



The Doors of Perception

Who has not experienced the unsettling *feeling* of travelling through space even while motionless and firmly parked in place? It is enough for an object — a bus or a plane or a car just next to our own — as long as it is larger than the frame through which it is viewed, to move against that frame (and hence against the durable environment within which we as perceivers are lodged) for it to pitch us into a minor crisis of sensory and orientational derangement. We respond to this perceptual puzzle with a reflexive startle and fretfully try to re-situate ourselves in a wider flow whose parameters we can, only after agonizing seconds, establish and pin down. We resolve the cognitive crisis by re-fixing the boundaries within which our sensations of self are understood. Only in such moments do we access the work of perception as *a labor of drawing*, of drawing new frames and brackets to alter or accommodate how we place ourselves meaningfully in the world.

Whether it is we ourselves who are in motion, or whether it is something that moves in relation to us, is for the physicist, a problem of *inertial* or *reference frames*. But it is a problem for everyday perception as well. How do we anchor ourselves in our world? How do we capture and use the stability of the environment to grasp the motion of an object in it, and how do we order objects, motions, and environments in relation to our ever-perambulating, ever-exploring selves? For every object in real experience belongs to a *de facto* “three-body problem”, the intransigent equation that seeks to predict the movement of three bodies in continuous gravitational interaction, but never actually does so?¹ Although these seemingly simple correlations happen every moment of every day in experience, they cannot be rationally modeled.²

Every living thing — no, every *thing* altogether! — is a reflex perceiver, a sentient registrar of differences developing in its surround. It is a wonder therefore that humans ever created the fable that *perspectival* vision can explain what we do. We do not in fact receive and digest a rigid reality in an impliable perspectival space, but rather probe, sample, and draw inferences; we *palpate* our world with all of our senses; we draw, re-draw, and actively *invent* the relations that connect us to it. We continually shift the boundaries and frames in order to produce uses and behaviors, and to understand where we are in the world. To perceive is to modify something outside us by modifying something inside.

Now, there is no perception without movement: The senses neither see, nor hear, nor feel what does not move or flow. Perfectly still objects, regardless of how obdurate and accessible they may seem, are not perceptible without the saccadic (tremulous) movement of the eyes, which occurs at speeds up to 900 angular degrees per second, a speed more rapid than the eyes themselves can discern. (We cannot for example see another person’s saccades.)

What is at play here, beyond the rudimentary modality of movement, is the living orchestration and intuition of change. A philosopher might use the term “difference” to gather the problem under the single heading of *salience*, for change in what happens around us is what matters and sticks out. (As the godfather of cybernetic awareness, Gregory Bateson famously expressed it, it is above all “the difference that makes a difference” to which the universe, and its sentient inhabitants, are attuned.)

Perception is the pursuit and organization of distinctions that make up the world that is unique to every organism: places and moments make a difference when they stand out from the evenness of the surround. Ontologically speaking they are points in a (space-time) flow where transformations or conjugations do or can be made to take place, where something connects to something else or opens a wormhole into a new functional reality that did not exist before. Salience — what stands out — is never a given. It does not precede perception but is produced within it. I hold this to be the essential lesson of Sarah Oppenheimer’s work.

Our libraries are filled with reflections on rational vision — on the ‘homogeneous, isotropic and continuous’ space³ beloved of modern “instrumentalist” thought. Oppenheimer’s work has long been treated as the production of paradoxes that mine and shatter the complacencies of mathematical vision, as the orchestration of an essential conflict between the subjectively ‘felt’ and the objectively ‘known’. But this was never the work’s primary concern.

What we can grasp clearly today is a progression in her work from mainly conjunctive operations (manipulations of occluding interior surfaces to unseal them and let them seep into other outlying ones) to kinetic appliances such as the one presented here today, whose preternatural displacements and flow *schedule* perceptual ruptures in time. There is now a deliberate engagement with the mysteries distributed “now here, now there” throughout being, as *pregnances* in space.⁴ By pregnancy I refer to the poisedness, volatility, and excitability of the worldly surround according to which nearly every point is endowed with transformative (morphogenetic) potential.

S-011110, the work set into Annely Juda Fine Art, displays rotational phenomena of an apparently simple yet actually mystifying kind. We know from the visibly symmetrical setup — rectilinear slabs mounted on a 45-degree rotating spindle — that we have to do with the purely linear motion of a body. And yet what erupts before our eyes confounds our ability to track the motion as a simple progression or change of degree. What presents itself to our senses is a transformation *in kind*. One reason for this is that what is rotated around the diagonal axis is not simply a ‘rigid body’ but the virtual rotation of one dynamic axis around another — 2 coordinated motions in one — where the axis itself serves now as the moving boundary, a halo-like envelope adhering to, and travelling with the object. The effect here, like the earlier-mentioned experience of the ambiguous movement of an adjacent vehicle, is to induce a baffling sensory climax and a need to reset our perceptual frame to accommodate what we think we know about the state of the world: That an object in our purview has been simply moved and not transformed. And yet, that is not what we experience.

We in fact experience a confounding and magical transformation, reminiscent of the topological burlesques of a high-board diver, in which an envelope of compound action — a performance envelope — mutates from a vertical to a horizontal disposition, as if an integer were literally transformed before us from a post into a lintel (and back) *without altering its performance*; that is, without showing how it engages the shifting ‘moment’ of its gravitational load. And this is a second paradox that enters into the game: we sense the incongruous movement of gravity and weight around — not a metric “axis” but a free and performative one. The ‘float’ and the turning effect of such works, when placed in a real context at full scale, would punctuate space and embed a transient drawing in it. (One need simply track the corners and black edges of the slabs as they carve their seemingly improvisatory parabolic sweeps.)

The delicate poisedness of the unambiguously weighty prism-forms brings their internal tension to the fore — there is suspension through equipoise — and this grounds attention not onto the mechanical pivot (which is rendered absent and void as the glass volumes vacate the place where the spindle would declare its fulcrum or moment point) but onto abstract or immaterial points in space where intensive values, such as triggers and tipping points, change and actively transform what is around them: these are like singularities in a phase space, places in space *and* time, where changes happen without apparent cause as if conjured by angels.

Such places are remarkable; and although they may well be part of everyday experience, they are rarely noticed. The observation of such a singularity brought the great perceptual psychologist James Jerome Gibson to the study of how organisms use light to tap their environments for advantage. As a child he noticed that when peering out the back of a train or automobile that the *ambient optic array* — space itself — would simultaneously compress (at the center) and expand (at the edges): objects shrank at the focal point but space rushed in explosively at the periphery of the visual field. Likewise, points in space converge or approach at drastically different rates as we move inside our milieus depending on their distance from us. We grasp information and organize ourselves in our surround based on the direct but unnoticed intuition of *relative* values, not absolute ones, as one thing progressively occludes or reveals another, as rates of change differ from moment to moment and place to place, either in conformity with, or against routine expectation.

Herein lies the fundamentally musical — read mystical, psychotropic — inclination of Oppenheimer’s work: it single-mindedly seeks the *thresholds* of things. It operates at the front where experience is unstable and easily bifurcates, to be frustrated, confirmed or, as in music, brought into free contact with what is not anticipated in our psychic and perceptual flow. Like music, her work operates through the endlessly surprising disclosure of unseen and unfelt orders of things — anomalies not necessarily in reality but certainly in experience — to teach us that these openings onto enchantment are always proximate and everywhere around us—all one has to do is pierce the veil.

Sanford Kwinter

1. The three bodies referred to by physicists and mathematicians were nearly always that of the earth, the sun and the moon. The problem famously has no solution. In the last years of the 19th century, Poincaré showed that there was an infinite number of periodic solutions, hence no regular pattern. On the *homoclinic tangles* that resulted from his intractable mapping solution, see Ivar Ekeland, *Mathematics and the Unexpected* (Chicago: University of Chicago Press, 1988).
2. The classical adage of the math professor who pitches a piece of chalk at a student in order to point out once caught, that the catcher has just solved an insoluble partial differential equation in real time.
3. Erwin Panofsky, *Perspective as Symbolic Form* (New York: Zone Books, 1997, 1924)
4. I borrow both the terms ‘salience’ and ‘pregnance’ from the mathematician Rene Thom *Esquisse d’une semi-physique: Physique aristotelicienne et theorie des catastrophes* (Paris: Interditions, 1988). The phrase “now here, now there” is a common translation of the Latin *nunc hinc, nunc illinc* from Lucretius who used the phrase to describe the random distribution of the singularizing “clinamens” or “swerves” that are the triggers for all form and event in the universe. Lucretius, *On the Nature of Things*.

