Recursive Tricks and Holographic Infinities
The Invention of Culture and After

Doug Dalton

Recursion and the Unconscious

At the beginning of the Winnebago trickster cycle, trickster fails as a chief by repeatedly calling a war party (which chiefs never do) each time only to be found cohabiting with a woman (which war leaders never do). Eventually leading his warriors, trickster utterly alienates them by smashing his own canoe and sacred war bundle. Finally left entirely alone, he then uses straw dummies to trick a buffalo into a quagmire, but as he carves the meat, his left and right arms fight over it; his right arm, holding the knife, butchers his left arm, leaving trickster to despair.

This is much like the time a short while later when trickster burned his own anus for having failed to prevent a group of foxes (despite having valiantly farted louder and louder) from stealing the roasting duck which trickster had left in his anus’ charge while he slept (which is why people have wrinkled anuses) and like the time immediately following when, awakening from a good sleep lying supine on his back, trickster had to ask his erect penis to return his blanket after mistaking it for the chief’s flag pole unfurling a banner announcing a feast (Radin 1956).

Split-brain research has discovered much in the last twenty-five years, but the model of the left and right hemispheres as devoted primarily to linguistic text and context respectively remains (Ornstein 1997). Researchers have also found that the senses process approximately eleven million bits of information per second while conscious discursive awareness can process only about sixteen bits per second. This means that consciousness...
is a massively entropic process in which information is discarded as it is chunked into ever larger bits. Conscious awareness thereby creates the illusion of the control of the self or ego, whereas it is actually the unconscious learned awareness of the body that governs behavior. Split-brain experiments have been done in which severed right and left hemispheres are shown separate pictures and the left and right hands select corresponding objects from a common pool. In one experiment, a picture of a snow-bound house prompted the left hand to choose a shovel; a picture of a chicken foot prompted the right hand to choose a chicken head. Much to their surprise and amazement, when researchers asked the subject to explain the selections, without the slightest hesitation the subject’s discursive left brain which could see everything except the snow-bound house, made up a story about needing the shovel to clean out the chicken’s coop; that is, it constructed a false story to explain what the body had already unconsciously selected (Nørretranders 1998).

As in the trickster’s folly, the right hand thus continually mangles the body’s synthetic, plural-inflected awareness. Trickster represents the dawn of human reflective consciousness, not acting according to instinct or context, but via intentionality, ruse, and the illusion of the ego, continually tricking others and also especially himself (Hyde 1998). Trickster conveys a profound truth of the human condition also known through split-brain research—that reflective—consciousness, caught up in discursive language following what Lacan called “the mirror phase,” as Nørretranders states, “lies like crazy to create a coherent picture of something it does not understand in the slightest … not … to other people so much as to ourselves (Lacan 1997; Nørretranders 1998: 283-84).”

Papua New Guinea Rawa speakers tell a funny story about the dawn of reflective consciousness which suggests that it is a particularly modern curse. Once, a long time ago, a young man brought back a mirror from working on a plantation and left it hanging on the wall inside his house while his father was away in his garden. When his father returned he spied the mirror. Thinking it was a man or a ghost, he dared not enter the house, going back and forth several times scaring himself until he finally shot the mirror with an arrow. When his son came back his father told him of the haunting and showed him the broken mirror, and his son explained to him how mirrors work. The story ends: “now we understand mirrors and all white man’s things.”

This could be interpreted as a narrative about eroding indigenous understandings resulting from Western technology, Christianity, and the impact of Western culture. However, if this story is true—and there is no
reason to believe that it is not—then one must conclude that human reflective consciousness, which is a basic human condition, is exaggerated in the overemphasis on scientific rationality that is the hallmark of Western culture, which has further mangled the body’s awareness with higher, more isolated levels of abstraction. That Rawa speakers find this story highly amusing also indicates that they are not so susceptible to its increasingly hyper-real ego-inflated illusions (see Baudrillard 1983). It may very well be that Papua New Guinea Rawa speakers and Winnebago have a greater awareness of awareness than do those Western people whose psyches have been probed by split brain researchers and Lacanian psychoanalysts.

**Entrapments of Recursive Paradox**

Roy Wagner’s *Invention of Culture* immediately confronts the reader with M.C. Escher’s “Two Hands” drawing each other. Escher saw this drawing as an example of “the conflict between two and three dimensions” and it is related to other themes in his works (Escher 1986: 65). Ernst found it to exemplify the principle of drawing revealing itself as deception; Hofstadter understood it as a model of Epimenides self-referential “liars paradox”—“all Cretans are liars,” or “this statement is a lie”—which is at the core of Gödel’s incompleteness theorem (Ernst 1978; Hofstadter 1979). Kurt Gödel published a paper in 1931 in which he showed that a formal mathematical logical system of any complexity is either “incomplete” or “inconsistent.” “Incomplete” means that it contains true propositions that are undecidable; that is, neither they nor their negations can be demonstrated within the system, and “inconsistent” means that it contains demonstrably true propositions whose negations are also true. He showed this by mapping a formal logical system onto an arithmetic system and writing the mathematical statement “this formula is not demonstrable,” which he then showed is true but cannot be demonstrated within the system (Hofstadter 1979; Nagel and Newman 1958).

In essence, Gödel proved that any logical system powerful enough to have self-referential meta-statements digs its own hole and condemns itself to incompleteness, doomed by its own recursiveness. It is just these sorts of recursive statements that Russell and Whitehead attempted to banish from logic and mathematics by defining hierarchies of logical types after the discovery of non-Euclidean geometries and Cantor’s transfinite numbers, but which Gödel proved once and for all are essential properties of formal systems. Hofstadter referred to this recursiveness as “strange loopi-
ness” and “tangled hierarchies” and showed it to be characteristic of mathematical logical systems of all sorts, including human language, music, dna, evolution and other natural and cultural systems (Hofstadter 1979). (One of the most amazing things about the Invention of Culture is that it was published (in 1975) four years before Hofstadter’s (1979) Pulitzer Prize-winning Gödel, Escher, Bach which has the same discovery about human consciousness as does Wagner’s book about culture).

Bateson found that self-replicating biological systems actually preserve hierarchies of logical types to prevent inheritance of acquired characteristics, and thereby preclude runaway feedback and change involving short-term adaptive strategies going in long-term maladaptive directions; however, human culture apparently undermines this safeguard by allowing Lamarckian legacies (Bateson 1979; see also Stocking 1968). With the ever greater recursiveness of Western hyper-rational awareness, we may be thereby creatively transforming ourselves and our environment in such magnitudes that we can no longer maintain ourselves or our environment in their present forms. Mangling our intuitive body-awareness, we may be tricking ourselves, as we are most certainly tricking others, into extinction, or rather perhaps more accurately into radical transformation—so radical that it may require the great courage of a complete Nietzschean transvaluation of all values.

Recursive cultural linguistic statements are exactly what Wittgenstein once thought we must remain silent about although, failing to do so himself, he later decided instead to try to extricate people from their folly through a kind of grammatical therapy (Wittgenstein 1958, 1961). Having understood the nature of recursive awareness, however, even in the Tractatus Wittgenstein despaired that only people who had already had similar thoughts to those he expressed would ever grasp them. (He was convinced that he had done more damage than good trying to get this idea across in his teaching career.) Nonetheless he persisted in trying to demonstrate to people that their language tricked them into metaphysical muddles and pseudo-problems which could be easily comprehended as artifacts of their own linguistic constructs once people had been made aware of their own grammars. People may therefore be saved from their folly, from continually duping themselves, through a kind of critical awareness of conscious discursive awareness. But Wittgenstein had much to despair about, writing as he was in the aftermath of fin de siècle Viennese bourgeois culture, which was fed by nationalistic imperialist conquests that supported ever grander illusions (Janik and Toulmin 1973). It is likewise difficult to see a way out of such recursive paradoxes in the present; where we are today in the real history of the world.
Escapes: Infinities and Zero

The way out of the recursive paradox of Escher’s two hands drawing themselves (and out of any double bind) is to realize that the picture was drawn by Escher, although one then quickly discovers the recursive relation between Escher and his art, and after that between oneself and Escher, and so on and so forth. Any recursive self-replicating system (or system capable of recursive meta-statements) quickly leads one to infinity and fractal geometries, and to infinity’s twin, zero or nothing. Escher described his artistic impulse as “driven by an urge that is not intellectual, but unconscious or subconsciousness, an urge that words cannot describe” which he nevertheless delineated, saying that “our imagination is inaccessible to the idea of ‘nothing’ ... That is why we clutch at a chimera, an afterlife ... or a nirvana ... which would ... be eternal in time and endless in space.” Escher described himself as feeling “a specific and conscious longing ripening within ... to approach infinity as purely and as closely as possible by means of ... representations ... Deep, deep infinity!” he called it (Escher 1986: 123-124). Escher’s longing—his way out of the limits of recursive awareness—was the recursive infinity of nothingness depicted throughout his drawings.

There is a very curious received history of the origin of the numeral zero according to which it was invented as a placeholder in ancient Mesopotamia, repressed for ideological reasons by the Greeks and Christians, and finally discovered in India because Indian philosophers had already long contemplated the idea of nothingness (Seife 2000). In other words, zero was finally discovered because it was already known! This is the same strange illogic of origins which Derrida finds haunts Husserl’s Origin of Geometry (Derrida 1979; Husserl 1970). As far as I know, Husserl’s transcendental ego, while discovering the essences of things in themselves, never fathomed the origins of zero. This is because, as Russell and Whitehead did in their Principia Mathematica, Husserl’s Origin attempted to bracket and reduce recursive paradoxes rather than comprehend them, leading him in the opposite direction of Wittgenstein’s critical awareness and instead toward the transcendental illusion of the ego (Russel and Whitehead 1997).

Papua New Guinea Rawa speakers have a story about the origin of zero which goes like this. Once the stars and sand challenged each other to a contest to count one another. The sand counted the stars and counted and counted on and on until it finished counting the stars (which are the celestial souls of dead people). The stars then counted the sand and counted and counted on and on until they realized they could not count all the sand.
Then the stars felt sorry and cried which is the origin of rain and, one could add, sorrow. Rawa “sorrow” (kawuyi kingo or kio) also translates as “cold” and as “nothing,” and like the Mayan ruler of the underworld Zip or zero, sorrow or nothing presides over death or, rather, it is the singularity of absence or nothingness that governs infinitely self-replicating earthly existence (Kaplan 2000; Seife 2000). As Escher also saw it, in this Rawa tale earthly existence is uncountable and leads its inhabitants to attempt to reckon infinity, death, and nothingness. For Rawa speakers death and the finite origins of infinitely self-replicating earthly existence resides in the stars and sun, and now in the Christian God, or both.

Like other Papua New Guinea cultures, Rawa speakers count through a recursive analogy to the body using the digits of the hands and feet, which makes it difficult to count to infinity (not that the number line makes it any easier). But, as with the Indian mystics who contemplated the void, sorrow and nothingness are at the core of Rawa culture. They constitute the underdetermined feminine ground that anchors yet undermines the overdetermined, flamboyant, often violent activities of the men. Sorrow and nothingness comprise the intuitive body awareness that is the cultural ethos, mood, and motivation of relationship, reciprocal giving, and foremost of the infinite expenditure of life energies in households which household members themselves memorialize through their existence.

**Infinity and Holographics**

In *The Invention of Culture*, Roy Wagner dared to approach pure infinity and discovered that cultures are recursive processes that limit conscious awareness, including the logical mathematical language of science (as Gödel demonstrated), and that different cultures organize themselves differently. Yet, just as Wittgenstein viewed the *Tractatus*, *The Invention of Culture* was the ladder he discarded once he had climbed up it. As Escher explained: “When one dives into the endless, in both time and space, farther and farther without stopping, one needs fixed points or milestones past which one speeds (Escher 1986: 124).” Wagner never looked back.

In the twenty-five years following *The Invention of Culture*, Wagner continued to develop these insights into a comprehensive view of human reality. The holographic worldview explicated in Wagner’s *An Anthropology of the Subject* is his most mature, least compromising statement yet of the understandings he developed in *The Invention of Culture* (Wagner 2001). In this latest work, *The Invention of Culture’s* dizzying dialectical inversions of
differentiation and collectivization and of invention and convention within
and between Western and Daribi cultures are gone and have been replaced
with the human hologram and the holographic worldview. This hologram
is an understanding of human knowledge and perception that derives from
the Usen Barok, among many others, although it certainly extends beyond
the areas where it is found and apparently applies to human knowledge
and perception much more broadly.

The holographic model, with its perceptual recursive closures and linear
cuts, can be said to be a more general comprehension of the dialectic
processes deployed in *The Invention of Culture*: something like that secret
that only the old men or highest initiates are able to comprehend. However,
in *The Invention of Culture* the dialectic plays itself out differently in Papua
New Guinea Daribi and Western cultures, in the latter providing the cunning
of history while in the former being incorporated into the culture in ritual and
myth. The dialectic can therefore be seen as more consonant with the Daribi
or New Guinea understanding and creation of culture, and *The Invention of
Culture* can be seen as a play of this understanding, effectively turning the
tables on the Western worldview by assuming the role of the trickster or cunning
that makes its history rather than its culture. Similarly, *An Anthropology
of the Subject* employs what is essentially a non-Western worldview to
explain all of human culture, thereby performing the same cultural denoue-
ment. Yet one finds that the understanding of human culture that the holo-
graphic worldview contains is ubiquitous, not only in Barok and other
non-Western areas, but also within Western psychology, philosophy and sci-
ence, even if it is not consonant with the ideology of the culture of science.

In *An Anthropology of the Subject*, Wagner shows that language and the
body are both the enabling and limiting conditions of human knowledge
which are holographic in that they are relative to their own usage and
therefore recursively self-replicating through different scales in human per-
ception and knowledge, consequently continuously catching people in the
mesmerizing jewels of Indra’s net. Meaning occurs in the liminality of the
recursive, cybernetic movement of language and perception and therefore
stymies social scientists and others who attempt to locate meaning in either
tropes, subjects, or their uses. Ritual develops a moving holographic scal-
ing of the human body, language, organic process, ritual itself, and social
organization and, through ritual, sociality is mnemonically “reperceived”
by means of the ineffable perceptual experience of the power of the subject
as its underdetermined perceptual ground.

The human body can itself be viewed as a self-replicating hologram
which has its own center of gravity, and yet is intimately connected to the
external world by considering the body as two types of laterality which ‘twin’ one another inward and outward. Gender, understood as the body’s outward ‘twinning’ which both genders share (‘own gender’), is the basis of what anthropologists usually analyze as ‘kinship’ as well as ‘culture.’ Kinship is a product of the body’s outward twinning cum sexual desire (‘supergender’) which is informed by a highly emotional subjectivity organized around the relation with fathers and mothers and which is ritually elicited and directed away from them, and culture is the demonstration or invention of different genders by means of making one of them encompass or contain the other. This simultaneous elicitation and containment is the completed hologram of the Usen Barok, among others, including Rawa speaking people. Through the inversions of self-replicating ritual movement, the subject’s awareness is related to the worlds of deceased as well as living relatives. The ‘cultural reality’ which humans thus naturally inhabit is not so much a constructed symbolic one as it is an iconic connectedness which nevertheless ensnares and consumes the beings who consume it and the world by means of it, enabling at least many humorous as well as perfectly serious chiasmatic expressions.

The uncannily anthropomorphic ‘flying fox’ or fruit bat, to which many Melanesians attribute asexual reproduction and lack of gender differentiation, is a model of ‘own gender’ underlying human kinship as well as a means to highlight and comprehend the gender differentiation that provides human kinship its form, and the bat’s ability to recursively echo-locate itself simulates human perception’s self-scaling holographic properties. In addition, it is not holographic infinities that humans or bats perceive but instead perceptual experience depends upon differentiation and the insertion of imaginary spaces into sensation, effectively finitizing infinity. However, as the subject finds its center and balance through the perceptual experience of the resonant interference-patterning of musical sounds, physical responses are elicited and associated with feelings and remembered (reperceived?) emotional responses which are limitless in their movement and ability to identify with the most fundamental emotional responses and patterns of others, both living and dead. Nonetheless, our attempts to model the world represent nothing so much as our ability to perceive it, providing nothing more than an irreducibly ‘near-life experience,’ even though the process of finitization is interminable.

The wheel is an apposite model of the self-relative recursive feedback of human knowledge, and what it demonstrates is that the continuity of movement cannot be perceived directly but only recovered after the fact in the retrospective experience of it. As with the invention of the wheel itself, movement and time are imagined to be things, in effect becoming circular,
self-referential metaphors. The naturalistic physical principles used to explain or educate ourselves to the wheel, such as time, space, gravity, and angular momentum, are even further removed from the direct perception of movement than the wheel is, therefore, the zero markers and imaginary spaces necessary to comprehend and experience time and movement are more to the point of its perception than are the wheel or time.

Because continuous change and movement are nevertheless necessary to human perception, conscious awareness is essentially disruptive of the models humans devise to comprehend it or, as Wagner puts it, consciousness is “simply the art of surprising oneself (2001: 222).” Conversely, the exclusive, limited focus on objectivistic ‘natural’ principles is “like having narcissistic sex with oneself in a mirror (ibid.: 233).” The use of the scale modeling of linear time and space to comprehend the infinite extension of the universe carries away and pulls apart our perception of it. Consequently, consciousness is a kind of death experience or a decentering cut or separation of our normal perceptual modeling—gala in the Barok hologram—and is a consequence of the fact that the non-linear infinities of the universe control the linear construction of human experience.

Wagner points out that Gödel’s incompleteness theorem, which showed that logical propositions existed which are neither demonstrably true nor false, also showed that non-linear infinities and coincidence actually order our world, and their perception always implies the connectedness of the subject to it. Chance and coincidence, and their meaningfulness for human subjects, “means that the reflexivity between the apparent randomness of ‘event’ or ‘happening’ and the choice that is made in noticing it or expecting it runs like a crack through the mirror of mind and all it might disclose,” including the lessons they might convey about the relativity of art and physics (Wagner 2001: 248, emphasis removed).

From The Invention of Culture to An Anthropology of the Subject, Wagner seems to move from dialectical processes to holographic infinities and toward chaos or complexity. However, throughout his ouvre he delineates and plays upon and with the relativity of culture and of human knowledge and perception. While accumulating knowledge and wisdom himself, Wagner also plays with culture’s infinite generative capacity, making An Anthropology of the Subject both his most mature statement and another creative and illuminating encounter with human relativity; one more way of glossing the unnameable whose pursuit is, after all, interminable. It may be a kind of trick on humanity or, more likely, a masterful and wizardly way of avoiding either being tricked or tricking oneself. Yet this is not the path anthropology has taken in the last twenty-five years.
Since The Invention of Culture was written, anthropology has been befuddled by the recursive paradoxes of what has come to be called “postmodern” discourse about discourse and writing about writing, and it has become permissible if not necessary to admit that Papua New Guinea cultures have changed as a result of outside colonial influences. However, as non-linear, self-replicating, recursive feedback systems, Papua New Guinea cultures rather partake of the infinities of fractal geometry and must be viewed instead as always having been creative, self-organizing systems which are open and continuous parts of their environments in far-from-equilibrium conditions. That is the genius of Papua New Guinea cultures, of Wagner’s The Invention of Culture and his An Anthropology of the Subject. These ladders need to be climbed and, moreover, discarded before we trick ourselves and the cultures we study into oblivion.

BIBLIOGRAPHY

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