

EVOKED EPIGENETIC ARCHITECTURE

*[The Stress Response Building or Blood Pressure and the Built Environment—
biochemistry of a building that could treat the cause of our climate crisis,
developed during a three-week residency at The Watermill Center for Scott Eliot,
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LOOSENING UP

The matter of the earth-brought-to-the-brink can be approached by simply pointing out who has inherited the earth and how. (Setting aside, for the moment, the even graver matter of the earth misconceived as heritable.)

An architecture based on the stress response would, above all, dispel the delusion that individual and collective interests are at odds—a dichotomy responsible for the greater part of our wretchedness.

Most biologists now agree that constancy is not a fundamental condition for life. Few biologists, if any, would be willing to go one step further and doubt the principal evolutionary ‘set-point’—i.e., that the aim of all the body’s vital mechanisms is reproductive success under Natural Selection.

Piloerection (production of goosebumps) is a response to cold or fear. Hair standing on end traps air for insulation or makes an animal appear larger. In humans it now serves no known purpose.

The unknown (the forest, darkness, fear of God, infinity) has been deposed from its position of regulatory predation. Stress incessantly deregulates.

We must either introduce a humanmade predator to unmuddle our autonomic response or become truly autonomous.

Meanwhile, let us link, causally, our stress with the strain the environment is under.

Meddle only endogenously (nonviolently).

Everyone is the patient.

It’s time to admit that the stress response is the stress syndrome.

Evoked Epigenetic Architecture is an immoderate intermingling of internal and external environments in order to arrive at an unflappable physiological balance. Homeostasis (stability through constancy) is the classical model of physiological regulation. In recent decades, allostasis (stability through change) has replaced homeostasis as the core regulatory model. This writing introduces a third regulatory model called *evoked epigenetics* (stability through evoked parameter values). Evoked epigenetics will be used to describe the Stress Response Building—a novel healthcare facility with a comprehensive approach to both distress and eustress. The Stress Response Building is the first instance of architecturally evoked epigenetics.

TO BLAME OURSELVES WE MUST FIRST ACQUIT EVOLUTION

The earth has been brought to the brink. Must we blame ourselves? There must be some way in which we can view ourselves as the victims. Hasn’t Natural Selection driven us to this precipice?

If we wish to blame ourselves for earth-at-the-brink we must first acquit evolution.

Let's take a hard look at evolutionary theory. Under evolution, selection pressures acting on genetic material favor those individuals bearing an adaptive advantage by means of successful reproduction. Evolutionary theory is itself the perfect tool for the advantaged, fabricated by the advantaged, in order to act advantageously. Natural Selection is the eugenics our collective conscience won't allow us to claim as our own—so, to soothe and delude ourselves, we then create evolution's visible, surrogate, bafflingly blameless socioeconomic hand: the hand of market-competition, preferential policy, test scores, try-outs, privatized plans, pay-offs, playground powerplays and countless other ways of grading, graduating, getting ahead, or groveling, losing out and falling behind.

(After all, it would not be 'freedom' were we to decide who succeeds. Freedom is the decision to protect the mechanism by means of which some individuals excel while others plod or founder. All else is oppression. So says adaptation, and the transparent farce of equal opportunity cannot convince it to claim otherwise. Equality is punitive and opportunity exploits outcome.)

A building designed for our survival would not pit us against each other. Rather, it would place us together, working against the conditions that equate survival and strife.

Is the capitalist body a nervous wreck? Are we living in autonomic servitude and slaughter? If predators still roamed the planet in search of human prey, would our stress levels have remained regulated as adrenal rush would release and shut down in relation to evident fright, flight and refuge. Now that we're thoroughly psychosomatic creatures, earth-brought-to-the-brink by a host of constant stressors (climate change, overpopulation, social disruption, insecurity, terrorism, discrimination, fundamentalism) eats us from within.

In this regard, global warming could be understood as a humanmade predator of humans, conferring on us the advantage of 'huddling together' to save the planet (from ourselves).

Believing that it's possible to treat stress without dealing with the evolutionary, exogenous stressors is, in itself, a sickness typical of today's diseases.

Inheriting the earth has itself brought earth to the brink. Who owns our wealth?

The offensive, the defensive, the self-congratulatory, the authoritarian, the overbearing, the conditionally caring, the speedy, the greedy, the keen, competitive, the vindictive, the deserving, and those who had already inherited the earth have inherited the earth and, as a direct consequence, the earth itself is under tremendous strain; the allergic, the infirm, the nurturing, understated, the meek, the misunderstood, the weak, the kindly, oversensitive, ascetic, endangered and diaphanous can ease the earth back from the brink, but not by becoming themselves the offensive, imperious or deserving (which would only serve to re-set the hypertensive trap).

Under stress we ravage the planet, we war and compete against each other, and we ingest ourselves by turning our fatty acids into readily combustible sugar.

The purpose of non-adaptive architecture is to shift us away from behaviors that correspond with our maladaptive release of stress mediators such as cortisol, epinephrine and norepinephrine.

‘Green’ building, though crucial, scarcely addresses the cause of the climate crisis—the emergency of autonomic self-ingestion (‘stress’ or ‘pressure’ if you prefer)—and the need to rebuild an environment that balances us and guides *voluntary well-being* (by consciously engaging autonomic functions which, for the most part, operate below the threshold of our awareness).

Don’t we need both stress and relaxation? Why not both at once? Why mess with the autonomic nervous system? It is, after all, ‘built in.’ Why buck the biologically suitable?

If I can accept the autonomic as an evolutionary given (i.e., as an involuntary control) I can also swallow the need for both the weak and strong and the advantaged and disadvantaged. The ostensible argument would be ‘we need the variety.’

What variety of variety? The contrary of weak/strong is not ‘monotype’ but the beginning of an infinity of nuanced difference within a vast

and unexplored voluntarily beneficent behavioral range. Arguing for the inevitability and vitality of advantage/disadvantage keeps us from discovering the biopsychosocial variants that could sustain us in any eventual environment.

Am I in charge of digestion or merely egging it on? How can I accurately frame physiologic function? Is it fair to say that cognition controls involuntary processes by entrusting itself to creation (the Tao of nervousness)?

Cognition doesn't take charge; rather, it connects autonomic physiology with its own involuntary movements. Perhaps this could be called 'intuition.' Perhaps there need not be any distinguishing of voluntary and involuntary. Perhaps (is there any doubt?) the least pathological state obtains when the volitional knowingly entrusts itself to the workings that brought it about.

In any event, I will say that the autonomic nervous system hasn't befitted us since the forming of the new rind of neocortex.

As a practical response, as a starting point—build a building in which the sympathetic and parasympathetic nervous systems can be signaled simply by location and activity within the location. For example, a location for collapsing chronic stress into an acute reaction—a clean burn by means of swift fix.

Run both autonomic responses at once (e.g., increased epinephrine during decreased heart rate). *Parallel Stress Response* (if autonomic we must be). Interchange. Couple. *Selectively Interspersed Autonomic Response*, if need be.

Parasympathetic prominence is synonymous with voluntary autonomic response (an apparent paradox). Design a portal for wished-for homeostatic parameters.

There can even be a location for neither. Neither the stress nor relaxation response—a response in which metabolism is immaterial; in which physiological response is itself not germane!

Prepare for fused, paradoxical, unprecedented, near-impossible responses such as wakeful hibernation, alarmed estivation, extra-cortical condensation, conscious epigenetics, free-range genomics, pathless cascading, metabolic disband, serene shock, copious coping, a-autonomia, waived adaptation and sensitizing overstimulation.

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Perhaps any discussion of evolution is counterproductive. Evolutionary dynamics are themselves overwhelmingly *sympathetic* (fraught with panic, injury, assault, insult, upheaval, harm, alarm) and have shaped us to such a great extent that we are now our own greatest threat to survival. Until the earth was literally brought to the brink, this process remained hidden as it slowly tore us apart from within.

Even the enlightened positions of ‘gene/culture co-evolution’ and ‘voluntary evolution’ (wherein we see the work of our own hands in both long-term and short-term evolutionary scenarios) are terminal. Nor does genetic engineering warrant its suspenseful moment of trial and error—no more so than the old external alchemies that absolutely proved fatal.

POST-PSYCHOSOMATIC AGE

This morning I received news from Cuernavaca that Sophia (the 83-year-old mother of my friend and doctor, Lucinda) has *susto*. *Susto* is a serious pathologic condition in which fright enters and lodges in the body. The incident occurred when Sophia’s son was attacked by another man. During the fight the man knocked Sophia to the ground, at which point the *susto* entered. *Susto* can only be expelled as a wild animal, such as a mountain lion or leopard. To be cured, the animal must freely walk out of the body. *Susto* can be self-treated. It can also be treated by a professional healer, a close acquaintance or even incidentally by a total stranger. Sophia is a village elder. With a quarter million indigenous people behind her, she has led several protest marches into Mexico City. She designed and built the adobe Roman Catholic church in her village. There is more to learn from her experiences than from the reams of research on the stress response mechanism.

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Stress occurs whenever requisite activity exceeds available energy.
Grace occurs whenever the exceeding of available energy is effortless.
Effortlessness is a condition in which we do exceedingly demanding work without drawing on reserve energy or by replenishing reserves.

Psychosomatic response occurs when an exceeding demand is met by the ravaging of reserve energy.

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I use the term 'psychosomatic' in a negative sense (even though any and every word that puts together bodymind would seem positively indispensable) as it best expresses the belief that the body unwittingly takes the brunt of psychological process.

Call it the Unbeknownst Body.

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'Subconscious' can be attributed to neuropeptides present in the tissue of the involuntary nervous system.

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The only official book-burning ever carried out by the U.S. government followed upon the publication of Wilhelm Reich's research linking cancer and the failure to express emotion.

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Danger, strangers, intensely novel stimuli, dread, a perceived threat to well-being, all trigger the stress response. The two main components of the stress response are the sympathetic branch of the autonomic nervous system and the hypothalamic-pituitary-adrenal axis. During the stress response, the sympathetic system releases the catecholamines *epinephrine* and *norepinephrine* from the adrenal medulla. The HPA axis releases the glucocorticoid cortisol from the adrenal cortex. These three hormones in particular prime the animal in emergency by increasing heart rate, blood pressure and cardiac output, while accelerating respiration, shunting blood away from skin and viscera to oxygenate skeletal muscle and brain, contracting the rectum, mobilizing fat and glycogen, and inhibiting salivation and digestion as the organism goes into a state of heightened vigilance.

The stress response is sometimes referred to as the 'fight or flight response.' In theory it evolved as an instinctual reflex against being eaten alive. But,

even prehistorically, the fight or flight response would have been a drastically oversimplified, distinctly masculine model. Responses to extreme danger vary throughout the kingdoms. Cuttlefish change color. Some animals immobilize. Stress response could result in play or altering one's form—even mating. People also withdraw, abuse substances, negotiate, weep, and reach out when threatened.

Whatever the resultant behavior, the stress response was designed to be activated only momentarily. It was meant as a rush of reserve energy. A jolt. A surge. The same hormones that trigger the response are part of a feedback loop that signals the hypothalamus to stop their secretions upon detection in the bloodstream—durations that can be measured in the fraction of a millisecond. And this is precisely where the pathology comes in. Now that we are modern psychosomatic creatures with persistent psychological and environmental stressors (and not just the occasional man-eating behemoth), the stress response can be triggered and remain tripped. We became psychological and it is the psychological that spawned its proper predators: anxiety, insecurity, self-esteem, rage, along with the constant environmental insults and stressors: toxicity, climate crisis, traffic, conflict, loss of variety—all added to socioeconomic stressors such as creditors, risk, foreign policy catastrophe, bombs, sodium.

(The evolutionary assumption: when the stress response was first fashioned, prehistoric peoples had neither worries with which to worry themselves sick nor that with which one worries.)

We easily, mentally make ourselves sick. Anticipation alone saturates the blood with sugars. We are as haunted by our psychosomatic selves as prey is haunted by predation.

Prehistoric fear was based on the real possibility of being eaten by a larger or stronger animal. We've subsumed that fear as psychological stressors (working in tandem with neurohormonal discharges) that eat us from within. To meet increased energy demands under stress, the stress hormones mobilize energy by releasing stored fatty acids (glucose and proteins) into the bloodstream. Delivery of these raw foods is accelerated by an elevated heart rate that in turn increases blood flow to critical areas such as the brain and muscles. When the stress response is constantly activated, the body begins to consume its reserves. This state of hyperarousal is tantamount to fast-forward fasting. Body functions are disrupted, tissues outside the stress loop are deprived

of nutrients, immune function is suppressed, and the host of stress-related pathologies begin to appear. (The World Health Association estimates that 80% of illness is either caused or aggravated by stress.)

When the sympathetic nervous system is switched on, its compliment (the parasympathetic system) is switched off. It's an either/or situation. With one exception (shockingly enough) all glands and organs in rapport with one system are also linked to the other (the parasympathetic branch is not in communication with the adrenal glands). The parasympathetic system reverses the modifications made by the sympathetic system. It conserves and restores energy as it reduces heart rate and blood pressure while facilitating digestion and the absorption of nutrients.

The parasympathetic system oversees stimuli that do not require immediate reaction. Parasympathetic preganglion fibers are in fact longer than sympathetic fibers because they are further from the spinal chord. This is quite literally a laid back, slowed down system.

It's often implied that the parasympathetic response follows upon the sympathetic, returning the body to 'normal' hormonal levels—a sort of second fiddle. Of course this is not the case. (Rather, it can be the case only if we accept human being as biosocial worst case scenario.)

Had America, for example, led with the parasympathetic from the point of the collapse of the World Trade Center's twin towers (Tehranis had for the first time in two decades dropped the "Death To America" incantation and had taken to the streets to publicly grieve with our people) our globe would have become more habitable, not brought to the brink of more war. Instead of producing a global atmosphere of shared horror toxic to the spawning of more terrorists, we've secreted a virulent and counterproductive neocortisol, ideal for further fundamentalist propagation.

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Some freshwater turtles stop their heartbeat for as long as six months while buried on the floor of a vernal pond.

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Leading with the parasympathetic is as uncomplicated as conscious breathing. Changes in the rate and depth of breathing produce changes in the quantity and type of peptide that is released from the brain stem. Meditation is a voluntary hypometabolic state of parasympathetic prominence—heart rate decreases; there is a decline of adrenocortical activity; respiration itself may be suspended. Even an iced transplant organ in transit between donor and recipient is in a hypometabolic state of relaxation.

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Yet the two autonomic branches do seem to follow upon each other (that's the nature of regulation—like inhalation/exhalation, diastole/systole). And an overactive parasympathetic system brings on its own deadbeat pathologies. The autonomic nervous system is a vicious cycle. Its image is that of a peace protest torn apart by riot police and dogs; stem of a flower stuck in a gun barrel; boy standing before a tank; even averted war is a torquing toward subsequent violence (to believe otherwise ignores human history).

Thus the stress response as a whole, originally designed to save life, can be more accurately called the *stress syndrome*. The response responsible for so many of the day's diseases can now be relegated to their number, counted as one among them. Relaxation is part of the stress response just as stress is part and parcel of relaxation.

I've arrived at the crucial question: Is there regulation outside the autonomic nervous system? And if so, what role does consciousness play? Would not autonomic bypass ultimately be the only way to regulate physiology? Perhaps the idea of regulation is itself an evolutionary scam. Is there a higher-order balance (or a more underlying balance) than stress/relaxation? Finding out for oneself is as easy as removing the world. One primary function of the Stress Response Building is to counterpoise absorption in the world with removal of the world.

Holding one's breath or sitting still are perhaps the most violent acts we require.

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As a fully realized psychosomatic being, I'd argue that we were never meant to evolve consciousness without concomitantly coming up with ways to consciously regulate physiological processes now considered involuntary and auto-ingestive.

Would this be a matter of directing the efferent autonomic system afferently?

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The fact that our actions and artifacts profoundly influence physiology is not only a matter of common sense. The influence of poetics on phenotype is also supported by today's most complex branch of biology called *epigenetics*. The epigenome regulates the expression of the genome. It selectively signals and silences genes. It stands between the genome and cell development and is utterly susceptible to behavioral and environmental forces. Short-term adaptations, transgenerational inheritance and reversibility of phenotype variation are examples of epigenetic phenomena. The upshot of epigenetics is that one is, to a startling degree, one's own inheritance (some say "organismal adaptive inheritance," while others simply take it for the neo-Lamarckianism it surely is). Epigenetics is, to a certain extent, autonomic bypass by means of *underlying regulation*.

The epigenome composes with the genome. To regard the epigenome as secondary to the genome would be tantamount to saying that the song exists for the sake of the notes.

Construction is an incredibly violent process. To build, we disregard more ecosystems, balances, and sensibilities than we'll ever realize. The built environment, for the most part, has been put in place by insult and abuse—by exploitation and pleonexia (radical greed) at least, and at worst, slavery. If we are unaffected by this violence, such insensitivity is, obviously, symptomatic.

An epigenetic architecture exposes the evolutionary environment as psychosomatic inflammation. How it is built, who pays for it, who benefits, what it serves, and the materials of which it's made (at last the 'green' question), in almost every case, promote the pathologic. Evoked

epigenetic architecture traces the source of sickness in both the exogenous (the socioeconomic, the built, the behavioral) and the psychological—and then constructs an environment in which it is safe to sensitize and safe to surrender to the parameters it proffers and dissolves. (A parasympathetic anticipation, if you like. A place the endangered may inherit.)

Realizing the degree to which material is susceptible to our every word.

THE STRESS RESPONSE BUILDING ITSELF

The life-process has no thing that distinguishes it from freedom. Freedom has no thing that distinguishes it from the life-process.¹

—Nagarjuna

An epigenetic building places selective pressure directly upon our impending persons. A rather instant inheritance—a direct awareness of working with our psychosociobehavioral effectors.

The Stress Response Building is based on an all-embracing approach to stress. Its function is to keep us from being terrified by our endogenous chemical productions.

Once the body is peripheral to itself it begins to heal. We may begin to speak of an all-volunteer anatomy. Beside itself (with joy) the body becomes the nexus of the psychological, the cellular, the social, the environmental; the subjective, objective, cultural, biospherical, biospiritual, and celestial. The same sickness can be treated through any of its concomitants. The stressors are thus exogenous; the only medicine is the mindfully endogenous (there is no pharmaceutical, no ayahuasca, no nano kool-aid unhinging and clamping down homeostatic set points).

I'll refer to the being that is versed in evoked epigenetics as the Unstinting Body. I'll refer to it as the Bountiful Body. The Unbilked, Tickled Pink, Disenthralled Body. Ad Libitum, Unscripted, and Unchumped. Perhaps I'll say Unbidden Body, suggesting a complex, un-coerced behavior—though uninvited, even transgressive—further suggestive of a situation spinning somewhat out of control and about to turn tonic, even salvific. A body placed under dynamics that are atypically curative would indeed be very epigenetic. Finding no tension or contradiction in surrendering to the voluntary—very, very 'epi.'

The purpose of this section of the essay is to describe the various functions of the Stress Response Building.

This building is a diagnostic facility, designed to deal causally with both harmful and beneficial stress with regard to the interrelation between the stress-related diseases of our day—hypertension, diabetes, obesity, heart disease, atherosclerosis, and their psychosocial correlates—globalization, segregation, migration, industrialization, discrimination, disruption, dislocation, insecurity, climate change, isolation, alienation, dispossession, dejection, destitution, distrust, indigence, underthriving.

The various aspects of the building actually emerged at once, while notating the functions that an epigenetic architecture would require. Because I was looking for a ‘missing’ psychosocial organ, I found myself excluding standard, partially-effective therapies befitting former biology—the clinical, the psychiatric, the phenomenological, the sexual, and the aesthetic. The building divided itself into 4 sectors linked by a central office or interspersive ‘master gland.’ The quadrants are thus slightly dispersed in order to offer various activities without collapsing into an integrative morass. It is a slightly-pulled-apart entirety, not quite entire until slightly pulled apart. The proximity and interrelatedness of the quadrants are crucial for the concerting of an effective, unexpected form of healthcare. (Surprise is itself part of the potency and increased neural plasticity.)

The quadrants lay out along diagonal and adjacent, complementary and canceling axes. The SW quadrant is the *Bodywork Bestride*. This quadrant is a somatics disciplines area. It is exploratory in the sense that it approaches the autonomic nervous system as a parallel system (as distinct from alternating or opposing)—activating, balancing, coupling, and blending the sympathetic and parasympathetic branches. *Bestride* has three implications: both sides of the autonomic; both sides of the voluntary and involuntary; indicating that the quadrants are both part of and apart from the building. *Bodywork Bestride* features a walk-in access for perfect-stranger care (as well as sessions by appointment)—accepting the traumatized, troubled, infuriated, insulted, out of sorts, over-ruffled, crimped, accosted, bossy, blasé and bellicose. There is also an inpatient ICU for admitting the gravely insipid.

Diagonally to the NE is the *Exteroceptive Theater* (exteroceptive: relating to stimuli external to an organism). This theater is the Body Politic or Policy-Making area. It functions as a contentious, adrenally over-secretory

quadrant. As the Globe's Organ Of Speech, it works by means of referendum, civic solo and group deliberation. As a highly-honed hypertensive instrument, it critiques, counter-assaults and crystallizes constructive intolerance. Crafting an effective law is, in effect, an act of making a chronic problem acute. Acuity (in adrenal terms) is sufficient response deftly delivered to a stressor.

In an epigenetic environment, laws are not the most binding agency. Like regulation of physiological processes, law is for allowing as many social freedoms as possible. Law for its own sake is oppressive. Enforced behavior breeds psychosomatic citizens. Voluntary behavior is more binding than law. If the laws are not fair, one is not free to volunteer. As the Taoist dictum states: "Once the law is established the criminal appears." Lawlessness is the apogee of human interchange. There is no greater and more committed force than unforced impulse.

In the NW, adjoined to the exteroceptive policy quadrant is *Ascetic/Aesthetic*—a perforated sanctum for the practice of preserving and vivifying the world by means of its removal. (Ability to blot out the world is basic for balancing both society and individual allostasis.) The concerns of *Ascetic/Aesthetic* include seclusion, stillness, meditation, quiescence, cessation of the stress syndrome, neither/nor non-dichotomous techniques. (Here the writings of Nagarjuna come to mind).

Altered states and voluntary control of internal states begin with the hypometabolism of parasympathetic arousal. Sympathetic control under parasympathetic prominence straddles world/unworld.

The conservation of energy through the regulating and removal of inner states is the first step toward environmental conservation. *Meditative hypometabolism* is a positive preemptive policy. *Adaptive hypometabolism*, on the other hand, is the body's forced adjustment to scarcity under harsh conditions. The former is living, the latter a matter of mere survival. Accordingly, *Ascetic/Aesthetic* features a built-in desert called 'Mum,' 'Here Nor There,' or 'Nothing Doing.'

As the concerns of *Ascetic/Aesthetic* are often immaterial (irrelevant or nonexistent) the quadrant operative diagonally, diametrically due SE is a design/build department called *Material Beatitude*. This quadrant is devoted to the built environment and includes a materials research center, a design office, workshop, and assembly area. Patients can either call upon the

services of fulltime staff or come in and concoct their own constructions. For epigenetic architecture, real changes are those that are carried out materially. To the degree the transformations we seek are not materialized, there is only backsliding. A beatitude (e.g., “blessed are the meek for they shall evolve the earth”) basically combines a nonadaptive trait with spiritual reward. The resounding implication is that the reward for such a trait is not material. A beatitude was, originally, an inverting of value, intended as a comfort for the oppressed. This dichotomous mode of comfort, equating immaterial wealth and material deprivation, is an incredibly powerful psychosomatic tool. To a great extent (even in a capitalist society) the belief that material advantage is spiritual disability determines the built environment, public policy, and adrenal output.

Materialized Beatitude inverts value once again (according to the spiritual needs of the day). It’s too simple to state that the meek should be given the goods (that would only start a mass competition for demonstrating greater virtue). In an epigenetic environment, the handling and acquiring of material goods may be the processing of spiritual wealth. (Is there a more effective means for bringing about a just world? Comfort for the materially well-off must also be taken into consideration. The poor have an obligation toward the redistribution of goods as a technique for diminishing the spiritual deficit of the rich.)

Happy are the hapless for they will respond as they wish.

Privileged are the poor for they shall parallel heaven and earth.

Blessed are the maladaptive for they will sidetrack extinction.

So, one more time around. Let’s reset evolutionary development. This time without the hypertensive fitness testing, without the greed creed, the push to the top on the part of the pure of heart and the grieved or the chronic cortisol grab from those below.

Materiality may be, after all, the non-conflictual (neither selfish nor altruistic) religious practice of Reality—earth/heaven, here/hereafter, worldly/otherworldly/unworldly, living/everliving, inner/outer, psychological/somatic fuse.

Good and goods, the voluntary's only option: once 'having' is understood and established as a basic right, we excrete adaptation's paralytic poison. The Unstinting Body believes that exclusion of material means from spiritual practice corrupts the intimate and the real.

Materialized Beatitude is the requisite parallel response—the de-double-crossing of the material world—for leaving behind adaptation's stress syndrome.

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All users of the stress response facility are considered patients (presenting with any number of psychosomatic symptoms) whether arriving to draft referenda, sit in the dark, draw a footing-drain or walk across a hardwood floor like a crane. Patients would generally enter the building through the centralized office which functions as an interspersive master gland or *Routing Node*. The first function of this node is that of listening, a listening so intent it's indistinguishable from responding. The effect is that of an allostatic exam: determining which of the patient's activities have exceeded her or his available energy; which autonomic branch to bear on; whether to run in parallel or pass into autonomic override; whether to switch from one's habitual activity; how to fully carry out one's response to one's cast of stressors: these are the sorts of questions that will come up. The sympathetic/parasympathetic layout of the building will then be carefully explained to the patients. Ultimately the patients will determine their own routings.

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In a *slightly interspersed* architecture, one space doesn't simply stream into another, nor are they absolutely severed. Membranes separating the different areas are selectively semi-permeable. Patients have roaming rights and may move freely along the axes to experience for themselves (psychoneuroendocrinoimmunologically) the East/West sympathetic/parasympathetic divide, the hands-on physicality marking the building's southern hemisphere, the law/lawless shift when moving from the sugar-saturated SW quadrant to the wantless SE, or the return of bloodflow from muscle to bowel while leaving the high rpm of the table saw motor to move along the SE-NW diagonal and enter the neither/nor deadcalm.

All areas of the building are necessary for a patient to be effectively cared for in any one area (whether the patient uses the other areas or not). In an epigenetic environment, the body is whole only to the extent that treatment of any one of its systems treats the entirety.

**SATISFACTIONS CAN'T BE STORED
(REBUILDING INCENTIVE BY RE-SETTING THE LIMBIC SYSTEM)**

Are our behaviors merely matters of physiologic regulation?

What comes first: a chronically elevated appetite or the industrialized agriculture that provides the salty items cheaply and markets them intensively?

So, voluntary stress response and voluntary appetite are synonymous. Waiting in line at a Brooklyn post office, the woman in front of me finally loses patience with the worse-than-lethargic performance of the postal workers: "Get another job if you don't want to do this one. And if you then don't want to do that one, get another job again."

More heart attacks occur on Monday morning than during any period of any other day of the week.

Charles Fourier believed that each worker should be allowed to flit around the commune every two hours, imbibing the nectar of feeling fresh at the next task. This method of overcoming the scourge of work he termed *papillonnage*. Not only escape from monotony or escape from work itself—*invigoration* by means of work has been a non-negotiable utopian demand since our dawning. (With market America as setback.)

Can the Stress Response Building (with its patient roaming privileges) actually become a complex of dopaminergic pathways throughout which its users flutter?

Why be epigenetic if we're not feeling good about it?

It is generally accepted that physiological regulation is driven less by fear and fighting than promise of reward. Any source of satisfaction (whether sunset, sugar, art, acclaim, sex, sodium, ritalin) causes neurons in the ventral

tegmental area to deliver a pulse of dopamine to the nucleus accumbens and prefrontal cortex, providing a brief sense of well-being. What the nucleus accumbens and prefrontal cortex want is not sodium, art, or sex per se, but a pulse of dopamine. The well-being wears off instantly because the signal of satisfaction at once desensitizes the system. Another name for this desensitization is *adaptation*. The satisfaction cannot be stored or prolonged and must be continually and variously renewed. This reward circuit is designed to serve myriad satisfactions, each one contributing its dollop of cerebral dopamine.

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Market-centered social organization, on the other hand, is notorious for narrowing the range of satisfactions. Single-source satisfactions such as work, shopping, watching a screen or eating, naturally 'adapt' (keeping in mind that adaptation and desensitization are essentially synonymous). The more persistently one source is called upon, the less satisfaction it can provide. The less satisfaction it delivers, the stronger the stimulation that is called for. As the dose and frequency of stimulation increase, the reward circuit begins to mediate addiction. The fewer the available satisfactions, the greater the likelihood that the system will lock onto a single source and create a persistently intensifying demand.

Dopamine is released by a neuron into a synapse shared with a neighboring neuron. Normally it is then destroyed, diffused, or reabsorbed by the emitting neuron. This neurotransmission is active only between 0.5 and 1 millisecond. (Cocaine, for instance, attaches to the transporter and blocks the reuptake process, resulting in a build-up of dopamine in the synapse, which causes the reward to persist.) Satisfaction, evidently (like the sympathetic nervous response), was not made to persist. Dopamine is, after all, another catecholamine and it is released (along with the glucocorticoids and a host of other hormones) by stressors. Satisfaction itself seems essentially stressful; perfect in a pinch but over the long haul *detrimental*.

Is sustained satisfaction (some might say 'happiness') chemically impossible? Perhaps we can make it pulse on and off so rapidly its state seems steady—a continual firing and dissolution or reuptake of the impulse—ceaselessly starting up (like word after word after word).

In light of the chemistries of stress and satisfaction, how should the Stress Response Building function? How might the macro ability to change activity every few hours effectively mesh with the minute millisecond cascading of catecholamines and steroids?

What I've mapped out so far is a modest but certain start. I've described a number of voluntary epigenetics' opening operations: parasympathetic prominence; making the chronic acute (pathology sets in when the problem takes too long to solve); parallel autonomic release; selectively interspersed stress response systems; autonomic override; (and as practiced in their respective quadrants) architecturally manifested wakeful hibernation, waived adaptation, pathless cascading, serene shock, metabolic disband, and so on. Once the building is up and running, exploration of further satisfactions and regulations can begin as new predicaments pour in and other supply beneficial behaviors appear. Ultimately communicator chemicals will become biosynthesized (not swallowed or spliced in) by the architected environment in direct interchange with bioprocess. (Could such psychoactive construction be measured in *archorphines*—archoendogenously active?)

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The physiological rule of thumb: it's more radical to synthesize one's own medicines within. Subtle is more extreme. Endogeny is safer because more potent. On the physiological level, healing is a matter of the synchrony of all systems. When all systems are operating on their own, the patient is given the greatest chance for dealing with stress autonomously, nonsymptomatically, and with greatest dignity. (The Stress Response Building provides for this.) Under market-medicine, the body's systems are isolated and pharmaceutically targeted. It's not possible to mechanistically fix one parameter without compromising the body's ability for self-fix (without at once dysregulating and desensitizing a number of interrelated parameters). For example, entering, maintaining and leaving a hypometabolic state requires strict synchrony of oxygen intake, carbon dioxide elimination, temperature regulation, discharge of metabolic wastes, control of heart rate, and maintenance of cell integrity. A partial, synthesized activation of the parasympathetic system tends to trigger autonomic stress. And beyond the physiological, without a sickness' corresponding emotion, a patient is likely to lose the path back to health. Emotion concerts otherwise scattered and inconsequential data in both internal and external environments.

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The basic chemical rule of thumb: high that stays high stays high by not depressing other parameters.

Even our very restlessness is our own mechanical insistence—a prefrontal call for that almost irresistible neocortisol.

We're flighty and fickle not because our satisfactions are constantly being met but because they are not.

There are no tradeoffs in fulfillment.

Grace doesn't sustain the stimulus.

Only the exceeding of expectation doesn't desensitize. (Ask your amygdala.)

Because satisfaction can't be stored, a building rich in dopamine sources would constantly renew sociosensory reward through every detail. Paralleling Fourier's papillonage, pathways in the building lead to separate but accessible worlds—allowing any level of voluntary interchange, reciprocation and sharing. Physiological regulation depends on continual modulation of emotional expression. If emotional expression is clamped at restrictive parameters, regulation is sought in pathologic extremes of the psychosomatic. Urgency, not emergency, regulates physiology. Ideas themselves are not capable of urgency and focus. Emotion sustains thought. Negative emotion is more cohesive than positive emotion. A dysregulated system darts into the negative for fatty fix. The reward circuit of the Stress Response Building treats this syndrome by providing palpable sociobehavioral options for patients to explore once their plateaus of physiological regulation have been reached by the very provision of the options.

The Stress Response Building is emotional in every detail, just as there is nowhere in the body the physiological correlates of emotion can't be found. This emotionality is a matter of the interrelation of design and manual devotion (taking the tools in hand).

On any given day, the very least the Stress Response Building would proffer is the renovation of the classic stress response. The choice of either fighting

or running away when endangered is admittedly male and mortifying. To instead seek support or “tend and befriend,” perform or pretend or perplex, defuse, cry, surprise, or distend, would serve to diminish a stressor’s predatory potency.

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The primary response addressed by the Stress Response Building is the most natural response of all: *rapid desensitization*. Rapid desensitization is the mainstay of the autonomic. We may have some say in stress (the central nervous system incites and subdues its production to some extent) but our satisfactions can only ultimately be fashioned in the autonomic. (At least this is the case for physiology up to this point in time.) That which we experience as satisfaction is the release of a small pulse of dopamine. The stimulus that initially releases dopamine adapts—thereby limiting or entirely shutting down the satisfaction obtainable from its repetition.

Of course this ingrown reward circuit may be overridden by something as plain as tone of voice, song or prayer. But the purpose of the Stress Response Building is to develop ways to beat the biodeterminism of this circuit by biopsychosocioarchitectural means.

A system that can no longer fluctuate desensitizes. A system that has nothing to fluctuate between, desensitizes. The wealthy can stay ahead of the hyposatisfaction syndrome by varying their routines and seeking further sources of satisfaction, but this variable is not a guarantee of beatitude or even enhanced sensitization.

For the moment, let’s extend appetite away from the tongue and expand the potential sources of satisfaction. Built into the Stress Response Building are civic, social, cultural, constructive, occupational, material, legislative, and ascetic appetites—all potential sources of satisfaction. Appetite must be kept myriad because fulfillment boils down to one bio-mechanism and this mechanism may now (by means of evoked epigenetics) safely be kept from ‘adapting.’

REMEMBER LABOR?

If an artwork takes labor as its medium, what then gets built?

If a healthcare facility based on overcoming the stress syndrome is built by stress-maximization of workforce, is the building itself not a contradiction; has its purpose not been undercut by the construction process; has the body of the building, having absorbed every blow, not become debilitated?

How can we rest if, energetically, a building is the embodying of the sum of the qualities of force gone into its construction?

How can we take ourselves seriously if the construction process is not used as the basis for treating the problems our constructions intend to address?

Is not 'empire' rebuilt each time labor cost is cut?

Does 'kindness' or 'work' apply the greatest epigenetic pressure?

How to *build without building* if construction is a form of violence committed with and against the earth?

What does it serve if we make a building our surrogate psychosomatics?

Could anything possibly be more psychoactive than something we're inside of?

Why shouldn't worker benefits and satisfactions be narrowed to compensate for the impossibility of assembling a building offshore or overseas (to be shipped back 'home')?

If the market is a Natural Selection mock-up, why shouldn't we use it as a mirror?

Why reinforce the mechanistic error by maintaining places in the body wherein we are not aware?

If there is nowhere in the body neurons are not, how could matter not be consciousness?

Could anything other than qualities of consciousness account for the built environment?

(Matter is consciousness while our materials and makings are qualities of consciousness.)

If having but one path of reward is either oppression or addiction, what compels a worker to a zero site (to return to work over and over again where there is neither satisfaction nor fair compensation)?

IT'S NOT NECESSARILY THE BODY (IT'S THE HYPOSATISFACTION)

It's said that modern medicine is disease-centric. Traditional medicines believe that disease is psychoexogenous (the result of climate variations, bacterial attack, emotional imbalance, lifestyle).

Now that we understand the host of physiological changes that are activated by a stressor, how can it be said that sickness is intrinsic or even 'centric' in any sense?

Which is to say: we may be doomed if physiology (in the sense of pressure applied directly to the heritable) is not an actual artistic medium.

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Just as rat pups detached from their mothers show an eightfold increase of corticosterone over 24 hours, human toddlers detached from their parents show heightened cortisol levels. Neural signals that call for increased blood pressure also call for salty foods.

Fat from the get-go.

Children who have been abused or bullied 'acquire' a ten-year decrease in lifespan. These children are also at increased risk for substance abuse, eating disorders, and self-destructive behaviors. These same children, though they rarely have a physiological defect or something 'broken' or 'dysregulated,' are 40% more likely to become hypertensive.

Homeostasis attributes all pathology to defect and deviation from set-points, and is therefore an extremely limited diagnostic tool.

Essential hypertension is the term used for hypertension of unknown cause. Of the one-quarter of U.S. adults with hypertension, 95% are classified as 'essential.'

It is astonishing that today's energy regulation diseases are rarely traced to a specific physiologic defect or mutant allele.

Nothing is wrong, we're simply diseased.

Nothing is wrong, something goes wrong.

The less we do the more we consume.

I'm fine, I'm just dysfunctional. Why do you ask?

It's so easy to override the local negative feedback.

Food's cheap, let's eat.

Something's got to satisfy someone.

"I just love the taste of a stranger" (ancient Greek saying).

That's not a fact, it's an effect.

Perfectly normal adaptations of internal physiology driven into mass-scale pathogenesis.

It's not inappropriate.

People are dying for nothing.

People are dying from nothing.

People are dying in perfectly good order.

Art treats iatrogenesis.

Push the placebo for what it is.

Expectation heals.

Anticipatorily palliative.

Bottled at the source.

The real stuff in place of the prescription.

Buying it from yourself.

Consciously tricked takes the cake.

Consciously tricked tickles.

Though physical defects are rare, standard medicine tends to target the body. Treatments directed at the symptomatic body (peripheral or repercussive receptacle) will tend to be countered by the higher order behaviors that brought them on.

Targeting the body with drugs, workups and operations can now be added to the list of today's diseases—a mechanistic fix can easily generate a mechanistically based problem whose fix is in turn mechanistic, and so on, until the pathogenic body is built (blood pressure may be treated by a diuretic to reduce volume which effects a compensatory increase in heart rate and vasoconstriction which is treated in turn by beta-adrenergic antagonists and calcium channel antagonists, etc.).

The allostatic model attributes the pathogenesis of hypertension, obesity, diabetes, heart disease, panic disorder, reduced life expectancy, allergy, tumor growth, Post Romantic Stress Disorder, victim presentation, apologetic excess, suicidal ideation, the common cold, memory deficit, intrusive thought, immunosuppression, Dissociative Identity Disorder, Learned Helplessness Syndrome, hypoarousal, hyperarousal, anorexia, ulcers, soul murder, migraines, metabolic syndrome, Support Network Inadequacy, libido-loss, instability of intent, bone demineralization, infertility, eroded personal boundaries, amygdala atrophy, Attention-Deficit Hyperactivity Disorder, and chronic fatigue to a pair of maladaptive stress responses known as *hypervigilence* and *hyposatisfaction*.

Hypervigilance is the condition of prolonged lowered expectation (particularly prominent among those of low socioeconomic status).

Hyposatisfaction is the chronic shortfall in an already greatly reduced range of satisfactions. Both conditions are products of *social disruption* or *cultural dissolution*. To take an extreme example: among industrialized aboriginal peoples, the rise in depression, obesity, alcoholism, suicide and murder invariably accompanies the rise in hypertension, and the rise in hypertension invariably accompanies increased environmental insult.

Allostasis is a more accurate regulative model because it doesn't defend blood pressure, temperature or hormonal set-points. Instead, allostasis demonstrates coordinated variation by means of predictive regulation. The body anticipates environmental demands and adjusts its parameters accordingly.

The potential allostatic problems are quite evident. We easily anticipate pressures while we are under no actual threat of being pressured. We feel generally unsafe, pressed, stressed and begin to *oversecrete*. Sickesses arise when the sedentary stress of the psychosomatic body fails to burn up the extra glucose that has been released into the bloodstream—or when organs outside the stress loop become blood deficient.

Welcome to the *allostatic syndrome*: an even newer evolutionary aid turned pathogenic.

Enter epigenetics.

The key difference between allostasis and epigenetics lies in that which they respectively modify—allostasis regulates neuroendocrinologic behavior while epigenetics modifies the functioning of genes. Allostasis applies largely to involuntary physiology while epigenetics applies voluntarily to gene expression. A step toward conscious epigenetics is far more natural and consequential than a similar step in the direction of the allostatic. Parasympathetic prominence and sympathetic control quickly lead to the need for evoked epigenetics. What good will it do to add the hypometabolic state to the three states recognized by science (waking, sleep with dreams, deep sleep without dreams) without changing the material world? Alert relaxation acting directly on stressors, adaptation and the architectural is optimal epigenetics.

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When evoked epigenetics asks “To what degree can the epigenetic be voluntary?” it moves beyond the adaptive, anticipatory bounds of classical regulation wherein we are secretorily trapped.

While classic epigenetics blindly modifies genes by means of behavior and environmental pressures, evoked epigenetics is *engaged* or *guided* gene expression. The evoked epigenetic theater consists of the actions of the genetically expressible self (omissions and commissions alike) within the whole environment (familial, social, cultural, built, natural). These actions produce the conscience that initiates actions. ‘Health’ is a consistency (a holding together) that is maintained only by engaging all aspects of the epigenetic theater.

The age is decidedly post evolutionary. While past gene mutations required millions of mishaps over as many years, syndromes now develop over mere decades, and detonate within a single generation. The Stress Response Building untargets the body, pulls out the PICC line, and returns the patient to the patient by placing the stressors under the patient’s sway. At this stage of the earth-brought-to-the-brink the old evolutionary model with its concomitant economics and autonomic overdrive is itself the crisis.

Notes

1) Nāgārjuna, *Mūlamadhyamakakārikā of Nāgārjuna*, trans. David J. Kalupahana (Albany: State University of New York, 1986) 366.