Henry Sussman*

Digital Parables[1]

Let's start these remarks, ones not entirely alien to Lacan, that therapeutic "healing" is a *medium* rather than a conceptual model, technique, practice, or school. Therapeutic "healing" in this sense is a process of *re-mediation*. Its parameters as such are features including intensity, duration, *grain*, absorptiveness, verisimilitude, simulation, addictiveness, feedback, entropy, meta-critique, auto-poeisis, and mutation. In the sense of its configuration and constitution as a medium, therapeutic re-mediation is free to transpire in books, art museums, theaters, cinemas, music and dance halls – indeed, in the street – as well as in the "official" consulting office or laboratory. A notion of therapeutic intervention grounded in such values as "absorptiveness" and "mutation" leaves such conventional values promulgated in the long-standing intramural struggles over methodological dominance as "truth," "theoretical rigor," and "clinical efficacy" temporarily (as in Hofstadter's telephonic image for recursion) "on hold."

As a *medium*, therapeutic redress opens up its multiple and interactive *dimensions*; it occupies its characteristic *spaces* (again, the resonant book, concert-hall, or other performance-space as much as the clinical *cabinet*); it concentrates itself in identifiable *nodes*, whose circuitry (interferences as well as flows) can be *mapped*; once in process, it establishes *interfaces* between a multiplicity of *inputs* relevant to and impacting upon the healing process.

At this juncture we can already characterize this battery of interventions as the invariably provisional redressing of systematic insult in the process of *rendering explicit* conditions of thwarting and unconditional closure, and *opening alternate circuitry* to jammed messages and shorted-out initiatives to performance. Once under way, the therapeutic intervention, prepossessing to the point of virtu-

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al absorptiveness and verisimilitude, attains a momentum and force field intrinsic to its own process. Systematic "healing" is by its very nature polymorphous, and once in process can be stimulated/diverted by multiple inputs. Seeing and hearing an opera can exert a profound catalytic effect upon a conventional (i.e. trans-subjective, theoretically coherent) formal therapeutic process already under way. Conversations with "civilians" (i.e. non-clinicians), reading books, or pondering theoretical paradigms can consolidate or divert the remediation: both when a formal program of therapy persists and when it has been "terminated" or temporarily suspended. We are concerned here as much with the *ambient* circumstances and intrusions of "healing from systematic insult" – the impact of strangers, books, other aesthetic and conceptual experiences, and conversion, encountered randomly – as we are with the no doubt informative and edifying history of spiritual dysfunction and its inventive remediation.

The downbeat in the configuration of theoretical backdrops as I am here assembling it is far more on the posture, drift, and variegated circuitry of therapeutic remediation (and on the switch-offs between circuits) than it is on its nature, sources, authenticity, and ultimate results of the quest for "wholeness" or the cessation of pain.

Movement and Melancholia

The most visceral and indispensable virtual window or *clearing* for healing that I could invoke is movement itself, particularly over and against the stasis ensuing from subjection to multiple *gravity-sinks* of rigidity, from *thwarting,* writ or delivered systematically. The history in which melancholy, for one condition, is inextricably bound up with inertia, with a seemingly irreversible break in momentum, is a particularly long and rich one.

How ironic it may seem that one dramatic spinoff to this long and varied tradition of phlegmatic melancholic self-absorption, stasis, and run-on rumination, possibly to no good end, transpired in an animal laboratory at the University of Pennsylvania, where a researcher named Bernard Seligman produced depression in dogs by strategically imposing a lid on a wooden box between whose partitions the animals had been allowed to jump freely. The laboratory conditions of the experiment, the scientific protocols under which it was carried out, allowed of course for the conditions, both of the free circulation between wood-

en compartments and its withdrawal, to be carefully calibrated and monitored. The scientific presupposition of the project articulated itself in the following way: the rigors specifically built into the experiment-design would allow for a no less objective, methodical, and repeatable parsing and interpretation of the behavioral implications, including the temperamental or modal dimension, than the careful orchestration of the conditions under which free circulation between compartments was permitted and barred. The condition that the arbitrary foreclosure of initiative produced on the dogs was called "learned helplessness" (*erlernte Hilflosigkeit*). Seligman's learned helplessness experiments achieved canonical status in the empirical literature of clinical psychology not only because of what they added to knowledge regarding the etiology, diagnosis, and treatment of one of the major spectrum-conditions under psychology's purview. Their cult status, a major step toward the evolution of cognitive psychotherapies, it turns out, also arose because the clinical project affirmed the relevance and indeed indispensability of laboratory trials, above all, the principled acceptance or rejection of wisdom also available from non-experimental sources (e.g. clinical case-studies, intuition, philosophical speculation, data and analyses gathered under the aegis of the "soft" social sciences, notably social psychology and anthropology).

In the language of laboratory experimentation, the "learned helplessness" findings confirmed what had been expressed over so many centuries in radically different textual displays:

> When an experimentally naïve dog receives an escape avoidance training in a shuttle box, it usually responds in this way: at the onset of the first traumatic electric shock, the dog runs frantically about until it accidentally scrambles over the barrier and escapes the shock. On the next trial, the dog, running and howling, crosses the barrier more quickly than before. Eventually, the dog learns to avoid shock altogether. ... A dog that has experienced uncontrollable shocks before avoidance training usually stops running and sits and lies, quietly whining, until shock terminates. The dog does not cross the barrier and escape from shock. Rather, it seems to give up resisting and to passively accept the shock. On succeeding trials, the dog continues to fail to make escape movements and it accepts as much shock as the experimenter chooses to give.

It is too tempting for us ensconced in literature and the arts to dismiss the production of depression in another species of mammals, in an experimental environment, as everything that Swift was aiming at in his rendition of the British Academy in the third Book of *Gulliver's Travels*: as what common sense and basic human recognition have taught us about melancholy, displaced to the quaint trappings of laboratories and the terminologies of science-babble. Nothing that we can glean from Seligman et. al.'s recapitulation of the dogs' experiences has not been stated more eloquently, and perhaps on a higher conceptual level than the memorable and habitually consulted avatars in this history of melancholy, from Theophrastus to Burton. A memorable recent addition to this list is Gregory Bateson,[2] in his compelling account of familial and mental doublebinds. Seligman and his team go on to write:

> We believe what ... lies at the heart of depression is this: the depressed patient has learned or believes that he cannot control those elements of his life that relieve suffering or bring him gratification. In short, he believes that he is helpless. Consider a few of the common precipitating events of his life. What is the meaning of job failure or incompetence at school? Frequently it means that all of a person's efforts have been in vain, his responses have failed to bring about the gratification he desires; he cannot find responses that control reinforcement. When a person is rejected by someone he loves, he can no longer control this significant source of gratification and support. When a parent or a lover dies, the bereaved person is powerless to produce or influence love from the dead person. Physical disease and growing old are obvious helplessness experiences. In these conditions, the person's own responses are ineffective and he must rely on the care of others. So we would predict that it is not life events per se that produce depression, but uncontrollable life-events.[3]

Depression in these lines is the human twilight to the closed system rendered in laboratory materials for the dogs. It is the emotional climate that we would expect to ensue from the catastrophe orchestrated by Kleist in his "Earthquake in Chile." It is a measure of Kleist's perverse irony that for his protagonists' sake, he can appropriate the sudden-onset melancholy ensuing from the disaster. He

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[2]   Bateson, *Steps to an Ecology of Mind,* U of Chicago P, Chicago 2000, pp. 310-31.
[3]   Martin E. P. Seligman, et. al., "Learned Helplessness and Depression," in *Essential Papers on Depression,* ed. James C. Coyne, New York UP, New York 1985, p. 203.

refits it into an improbable escape-hatch from their arbitrarily dead-end predicament. Gregor Samsa's own particular transformation, from traveling salesman into "giant vermin," unfortunately preempts him from seeking out therapeutic intervention. But the only drift of his frenetic initial efforts to adapt and the negative reinforcement proceeding from all family members save his sister Grete is further toward "learned helplessness." Traumatic catastrophes, the more devastating the better, make for the most vivid imaginative literature. In human terms, especially when all escape routes are barred, as in Bateson's compelling account of the double-bind and its familial home, they spawn the full spectrum of depressive conditions.

It is in the scene, *khōra*, and theatrical *orchestra* of melancholy and depression that the most compelling motive arises for tribute to Terpsichore, the muse of dance. Classical tragedy, even as the schematic blueprint of systematic closure at the deep strata of family kinship, and community, opens the scene where the elements of the tragedy receive their choreographic expression, where they *move*. Immoderate desire, obdurate taboo, power, memory, political affiliation and interest, revenge: all these find expression, in character, on the tragic stage, which registers the traces of their movement. Tragic catharsis, therefore, consists as much in the sheer *dynamics* of representational space as in the specific negotiations of nobility, trespass, necessity, and communal memory adjudicated by the play. The open-ended poetic screen that Stéphane Mallarmé devised for lyrical expression as late-Capitalism and its technologies dawned, a display that could be folded in several directions and could be made to mirror itself.

Of writing in general I would say that it constantly demands the coordination between two registers of movement: the *horizontal* addition of words and the vertical a) negotiation of pre-existent grammatical and syntactic structures; and b) a search-function for needed signifiers fluctuating between memory-stores arrayed at different *depths*. Definitively checking effortless fluidity in either its horizontal or vertical ranges of movement, writing, under these conditions, staggers forward. Under optimal conditions of relaxation and attentiveness, it may be said to dance, but never effortlessly. Any palliation emerging in the course of cultural composition arises from positive reinforcement in the feedback loop between the compositional search for words, also their felicitous arrangement, and the tentative, emergent worked object.

Writing is then, the impossible choreography between grammatical and syntactic structures and constraints and semantic possibility. As fitful as any overall movement internal to its process and along its overall arc may be, this dynamic, with its irreversible movement, invariably feels better than "learned helplessness." It is replete with regenerative power, if we can wean ourselves from banking on restorative wholeness or full restitution. What we may well regenerate, if we can break our various inertias and *move*, above all along the panorama of annotation and composition, is *mutations*, hydra-heads, "probe-heads." It is an aria of exhortation, a rallying cry to resume motion at any cost, a movement foreclosed in various fashions, along the lateral passageways of semiosis, polysemy, and homonymy. The expanding thresholds of mathematics are arranged in steps, it is true, but the defile that these breakthroughs assume is by no means linear when mathematics is on task, working through relations that are meaningful. It is the devil's pact that mathematics has closed with movement per se that enables me to implicate Zen kōans, as we shall see, with an irreducible mathematical dimension. Poetry as well pays considerable taxes and *impots* along the horizontal axis of its articulatory baseline, its grounding in grammar and logic. But then, Buddhist monk or terrorist? that it is, poetry disguises the time-bomb that it is carrying, the visual resources and tricks that it has enlisted. And if I appeal to mathematics in this demonstration, it is as one who, back in the day of primary learning, was utterly daunted and humiliated by its unforgiving demand for linear attentiveness. The mathematics with which I have made my peace as a failed acolyte is the expanding matrix of possibility whose experience can be conveyed either by a master-narrator (Jorge Luis Borges) or even by an enlightened physicist and computer scientist (Douglas R. Hofstadter).

The latter's *Gödel, Escher, Bach: An Eternal Golden Braid* succeeds, on purely literary and theoretical grounds if on no others, as one of the remarkable works of interdisciplinarity and intertextuality of the twentieth century. Hofstadter's strategically meandering narrative betrays the meticulous planning of a master-teacher; also an uncanny instinct for revelatory examples, woven in their full complexity into the braid. Building up with linear meticulousness the logical and numerical steps accounting for cybernetic architecture as processing, Hofstadter nonetheless choreographs, in a constant feedback loop, three simultaneous and mutually-referential panoramas for scientific discovery and improvisation: mathematics' unavoidable recursion to double-binds (Gödel's Incompleteness Theorem), variation and fugue in music (Bach); and "impossible"

figuration in graphic art (Escher). The dance between these seemingly inimical fields is as breathtaking as the pedagogical virtuosity by which Hofstadter can "make sense" of computers and the mathematics, physics, and engineering out of which they arise. Hofstadter's master-introduction to Computer Science slowly unfolds through sequentially arranged "lessons," elaborated in discursive prose, in which he takes leave, as the occasion demands, to segue in crablike fashion over to Gödel, Escher, or Bach, or to any of the subsidiary interests their inventions implicate.

These core-lessons in mathematical and scientific thinking fluctuate, systematically in fact, with fanciful dialogues, after the manner of Lewis Carroll's fiction, in which such characters as Achilles, the Tortoise, and the Crab invoke a common set of terms and cultural materials as they dramatize alternate explanations to the by no means intuitive account of computers, their functions, and their correlatives. At crucial transitional moments in *Gödel, Escher, Bach*, Hofstadter invokes Zen culture and kōans as instances of a radically discontinuous thinking that is nevertheless completely at home in the stringing and chunking that computers must customarily perform; in the non-linear leaps between levels of processing that is a basic feature of their architecture and capability. "Kōans are supposed to be 'triggers' which, though they do not contain enough information in themselves to import enlightenment, may possibly be sufficient to unlock the mechanisms inside one's mind that lead to enlightenment."[4] In this sentence, Zen kōans help Hofstadter reference a function in a computer that may trigger a higher level of processing while not itself encompassing or embodying that higher level.

Zen Annotation

The briefest of book-marks to underscore that the kōans, compiled in such collections as *Mumonkan* and *Hekiganroku* are arranged in a progressive order – one simulating the movement toward realization or enlightenment which is the aim of the composite aesthetic and political-theological complex of which they comprise part. In their arrangement itself, there is an embedded movement or progression, but in no way a logical or linear one. It is a fundament of Zen dis-

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4   Douglas R. Hofstadter, *Gödel Escher, Bach: An Eternal Golden Braid,* Vintage Books, New York 1979, p. 246.

cipline that the cues and encounters most material to enlightenment may well emanate from the most peripheral outlying areas of thought and purpose. In this sense, the untoward steps by which the *Mumonkan*, say, leads toward its end, is a performance of, an allegory, in Walter Benjamin's sense of the early-modern *Trauerspiel* tradition in European drama, of what we would now call higher-level processing or thought. In preemptive fashion, the overall movement between kōans performs its very end or culmination – a facility for improvisational thinking grounded in discontinuous logic, tenuous inferences, and wild associative leaps. Not only do the kōans consistently import and activate stunning poetic freshness of figuration into their reduced scale and minimal stage-trappings; the time-lag between their logico-semantic drift, import, or meaning and their performative thrust, the virtual illustration that they deliver, is non-existent, or at least radically curtailed. It is surely this speed and parsimony of feedback – within an overall architecture of astonishing, historically momentous insight that inspires Hofstadter to wire the kōans within his "eternal golden braid." This is, generally speaking, the celebration of intelligence and complexity and the capacity for synthetic and by no means intuitive thought-processes that meanders, indirectly but smoothly, in and out, in a short-circuit of ongoing mutual interactivity, between the traditional scenes of writing for scientific, logical, graphic, musical, and poetic inscription.

It is, then, a particular possibility for motion in the generation of *différance* that we can trace in the progression from one kōan to the next, between *all* kōans. It is on nothing less than a daunting level of Zen-sensibility (or *Zensibility*) that the *Mumonkan* sets off: To an unspecified monk's query as to whether Buddha-nature extends to dogs, Jōshū interjects the Mu-syllable, a shifter in the direction of the emptiness underlying all Being in Zen philosophy. Often the final syllable in communal chanting, "Mu," is accentuated by a collective exhalation. The collapse of the lungs after such a concerted, voluntary outward breath corporeally *illustrates* "Mu." One could well argue that the very first kōan in the *Mumonkan* cycle is in fact the last. There is no question more fundamental and far-reaching than whether the Buddha-nature, whose discovery is the ultimate task of Buddhist meditation and practice, extends to "sentient beings" other than humans.

It should be noted that the core text of each kōan, the situation-based anomaly or discovery both registering and prompting what we would now call cognitive (or mathematical) "popping," is indeed the tersely worded enigma that the

kōans are known to be. Yet Mumon, compiler and editor of the *Mumonkan*, saw fit to supply the text of every kōan with a commentary in the form of a lyric poem even terser and more enigmatic, if that were possible, than the narrative vignette in which each emergent enigma is choreographed. The irony of this "explanatory" lyric (its poetic format is already suspicious), is that it is just as sublimely arbitrary and mysterious as the situation that provoked it. Many editions of the kōans supply supplemental notes, to Mumon's lyrics as to the stories themselves, thus transforming each "unit" into a scene of interpretation replete with an "ur-text," a "canonical" exegesis, and "hypertext" in the form of footnotes. The canon of structured but non-linear meditations known as the kōans sets out as the embodiment and illustration of emptiness underlying all knowledge and social systems; it quickly eventuates, however, into an expansive generator of textual and exegetical possibility. The kōans are themselves fated to reside on the "jewel-hinged jaw" between austere parsimony and exhilarating expansive movement. This double-agency in processes of stark miniaturization and sublime multiplication is precisely what draws Hofstadter to the core-achievements in mathematics and physics that find instantiation in the bodies and circuitry of modern computers. Zen meditation and practice becomes, in the purview of *Gödel, Escher, Bach*, another receptive scene of inscription and cultural production indelibly scored by the "eternal golden braid."

The narrative and communicative accouterments to an allegory of enlightenment as non-linear realization have already reached a prodigious level of complexity by the third kōan in the *Mumonkan*, "Gutei Raises a Finger":

> Whenever Gutei Oshō was asked about Zen, he simply raised his finger. Once a visitor asked Gutei's boy attendant, "What does your master teach?" The boy too raised his finger. Hearing of this, Gutei cut off the boy's finger with a knife. The boy, screaming with pain, began to run away. Gutei called to him, and when he turned around, Gutei raised his finger. The boy suddenly became enlightened.

> When Gutei was about to pass away, he said to his assembled monks, "I obtained a one-finger Zen from Tenryū and used it all my life but still did not exhaust it." When he had finished saying this, he entered into eternal Nirvana.[5]

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5   Katsuki Sekida, *Two Zen Classics*, Weatherhill, New York 2000, p. 34.

This kōan and everything that it implicates, turns on the sublime riddle: what could "one-finger Zen" be; how could it persist in its inexhaustibility, even in the hands of an acknowledged master? The coincidence in this vignette of two sub-narratives, concerning the teacher and his pupil and the death-scene at which his lifetime wisdom can be displayed and tested, adds all the complexity needed to frame the enigma of pointing fingers, the lessons they indicate, and the difference between tangible and absent ("explicit" and "implicit") ones. On the one hand, the kōan acknowledges that at least to one master, all the Zen necessary for eternal enlightenment could be reducible to an act and sign (the finger) of pure indication, indication devoid of content and direction, indication, hinting, intimation – simply for their own sakes. This is what a master could possibly know, but never his juvenile retainer. When the boy attendant presumes to mimic Gutei's wisdom, but without an inkling of understanding, having never processed it, the master deprives the pupil of the offending digit. Painful and austere punishment, but the loss of the appendage is not life-threatening. Since the full wisdom of "one-finger Zen" inheres in the gesture of indication itself, a speech-act of "pure" indication, the adherent is amply rewarded for this severe discipline in the exchange: loss of finger/sudden enlightenment. What has been transacted when the master shows his finger to the pupil, the pupil whose corresponding digit has been cut off is, precisely, the transmission of "one-finger Zen."

What is most recognizably "kōan-like" in this meditative stepping stone is the extreme compression enacted by the coincidence between the reduction (or consolidation) in the boy's instrumental digits, and the precipitous, vast augmentation in processing capability signaled by sudden enlightenment. From a Western perspective, we may be tempted to import all the dialectics (and sexual, familial baggage) triggered by Freudian castration into the reception of this scene. Far more relevant here, it seems, both in terms of Zen philosophy and the systems theory underlying cybernetic technology, is the way that the terrain of relation and relationality itself is mobilized by the figure of the teaching-finger (or the corporeal embodiment of the teacher's pointer). This has a lot to do, I think, with Hofstadter's most productive soldering of Zen into the circuitry of "the eternal golden braid."

"Gutei Raises a Finger" is, then, *digital* in multiple senses of the word, whether the incriminating finger happens to be absent or present. Its "way" (or drift)

points in the direction of enlightenment, among other things, as an apprehension of "pure" relationality, unfettered by baggage from multiple existential domains, which is a dominant feature of digital organization and operation. Surely the possession of a finger is a characteristic deeply rooted in the world of analog relations: there is an implicit "one-on-one" between my sense or interest and what I am pointing to. But the way of enlightenment intimated by "Gutei Raises a Finger" is toward the pure relationality that Anthony Wilden, already in 1972, perhaps with greater lucidity than anyone else, recognized as a telling feature of the rapidly-emerging regime of digital communications and information:

> The analog computer is an icon or an image of something "real," whereas the digital computer's relation to "reality" is rudimentarily similar to language itself... The analog is pregnant with MEANING whereas the digital domain of signification is, relatively speaking, somewhat barren. It is almost impossible to translate the rich semantics of the analog into any digital form for communication to another organism... The digital, on the other hand, because it is concerned with boundaries and because it depends upon arbitrary combination, has all the syntax to be precise and be entirely unambiguous. Thus what the analog gains in semantics it loses in syntactic, and what the digital gains in syntactics it loses in semantics. Thus it is that because the analog does not possess the syntax necessary to say "No" or to say anything involving "not," one can REFUSE or REJECT in the analog, but one cannot DENY or NEGATE.[6]

Enlightenment, in terms of "Gutei Raises a Finger" is nothing less than "popping" out of the analog, but in no definitive way. If Gutei's young assistant achieves instantaneous enlightenment upon Gutei's displaying the finger that the boy no longer possesses, this may be understood, among other possibilities as an opening up to him of the domain of digital relationality. Backed by Gutei's coming to terms with "one-finger Zen," the finger that he points toward his pupil is a digital digit. It alone is the transition between analog naming, comparison, mapping, division, and distribution, and digital synthesis and programming.

We mustn't forget that Mumon applies his own exegetical "body English" to the kōan in the form of the lyrical amendment that he appends to it. We should also bear in mind that a Buddhist monk, directing interpretation's traffic flow, is no

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[6]   Anthony Wilden, *System and Structure,* Tavistock, London 1972, p. 163.

less susceptible than the rest of us, to injecting his own values. What Mumon stresses in his lyrical follow-up to the "case" is how Gutei, by means of his very least concerted digital gesture, one-ups his master, Tenryū, in the precipitous chasm that he cleaves through worldly banality.

> Gutei made a fool of old Tenryū,
> Emancipating the boy with a single slice,
> Just as Kyorei cleaved Mount Kasan
> To let the Yellow River run through.[7]

Enlightenment, the free-flowing feedback loop between the analog and digital, is nothing less than an indispensable force of nature. Buddhist practice is the mindful demolition restoring the freedom of the flow. In its pronounced non-violence "one-finger Zen" activates the force that will allow water to master earth, the Yellow River to truncate Mount Kasan.

A minimal work of narrative art, "Gutei Raises a Finger" activates a full range of motifs and scales of articulation calling out for further elaboration. Among these are surely: mind (enlightenment)/body (finger), mastery/ignorance, mental force (meditation)/physical force, age/youth, death/life, enlightenment/logic, digital/analog. Such complexity stands to be scored along these continuums that the results of the deliberation can only be inconsequential – in terms of instrumental standards or action-language. If we take this "case" or kōan as a single flagstone in a Japanese garden of meditation, progressing "beyond" it would not so much involve a definitive proof or inference as much as a sideways step to a neighboring narrative environment in which parallel dynamics achieve different weightings, emphases, and outcomes. The meditation or movement is anything but progressive; it sets out, rather, in a philosophical milieu in which the *direct* application of torque is doomed to inconsequentiality.

Each kōan, then, by dint of its multiple resonances, leads to an unlimited set of other kōans, indeed, to ones that may not yet have been devised. It is only in this sense that we can turn to Case 5, "Kyōgen's 'Man up in a Tree'" as an ex-tension of "Gutei Raises a Finger":

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[7]   Sekida, *Two Zen Classics*, p. 35.

> Kyōgen Oshō said, "It is like a man up in a tree hanging from a branch with his mouth; his hands clasp no bough, his feet rest on no limb. Someone appears under the tree and asks him, "What is the meaning of Bodhidharma's coming from the West?" If he does not answer, he fails to respond to the question. If he does answer, he will lose his life. What would you do in such a situation?[8]

As opposed to "Gutei Raises a Finger," whose sudden and unanticipated realization is a matter of delight, even if accompanied by pointed physical suffering, this kōan leads right into the heart of a dead-end. In this respect, the kōan has much in common with "Ganto's Ax," a text Hofstadter makes much of. The tree-man's choice, between dying in observance of his meditative practice and in effect "killing" his practice (at least putting it on serious hold), is the "double-bind" situation whose elaboration by Gregory Bateson shed such illumination on the mental world of schizos, substance-abusers and the impacted family systems that produce such outcroppings. The discourse of deconstruction will come up with a term perhaps more philosophically respectable, "aporia," for this kind of a situation. The cleaner term from the Greek enacts deconstruction's overall turn toward the etymological subtext and network self-sufficient in itself for programming social possibility and outcomes; a vector leaving tangible actors, historical circumstances, and the metaphysically grounded constructs prevalent in philosophy and the social sciences behind. The aftermath of the particular "step" taken by "Kyōgen's 'Man up in a Tree'" in the Japanese garden is to imprison its taker in the starkest impasse, one whose only "escape" is enlightenment itself, an enlightenment, as we already know, that can ensue only from the offhand gesture, a chance misstep, the most random and minor detail on which the dream, according to Freud, pivots, the Lacanian "*objet petit a*." It is no accident that the incriminating question in this "case" mobilizes the unboundedness of a directional coordinate, the West. From a Japanese perspective, it is indeed out of the West, India, that Buddhist philosophy first made its sweep, in the 8th and 9th centuries, via China.

It is within a kōan's capability to sharply curtail motion, action, and consequence, even while contributing to the cognitive stretching, limbering, and de-contracting that is the ongoing thrust of meditation. Interestingly, the supplemental "Comment" and "Verse" by Mumon can only reiterate the double-bind

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[8]   Sekida, *Two Zen Classics,* p. 38.

into whose crux the kōan leads us. "Mumon's Comment" tells us that figuring the tree-man's predicament out will be tantamount to giving "life to the way that has been dead until this moment and destroy the way that has been alive up to now." If meditative practice can for some reason not come up with the vivifying insight, it will be necessary to await the Maitreya Buddha for a resolution to the quandary. "Mumon's Verse," though, can only castigate Kyōgen for foisting on Zen an irredeemably deadly meditation.

Both as narrative engines and as cognitive maps, in their reduced scale and minimal accouterments, the kōans open vast domains of meditative possibility; in their poetic compression, they clear away morasses of thematic and logical obstruction. They slide jarringly, but also tellingly, into one another. Their interaction produces change both along the vertical axis, in sudden "pops" and leaps in higher-level processing capability; but also along the horizontal panorama of "chunking," permutation, and combination – of theme, parameter, and scale of discrimination. Any composite "map" to the kōans would be a rhizomatic affair, careening randomly and even dramatically from one sector to the next, in one geographical coordinate or another, but moving incessantly.

Conclusion

It is to Hofstadter's enormous credit, in such a work as *Gödel, Escher, Bach*, that he was not only capable of isolating, explicating, and orchestrating the underlying processes of structural fabulation, coding, programming, and replication common to a bewildering array of scientific and cultural breakthroughs: among these, Baroque fugues and canons, two-dimensional graphics, as practiced by Escher, with "impossible" three-dimensional features, fanciful literary embroideries on mathematical concepts, such as Lewis Carroll placed in the mouths of his characters, the conceptual steps and transpositions that enabled Watson, Crick, and their colleagues to "break" the genetic code. To these must surely be added the mathematical representation of bubbles and other anomalies in the domain of numbers that were ultimately to translate into cybernetic capacities for leapfrogging back and forth between different levels of generality, languages, and operating systems. Not only could Hofstadter penetrate the particularity of the inventions and transpositions necessary for the signature crystallizations in these fields; he fashioned the resonant feedback loop, or, if you will, the *cognitive* DNA, allowing these syntheses and advances in very different fields,

scored in different typefaces on very different pages or screens, to be, if not exactly perfectly continuous with one another, to engage in productive mutual conversation by means of shared tropes, figures, and dynamics.

Our debt to Hofstadter is monumental for the lucidity and sanity, already at the outset of the cybernetic age, that he contributed in the medium of his panoramic view of 1) the decisive centrality of the underlying *codes* and *languages* of science and of the communications between them; and, 2) his activation of the *transcriptions* between them already constituting the very *possibility* for the emergent interactive technologies and disciplines. So inventive are the textual features that he installed into Gödel, Escher, Bach, among them an ongoing alternation and "dialogue" between more-or-less didactic "lessons" leading to an understanding of contemporary Computer Science and its mathematical, logical, systematic, architectural, and aesthetic components, and the fanciful fictive encounters, a la Lewis Carroll, "illustrating" the most salient principles and points, that the work warrants a full-fledged literary analysis of its own. The movement that Hofstadter launches and marshals to multiple effects in this work is in itself a rejoinder to the melancholic "learned helplessness" that an age first deploying multiple new technologies, each intimidating in its complexity and with side-effects just as daunting, could well engender. I am arguing here that fanciful and inventive movement, such as Hofstadter has harnessed from fields including number, logic, music, graphics, Zen, and engineering, is itself redress and recompense in the face of increasingly expansive, encompassing, intrusive, and extractive systematic architectures.

A notable taking-off point for the work's relentless, polymorphous motion is the plasticity that Hofstadter ascribes to intelligence itself. Among the de facto "rules of intelligence" that Hofstadter posits are the abilities "to respond to situations very flexibly," "to make sense out of ambiguous or contradictory messages," and "to synthesize new concepts by taking old concepts and putting them together in new ways."[9] Chief among the intelligent attributes that he dwells on is the processing of rules in general:

> What sorts of "rules could possibly capture all of what we think of as intelligent behavior, however? Certainly there must be rules on all sorts of different levels.

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9   Hofstadter, *Gödel Escher, Bach,* p. 26.

There must be many "just plain" rules. There must be "metarules" to modify the "just plain" rules; then "metametarules" to modify the metarules, and so on. The flexibility of intelligence comes from the enormous number of different rules, and levels of rules. The reason that so many on so many levels must exist is that in life, a creature is faced with millions of situations of many different types. Some situations are mixtures of stereotyped situations – thus they require rules for deciding which of the "just plain" rules to apply. Some situations cannot be classified – thus there must exist rules for inventing new rules... Strange Loops involving rules that change themselves, directly or indirectly, are at the core of intelligence. Sometimes the complexity of our minds seems so overwhelming that one feels that there can be no solution to the problem of understanding intelligence.[10]

Among the most endearing of many of *Gödel, Escher, Bach's* performance-features is its ongoing celebration of human intelligence and its non-species specific outcroppings. In significant respects, *Gödel, Escher, Bach* is an extended hymn to the blessings and remaining potentials of intelligence. It is no exaggeration to say that intelligence is the *prima mobile* of the work; that it articulates and diversifies itself on many different levels, assuming formats and processes no less specialized and diverse. Not only does intelligence address an astonishingly broad set of challenges and limits, often determining the degree of satisfaction and felicity in any historico-epistemological configuration that will be achieved. Its preeminent characteristic as outlined in the citation immediately above, is maintaining its flexibility in the processing of a bewilderingly daunting manifold of rules, rules whose interactions – mutual attenuation, or exacerbation, or suspension – are often more daunting than their specific strictures. It could well be argued that the trajectory of *Gödel, Escher, Bach* is to track the vicissitudes and transformations of intelligence as it addresses major conundrums in a range of sciences and arts, tackles technological challenges in different spheres (sound-reproduction, cybernetics), and accommodates itself to unprecedented media.

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[10]   Hofstadter, *Gödel Escher, Bach,* pp. 26-27.