the physical macrocosm and the optical microcosm, grow a series of identities, overlapping, displacements and transformations which may yield a clue to the validity of the painter's language.

If one magnifies a newspaper photograph the better to see a detail, this detail vanishes further and is replaced by the meaningless dot-and-blank of a printer's screen. Similarly the man who plumbs natural vision finds that a blur gathers, muddling the neatly labeled things. Neither the line nor the color of the world as seen can stand a curious approach. The optical world is dependent on physical bodies only insofar as they are revealed by light. Light is its most solid possession. The sleeper and the blind are conscious of things unseen but to the painter the unseen are as if they were not.

The eye gathers the meaning of the shape not from its silhouette but from inside. All modelings lead to this backbone of form, the frontier where light meets dark. Centrally located, this backbone of form draws to itself all the subsidiary, component forms, as the spine controls the web of the ribs. The outline proper, drained of power, expresses the illusiveness of matter rather than its boundaries; the form seen turns into the form unseen; the indistinct junction of solid and space affirms the sponginess of matter, as full of air as an expanded lung.

A house, a wall, a tree, are given definite colors by laymen as easily as if they were children's toy blocks; in the painter's world such local colors are modified by aerial perspective, slashed into contrasting hues by light and dark, suffer metamorphoses that transcend the limitations of our vocabulary.

The seen world (of which color is the articulation) has no use for those generic terms that suffice to the man who is color-conscious only as he protects steel from rust, daubs a barn door or inspects the bill for his wife's new dress.

No body can stand optically isolated, as it is isolated by reason or by anatomy. Each affirms its affinity to its surroundings until the whole is a unity, as is a straw matting or a shingle roof, each unit dovetailing into the next. The optical outline is not free, as in a mechanical rendering, but receives impacts from lines outside itself, is sucked in by tangential movements, is thus anchored securely to things far and near which it need never physically touch. Local color also reacts to its surroundings as edge meets edge. The apple, which the fruiterer knows to be solidly round, yellow and red, in Cézanne's eye magnifies its yellowness against a purple cloth, reddens to deeper hue against the green of a bottle, is dragged out of both shape and tone by the magnet of a wallpaper design. The object is tied further to its surroundings by the shadows cast; they transcend the object that casts them, ooze over neighboring objects like tentacles. The scientist has to explode the things we know into particles heretofore unknown before he reaches their common denominator. But the visual world, retaining the image of things as we know them—a table, a bottle, an apple—commingles them into a oneness to which common-sense experience offers no clue.

Optical objects, unlike factual ones, are not capable of measurement. With calipers and rod the anthropologist can subtract from man enough to equate him with a row of ciphers. But the shifting relationships in space of bulk and limbs make such a job impracticable for the painter. When Dürer attempts numerical formulae he enters the realm of anatomists; if his etched Adam and Eve, instead of cautiously imitating a basrelief, behaved with the reckless gusto of the leaves of the trees about them or the blades of grass at their toes their postulated measurements would collapse. The painter must reconcile himself to scientific monsters. A model extends his hand forward

and it becomes as large as his torso, drags a foot back and it shrinks to the size of the big toe of his forward foot. There is more than a joke in Parmigianino's self-portrait, distorted in a concave mirror, for this bizarre and unscientific relation of limb to limb within a single body is of the essence of the optical world.

Such a world reacts in a most unEuclidean manner to objective spatial truth. When Raphael scorns perspectives as "those measures that seem to be and are not" he brings a fresh wonderment to the somewhat jaded view we take of scientific perspective; it is an incredible world where all parallels meet, where horizontals foreshorten into verticals; an architectural scene, drawn in perspective, opens and closes its right angles with the reckless dash of a senorita maneuvering a fan. This rendering from a single point of view is only half of the optical truth, for the fact from which the painter starts is not a single image in the camera obscura but twin images, one on each of his retinas. Twins, but not identical, for if we shift our emphasis from one eye to the other, backgrounds slide sharply in relation to the object; the object, as we look at it through one eye and then the other, will expose, if it is close enough, more of one side and then of the other, as if it were pivoting gently. This primitive triangulation achieves computations in depth which the cubist tried to emulate—through both eyes used simultaneously we can see both sides of a sheet of paper, five facets of a die.

The distances involved in optics are relative, not measurable by yardstick but created anew in each picture. In a Cézanne landscape the pinetree in the foreground is related to the Mont St. Victoire in the background by a pocket of space that may be no wider than (in his "Mardi gras") the space between the harlequin's right and left foot.

The relative importance of things in the objective world is graded according to man, his hobbies and his needs. The optical approach upsets this egocentric order. Snapshots of a great man may focus candidly on the creases of his trousers rather than

on the pose he strikes. Inasmuch as the painter-copyist, too, functions as a camera he creates a new order based on shape and colors rather than on ethical, social or religious values. Paintings which attempt to preserve the order based upon the laymen's usage can present only a useless world: painted chairs cannot be sat upon or sketched houses entered, etched beggars gather no alms, frescoed kings cannot rule.

When an astronomer computes the orbits of planets, man disappears from the landscape. When a scientist makes researches on the atomic scale, man's body dissolves into cells, becomes unrecognizable. With his vision of the known world upset, man loses his supremacy and even his identity. Without changing the scale of vision but by shifting his point of view from routine knowledge to pure optics the painter also faces a revolution.

Thus, born of this new vision, paintings which are great plastic organizations glorify the inorganic rather than the human body. Giotto lavishes care on buildings and rocks. To strengthen man's body into the equivalent of a plastic tool he must needs cover it with heavy all-hiding cloaks which bring it closer to his beloved mountain forms. Raphael's bonneted pope is dwarfed by the upholstered tassel of his throne. Velásquez juggles in one picture with three spherical shapes: an apple, a dwarf, a prince. The human body can hardly compete with purer geometric forms or his fleshtone with that of flowers and skies. With man dethroned, other bodies assume dictatorship.

However aloof the new-found hierarchy which governs his choice, the painter is no floating spirit but a severely anchored body. The world he discovers from his ambush is conditioned by the elasticity of the eye-lens and the varying length of the visual ray. With each given focus he finds himself at the core of a hollowed sphere with a range of visibility coinciding with its periphery. This spherical grasp of the outer world, which Cézanne refers to in a letter as "concentric vision," brings what we see of the universe out of a state of infinity and apparent

disorder to a state limited, orderly, and as such within the range of human purposes. The classical concept of the world apparent in Raphael or Poussin is not wholly a mental construction but an echo of the humanistic order reigning within the optical sphere. The painter, having through candid vision upset the established hierarchy of things, finds in this "concentric vision" a new dignity. His becomes a pre-Galilean universe, with man again at its hub.

This assumption of a rigid focus is adopted for clarity's sake. But when we observe a scene our eye changes its focus according to the range of the objects successively sought. This gives a quasi-tactile reality to the selected details while the marginal areas become indistinct. Vermeer in his "New Testament" at the Metropolitan Museum focuses on his background and fills the foreground with an amazing rendition of a tapestry scene in blurred vision. Titian in his neutral backdrops solves the Gordian problem in a dictatorial way by wiping the unfocused planes out of optical existence. To make everything in a picture equally sharp or equally hazy, no matter how far apart from each other in space, is to establish a composite image which in painting is the equivalent of time. Successive focuses in the act of seeing collapse into simultaneity in the painted result. In terms of physics, the world that ebbs and flows inside the painter's eye justifies styles ranging from the sharpness of Mantegna to the fogs of Monet.

The gentle light, the amiable scenes favored by Vermeer, the humble objects Cézanne paints, are the wilful choice of men heroic enough to be copyists yet wise enough to channel natural vision into problems that are relatively simple and capable of solution—Cézanne's apple, Vermeer's bare walls, approximate laboratory conditions. Thus the man who copies finds that a style has been imposed on his work through the extreme chastity deemed wise in the choice of subjects—a simplicity such that beside it the purest antique groups of Puvis de Chavannes seem ambitious exertions. Others may relish stranger moods in nature, fantasies in optics tinged with a content that

is demonic, one is tempted to say Germanic. Such a scene confronted Leonardo, according to his own record—an old woman in black whose head, bonneted in white, seemed in the sunlight twice its natural size. Rembrandt seized upon the optical prestige of night devouring bodies; Grünewald recorded the miracle of their vanishing into intense light.

However candid the copyist's approach, his choice of a "motif" will tend to harmonize the physical fact that is his canvas with the optical facts of vision. Into Vermeer's optical world the canvas itself with its four square angles attracted square window panes, chessboard floor patterns, rectangular pictures that hang within the picture; this affinity translated into depth explains the cubed space of Vermeer's rooms, the cubical constructions of Cézanne and Giotto.

Concentric vision produces a taste for spherical forms. Again Vermeer illustrates the point in his astonishing picture at the Metropolitan Museum which bunches together those spheres—the mappamundi, the crystal of a celestial globe, the apple, the breast to which the hand points. For him the common denominator of vision is the globule of light and color dropped from the brush tip—to his painting as vital as the round cells in its blood are to a living organism. In "The Milkmaid" it transforms a loaf of bread into a star-studded universe. It is spherical as the sun and as the eyeball, the two ends of the ray on which it is threaded, pearl-like.

I was watching a duck waddle out of the shade. A gray fowl on gray dust at the outset, it crossed into sunlight and became a dazzling white bird on pink ground while at a right angle from him his sharp shadow, just born, followed his moves, its blue feet close to the golden feet of its mate. Optically all was changed; the bird and the scene were transfigured and a dark bird was added to the play. But my duck, save for a warmer feeling at its webs, had not noticed the change nor the strange companion aping its step. This bird was no painter but, secure in its tactile experience, upheld a layman's faith in things as they are.