

PROLOG UE

"This 24 year-old Haitian man had his first tonic-clonic seizure at the age of 17 years, during the wake of an uncle. The patient had been sleep deprived during the vigil of the corpse. The seizure was attributed to possession by Ogu, the warrior God, and the dead uncle's loa. Subsequent seizures and morning myoclonus were explained as harassment by the wandering soul of the uncle.

The possession was interpreted as a punishment, for the patient had been disrespectful towards the deceased in the past. He was treated by the local mambo for 6 years and did not see a physician until coming to the United States. His EEG showed 3-4 Hz bursts of generalized spike-wave complex discharges occurring spontaneously, as well as during photic stimulation..."

<u>Epilepsy and Religious Experience: Voodoo Possession.</u> Carrazana E, DeToledo J, Tatum W, Rivas-Vasquez R, Rey G, Wheeler S. (*Epilepsia,* Feb. 1999)

н Т PERMEA R SELF

The fundamental delusion of humanity is to suppose that I am here and you are out there. Yasutani Roshi

BODHI TREE

Most of us are familiar with the tale of Siddhartha Gautama, commonly known as the Buddha. Born to a rich family around 563 BCE in what is today Nepal, the young Gautama was hidden away by his family, sheltered so that he would never know of the existence of sadness, death, or old age.

Upon seeing an old man and realizing the truth of aging and death, Siddhartha renounced his wealth and sought spiritual enlightenment. He became an ascetic, mortifying his body through extreme *yogas* such as eating only a single grain of rice a day.

Disillusioned with his lack of progress, Gautama resolved to sit beneath a tree and meditate until he reached enlightenment. In the mythical versions of the story, demons and disturbing visions come to distract him, but he remains firm. Eventually he was enlightened, able to see that all suffering in the world had its roots in attachment to worldly things, and that attachment had its roots in the illusion of self. With this truth fully realized, Gautama entered Nirvana - a state in which there are no boundaries, no personal identity.

As Buddhism and other Eastern philosophies such as Taoism have permeated Western culture, stories such as this have become widely-known. Buddhism is the fourth-largest religion in the United States, after Christianity, Judaism, and "no religion." Ashrams and Yoga studios dot the American landscape. Meditation is prescribed by doctors all across the country for the relief of stress and the prevention of disease.

And yet, how many people live their lives in the full knowledge that the *self* - the core of their personal identity - is an illusion?

We believe, more than ever, that human beings are rational, reasonable things. Our economics is based on this fact; capitalism could not exist without full faith in the axiom that people act in their rational best interest. When we make decisions - to buy a new car, to choose a lover, to go to graduate school or to cook instead of eating out - we believe that there are logical, objective factors behind our decisions. This car has better gas mileage, this woman loves me, I need to save money....if things were otherwise, we think, we'd make different decisions.

This model of the universe consists of two parts: the outer and inner world. The outside world is *out there*; we detect it through our sensory organs, which relay information to our Self, the thing which is really us, the thing in charge. The Self looks at the data, makes decisions, relays those decisions back to the body and we act accordingly. Think of a painter - he surveys his surroundings and paints the landscape, but does not add himself to the canvas.

This dualistic model of consciousness, which requires a separate and distinguishable self to exist, is the foundation of not only modern American culture, but all of Western culture, down to Socrates and Plato. It is then, perhaps, not surprising that despite the current popularity of Buddhism and Buddhist practices, the concept of a self-less existence has been largely ignored in Western societies..

What is interesting, however, is that Western science - the most systematically rational of all Western undertakings - has, slowly but surely, been undermining the dualistic model of consciousness for decades.

Not the least of these efforts have been aimed at understanding how we make decisions - whether to eat a certain food for breakfast, to end our lives, or to end the lives of others.

Are any of our decisions truly rational?

Aftermath of Sarin gas attack on Japanese subway by Aum Shinrikyo, an ostensibly Buddhist mystical cult.



AOKIGAHARA

Our mental models for understanding suicide are a perfect example of our belief in dualistic consciousness. The most common thought process looks like this: People commit suicide because they are depressed. People get depressed when bad things happen: maybe they lose a job, a loved one dies, they have no friends. Depressed people often turn to drugs and alcohol to dull the pain, but this just makes it worse. They then decide to commit suicide because being dead is less painful than being alive. They often go to the most convenient place, and use the most convenient, least painful method: guns for men, pills for women.

In this mental model, as with the dualistic model of consciousness, there are two distinct entities: the inner self, and the outer world. The outer world sends data to the inner self (*"life is painful"*); the inner self assesses the situation and reacts accordingly.

If this model is correct, suicidal ideation is a problem of individuals: *I* am depressed, *I* am having problems, *I* choose when and how to kill myself.

However, there is a great deal of evidence that people do not autonomously decide where and how to kill themselves. Take, for example, the phenomenon of "suicide hot spots."

The Golden Gate Bridge is widely-touted as the world's "most popular suicide destination," with over 1,200 suicides reported. People must walk long distances across the bridge to come to accessible areas to jump from; there are instances of people driving many miles, including across other bridges, to

commit suicide at the Golden Gate.

Although the Golden Gate has few barriers erected specifically to reduce suicide attempts, there are many such bridges, and many more easily accessible than the Golden Gate. Clearly, it is not simply opportunity or ease of access which makes this particular bridge so deadly.

The Golden Gate is not an isolated case. Aokigahara Forest, at the foot of Mount Fuji in Japan, is the world's second largest "suicide hot spot," with over 78 suicides a year. This is despite the many attempts made by Japanese armed forces to patrol the area. Hikers in the woods see dozens of signs imploring, in Japanese and English, the depressed to seek help. Despite this, the semi-annual "body hunts" supported by local volunteers find dozens of people each year, often hanging from trees in various states of decay.

Aokigahara, unlike the Golden Gate, offers the suicidal nothing in terms of convenience. It is hard to reach, people must hike far off the popular trails into dense forest to avoid patrols, etc. Suicide in the forest, although perhaps peaceful, offers none of the rush or quickness of death promised by jumping from a bridge or using a firearm. Dead bodies are often devoured by animals and left exposed to the elements, something which even the suicidal usually choose to avoid.

The cases of both the Golden Gate and Aokigahara do not fit within our mental model of suicide. Why would people go so far out of their way? Why would they choose such inconvenient locations and methods?

The answer is that the self does not make these decision in a vacuum - but rather is influenced by cultural expectations, assumptions and practices which help to drive our behavior unbeknownst to our conscious minds.

The music we listen to, the kind of food we eat, the person we marry - all these things are affected by what culture we are born into. We may think that we like



Detritus left by the suicidal in Aokigahara forest.

a certain kind of music because of some objective trait of that music, but in reality our tastes and preferences are largely culturally determined. In much the same way, your political leanings have far more to do with the part of the county you are from than with any objective assessment of political and economic fact, no matter how well-informed you think you are.

We are all subconsciously monitoring our surroundings for clues about how to behave. Cases of people dying while surrounded by seemingly indifferent bystanders, the most infamous of which was the murder of Kitty Genovese in New York City in 1984, are now so common that a simple Google search for "stabbing people ignored" pulls up multiple pages of results.

Excerpted here is an article from the New York Post, chosen at random from a dozen similar articles:

"A heroic homeless man, stabbed after saving a Queens woman from a knifewielding attacker, lay dying in a pool of blood for more than an hour as nearly 25 people indifferently strolled past him, a shocking surveillance video obtained by The Post reveals.

Some of the passers-by paused to stare at Hugo Alfredo Tale-Yax last Sunday morning and others leaned down to look at his face.

He had jumped to the aid of a woman attacked on 144th Street at 88th Road in Jamaica at 5:40 a.m., was stabbed several times in the chest and collapsed as he chased his assailant.

In the wake of the bloodshed, a man came out of a nearby building and chillingly took a cellphone photo of the victim before leaving. And in several instances, pairs of people gawked at Tale-Yax without doing anything.

Later, another man stopped, leaned over and vigorously shook Tale-Yax's body. After lifting the victim's head and body to reveal a pool of blood, he also walked Not until some 15 minutes after he was shaken by the pedestrian — more than

an hour and 20 minutes after the victim collapsed — did firefighters finally arrive and discover that Tale-Yax, 31, had died."

Although it is possible that this man just happened to be stabbed in the midst of dozens of sociopaths, it is more likely that all of these people were completely average in intelligence, capability for empathy, and environmental awareness. Why, then, did no one stop to help, or even pull out their phone to call 911?

The fact is that our behavior is more determined by our perceptions of others than by any rational process. When put in an ambiguous situation - a situation in which there is no known standard of behavior - we look to others to help us determine what's expected. A man lying in the street presents several possibilities: he could be dead, he could be dying, he could be faking, he could be doing modern art, he could be shooting a movie, maybe someone already called 911, maybe the police are on their way...There are so many variables that it's difficult to determine the proper course of action. To help us decide, we look to others: what are *they* doing? How are they reacting? If everyone is simply standing around or minding their own business, it is very likely that you will do the same, no matter what you "think" you'd do. In turn, others look to you, see you minding your own business, and the cycle continues.

It is fairly certain that, if you had stopped each of those people a few minutes earlier and asked them what they'd do if they came across someone dying on the sidewalk, all of them would have said they would help in one way or another. After all, that is the rational, humane thing to do.

In reality, however, our decision-making processes aren't "rational" in the way we understand the term. We don't make decisions on our own: we make decisions as part of a group-organism, determining the best course of action by



Walking past a dying man.

taking the average of all the reactions we have perceived in others.

This feedback loop, spread out over long stretches of time and geographic space, becomes what we call "culture." When we are unsure we look to our broader culture for clues - social norms, sexual taboos, behavioral archetypes - and change our actions accordingly. All the while, we are unaware of this process and believe our actions to be based upon our own rational thought.

Applied to suicide, this mental model of decision making - what we might call the "model of the cultural self" - helps to explain why some areas are more popular for suicide than others. The Golden Gate is a popular suicide destination *because other people have committed suicide there.* People hike miles into the dense forests of Aokigahara *because other people have done that.*

People do things because people do things.

THE SORROWS OF YOUNG WERTHER



Yukiko Okada.

Even the decision to commit suicide, the most dire decision a person can make, is more about our perception of others than it is about ourselves.

In 1774, Johann Wolfgang von Goethe published *The Sorrows of Young Werther*, a novel in which a young man is caught in the throes of a passionate and unrequited love. Unable to reconcile his feelings, Werther commits a botched suicide by pistol, lingering for hours before dying. The book was a huge success, and inspired everything from literary movements to fashion trends in which young men dressed like Werther. It was the media event of it's day.

It also inspired copycat suicides; so many, in fact, that suicide epidemics - also called suicide contagion - are known as "The Werther Effect." In a suicide epidemic, well-publicized suicides serve as models for others, and soon large clusters of suicides at the city, state, or even national levels can be observed. Marilyn Monroe's suicide was followed by a rash of similar suicides all over the United States. In Japan, so many suicides followed that of talent-show winner Yukiko Okada (who leapt from her seventh-story dressing room) that the press dubbed the deaths "Yukiko Syndrome."

"According to one unconfirmed report, I7 of the 31 juvenile suicides that were known to the police in the first two weeks or so after Okada's death were by girls, and 19 of the suicides were by jumping from a building. Usually more boys commit suicide, and the most common methods are ordinarily hanging and gassing.

Spring is the suicide season in Japan as it is in many other countries, and April is often the worst month. The National Police Agency reported 93 suicides among minors (younger than 20) in both 1978 and 1979, and 59 and 50 juvenile suicides respectively in April 1984 and 1985.

The first suicide to be nominally connected with Okada's death was that of a 16-year-old Korean girl shortly after midnight on the morning of the 15th. Pak Migi leapt to her death from the 13th floor of an apartment building in Kobe after telling her younger sister "I want to become like Yukiko Okada." Pak's mother reportedly had no idea why her daughter had killed herself...."

Clearly, the suicides of the famous are not the only factor which influences the decision to end a life. However, many of the things that seem to influence suicidal thoughts, such as poor diet, lack of sleep, and chemical imbalances, are neither rational nor under our control. Indeed, even the time of year, amount of daylight, and the phase of the moon have been shown to have some connection with suicide rates.

If the decision to live or die is so influenced by outside factors - if we don't make that decision rationally or consciously, but as the result of any number of unconscious factors - can it be said that we are making that decision at all?



Yukiko Okada.

UNWALLED GARDEN

Until now we have been discussing the dominant view of the self - namely, that the self is unique, largely independent of the outside world, and depends largely on rational thought processes. Just as with a walled garden, there is a fundamental division between what is *us* and what is *outside*.

We've demonstrated, however, that this model does not accurately describe what drives our behavior, but rather *what we feel* drives our behavior. All of us have the illusion of being a rational actor. When we analyze our behavior, however, we often find disturbing correlations between what we do and the environment around us.

Let us propose a different model of the self: The Permeable Self. In this model, the environment around us and our inner selves are intertwined; they influence one another, creating a feedback loop that results in our behavior. Our states of consciousness, far from being independent and solely rational, are the product of these feedback loops between our minds and the world around us.

This is how we explain suicide hot spots, "Yukiko Syndrome," even the effect of the moon on suicide rates. Suicidal ideation is not entirely based on our external situation or on any rational consideration of life and death; it is based on chemical imbalances, which in turn are affected by drug use, amount of received sunlight, diet, amount of sleep, dehydration, and so on through a seemingly-endless list of environmental factors. It's important to note that we *perceive* all this environmental data only in the broadest, most qualitative way. This is why, for example, dehydrated hikers will feel depressed and angry long before they feel thirsty. Our bodily systems know what is going on, but our conscious minds are completely unaware. This is the equivalent of being able to see that a plant is dying, but not being able to tell, without special training, that it is dying because there is not enough phosphorous in the soil.

Accepting this model of the self - that our self and the environment are not separate, but intermingled, and that our thoughts and feelings may be the result of unknown physical causes instead of reason - allows us to view our subjective experiences of the world in a very different light.

For example, depression is subjectively experienced as a crushing hopelessness, as a feeling of giving up on the larger universe. If we accept the model of the permeable self, however, we can experience that emotional reality while simultaneously realizing that *our subjective experience is a function of our immediate environment, and does not necessarily reflect the world at large.* To put it bluntly, many depressed people need, not to escape a veil of tears, but to eat more vegetables and expose their skin to more sunlight.

This philosophical shift accomplishes two things: for one, it significantly decreases the importance of our immediate emotional reality. Secondly, it opens up a new realm of possibilities in the use of environmental stimuli to *enhance, expand, and improve our experience of the world.*

If our self is permeable to the world around us, by changing our environment we can fundamentally change our selves.

SHAMAN

"They told me I must not eat anything until the horse dance was over, and I had to purify myself in the sweat lodge with sage spread on the floor of it, and afterwards I had to wipe myself dry with sage....

Next the six Grandfathers came forth and stood abreast behind my bay, and they began to sing a rapid, lively song to the drums, like this:

'They are dancing. They are coming to behold you. The horse nation of the west is dancing. They are coming to behold!'

...And...each troop in turn, wheeled and came and took its place behind the Grandfathers - the blacks, the whites, the sorrels and buckskins, standing four abreast and facing the west. They came prancing to the lively air of the Grandfather's song...and all the while my bay was rearing too and prancing to the music of the sacred song...

...And as they sang, a strange thing happened. My bay pricked up his ears and raised his tail and pawed the earth, neighing long and loud to where the sun goes down...then, suddenly, as I sat there looking at the cloud, I saw my vision yonder once again - the teepee built of cloud and sewed with lightning, the flaming rainbow door, and underneath, the six Grandfathers sitting, and all the horses thronging in their quarters..."

Black Elk Speaks, John G. Neihardt.

NON-ORDINARY STATE

About a year ago I released an album called *Giles Corey*. In the text that accompanied that record, I wrote the following:

I sat in front of a piano, and slid the hood over my face. Immediately, I felt the room contract. After that, only flashes. Half-memories.

The tape recorder on the table clicked to a stop an hour later. I was on the floor, the hood next to me, crumpled into a heap. Featureless. I couldn't remember how I'd come to be there.

It was several days before I could bring myself to listen to the recording. When I did, I noticed things - footsteps while I played. The sound of glasses clinking together. Knocks on the wooden body of the piano. And myself: wailing, screaming, crying. For an hour, until the end of the tape brought it to a sudden stop. No explanation.

At the time, I found the strange, out-of-body experience to be extremely disturbing. The feeling of being *elsewhere* was troubling.

Now, I think of the very first time I played live with HAVE A NICE LIFE. The high volumes in a small space were mind-numbing. I bashed my hand so hard against my legs that I broke the microphone and left huge, black bruises all over my thighs. After the show I vomited and collapsed.

I remember once playing an excruciatingly small, cramped basement, and, during the climax of a song, throwing the microphone over a low-hanging water pipe, wrapping the cord around my neck, and dangling from the ceiling. I remember that, and what happened after the show, but nothing in between.

I realize that it is this kind of experience - the out-of-body sensation, the complete submersion in the immediate moment, the ecstatic, joyous feeling of loss of control - that I've spent a great deal of my life pursuing. I was seeking these moments out.

Over time, I've come to think that these experiences aren't solely a product of, say, the pleasure of playing live music. Nor do I think, as I used to, that they are cathartic moments rooted in my own personal traumas.

What was happening to me was a more dramatic form of something that is quite common and very ancient: a non-ordinary state of consciousness (or NOSC).

NOSCs are commonly referred to as "trances," and they are as old as humankind itself. Civilizations all over the world have included trance-inducing rituals in their religious practices. In one study, 90% of a representative sample of 488 small- and larger- scale societies evidenced institutionalized forms of altered states of consciousness. Trance, one scholar writes, "appears to be a near-universal cultural phenomenon that occurs in most and perhaps all human cultures."

In fact, these events are so commonplace that it is often difficult to discern what is and isn't a non-ordinary state of consciousness. NOSCs can be as varied as the "flow" state studied by psychologist Mihaly Csikszentmihayli (the feeling of being "in the zone," the effortless and thoughtless action often associated with elite athletes), and the demonic possessions reported by the nuns at the monastery of Loudun (in which dozens of individuals experienced extreme physical symptoms such as loss of motor control, speaking in tongues,



Black Elk.

erratic and violent behavior, etc).

NOSCs can be identified in things ranging from the vomiting and unconsciousness I experienced during my live performances, to daydreaming, hypnosis, spirit possession, sensory deprivation, hysterical states of disassociation and depersonalization, and feeling "high." They can involve others, as in mob violence and group hysteria, or be entirely personal, as with the "vision quests" of North American Indians. Trance states are so variable that trance-induction has traditionally been a ritualized and often closely-guarded affair, because some NOSCs can result in indiscriminate and ferocious violence, sexual orgies, destruction of property, etc.

What, then, are the defining characteristics of these widely varying states? How can we classify them, and what causes them?

No matter what the cultural context - whether we're describing a basketball player's sense of being "in the zone" or the experience of a Balinese shaman acting as the vessel of a vengeful spirit - all NOSCs tend to share similar characteristics:

- 1. Alteration in thinking (an inward shift of attention, memory loss)
- 2. Disturbed time sense (time moves faster or slower)
- 3. Loss of control (submersion of identity in "higher power" or "the moment")
- 4. Change in emotional expression (less inhibition, extreme emotions, detachment)
- 5. Changes in body image (depersonalization, sense of body-mind schism, dissolution of the boundaries between self and others)
- 6. Perceptual distortions (hallucinations, often culturally-determined)



Balinese men "dancing" into an open fire during a ritual possession.

- 7. Change in meaning or significance (attaching increased meaning to subjective experience)
- 8. Sense of the ineffable (inability to communicate nature of experience)
- 9. Feelings of rejuvenation and profound hope

10. Hypersuggestability (vulnerability to hypnotic suggestion, likeliness of following other's orders or expectations)

These states are also induced in very similar ways:

- Reduction of sensory input or motor activity (as in deep meditation, ascetic practices, or exposure to repetitive, monotonous stimuli)

-Dramatic increase of external stimuli, motor activity, or emotions (as in excitatory states following extreme physical exertion)

- Increased mental involvement and alertness (fervent praying, focusing on a revolving object, hyperalertness and focus)

- Decreased alertness or relaxation of critical faculties (as in passive states of mind with little to no goal-oriented thinking; meditation on nothingness or void)

- Presence of physical factors which affect the mind (*drowsiness; dehydration; hypoglycemia from fasting; hyperventilation; sleep deprivation*)

It should be noted that often the increase or decrease of any particular factor is enough to induce as NOSC. We can imagine our "normal" state of consciousness as a narrow band in the center of a spectrum; pushing either forward (towards hyperfocus, for example) or backwards (towards complete passivity) on the spectrum will result in an altered state. With this in mind, we can re-examine the incident cited at the beginning of this chapter.

I sat in front of a piano, and slid the hood over my face (**reduction in external** stimuli; hyperventilation). Immediately, I felt the room contract (alteration in thinking; perceptual distortion). After that, only flashes. Half-memories (disturbed time-sense; disturbed memory).

The tape recorder on the table clicked to a stop an hour later. I was on the floor, the hood next to me, crumpled into a heap **(loss of control)**. Featureless. I couldn't remember how I'd come to be there. **(disturbed memory)**

Think over the other examples: physical exertion on stage (hyperventilation, dehydration, hypoglycemia) accompanied by loud (increase in external stimuli) music (monotonous rhythms), resulting in loss of control, loss of memory, change in perception, a sense of the ineffable, and a loss of ego.

I wasn't "getting into the music," and I wasn't "experiencing catharsis." I was inducing trance states, in the same way that indigenous cultures have induced trances, spirit possessions, and religious ecstasy for centuries. In the same way that the Buddha had meditated beneath the Bodhi tree (*decrease in external stimulation, hyperfocus, hypoglycemia, chanting of repetitive mantras*), I was seeking an altered state of consciousness.

If our self is permeable to the world around us, by changing our environment we can fundamentally change our selves.

The immediate question now becomes: why do these states occur, can we deliberately induce them, and what is their significance, if we can?

O S C I L L A T I N G NEUROLOGY

Sometimes we forget that, for all of our scientific advancement, we have no idea how our minds actually work. The secret of consciousness - what turns the electrical and chemical signals of our bodies into something that can think, feel, and become aware - is just that: secret. However, there are tools that allow us to draw correlations between the things that happen to our *brain* and the things we experience as our *mind*.

One of these tools is the electroencephalograph, or EEG. Using electrodes placed on the skull, an EEG can measure the surface electrical activity of the brain. In fact, this electrical activity is present throughout the body, and is the product of the natural activity of every living cell. The EEG transcribes these signals as waves, much the same way that a seismograph measures movement within the earth. These wave-like properties of the electrical activity in our brains is what led to the term "brainwaves."

The frequency of our brainwaves falls into 5 ranges: gamma (30-70Hz), beta (13-20Hz), alpha (8-13Hz), theta (4-8Hz), and delta (1-4Hz). All people vacillate through the different frequencies at different times, but concentrations of brainwave frequencies are associated with different mental states:

Gamma waves are associated with high-level processing of stimuli, and the grouping of features of a given stimulus into a coherent whole; they are also associated with memory processing. High-levels of gamma waves have been

observed in studies of advanced Buddhist meditators while meditating on universal love and compassion, as well as in studies of musicians listening to music made by non-musicians. The average human voice frequency is within gamma range.

Beta waves are associated with strong, excited emotions such as fear, rage or anxiety. They also correlate with alert attentiveness, selective attention, concentration, or anticipation. They have been observed during meditation during moments of ecstasy or intense concentration, and only in advanced practitioners.

Alpha waves seem to suppress cortical activity in the brain, which has the effect of suppressing stimuli in order to achieve focus. For example, if asked to focus on a particular visual stimuli, alpha waves will help to block out sounds in order to allow stronger focus on what you are seeing. States in which alpha waves are predominant are associated with relaxed wakefulness and creative thought; they sometimes produce a tranquil, pleasant, floating feeling.

Theta waves are associated with many phenomena related to consciousness, and have been connected to memory, emotions, plasticity (how the mind adapts and changes), sleep, meditation, and hypnosis. Theta waves are predominant during Stage I sleep, in which you lose your sense of lying in bed and being awake. This state is known as the "twilight state," in which you are neither fully awake nor fully asleep, and causes people to experience a state of reverie and disjointed, fleeting hallucinations.

Delta waves are consistently observed in deep sleep. As the percentage of delta waves rises, sleep gets deeper. Maintaining delta waves and consciousness simultaneously is very difficult.

Your "conscious mind" is made up of many of these frequencies at once. The neural networks inside your brain, consisting of cortical neuron groups, often synchronously "pulse" at a certain frequency. Thus, it is possible for one



EEG receptors.

network inside your brain to pulse at the frequency of theta waves, while another network pulses at alpha frequencies. These networks then oscillate between frequencies depending on a mixture of external and internal stimuli.

Different networks can also "sync up" with one another, shifting their frequencies so that they pulse synchronously with one another. It has been theorized that this is evidence of different neural networks sharing information across one another; essentially, different parts of the brain "talking."

This model of oscillating neural networks falling in and out of sync with one another can shed a great deal of light on the induction of trance experiences, because it connects the functioning of our conscious minds with one of the most overlooked phenomena in the study of the human mind and society: *auditory driving.*

ENTRAINMENT



Neher noticed that, given enough attention and exposure to drumming, brainwaves corresponding to the frequency of the drumming would become more and more predominant. For example, drumming patterns with frequencies within the alpha range would, over time, produce brainwaves at the same frequency; the participant's brainwaves would "sync up" with the external stimulus.

Neher called this phenomenon "entrainment," and the act of deliberately inducing particular brainwave frequencies "auditory driving." He wasn't the first researcher to notice something like this; "photic driving," the act of entraining brainwave frequencies by using visual stimulation (usually flashing lights), had been well-documented. Photic driving is the reason that some videos or movies can cause epileptic seizures, and had been exploited for the purpose of inducing NOSCs by Brion Gysin and Ian Sommerville with the creation of the "Dreamachine." Neher was simply applying the principles of photic driving to auditory stimuli.

Neher's discovery of auditory driving is the final step in connecting our internal perceptions of reality to our external environments:



A conscious mind pulsating at a particular frequency.

- Our conscious minds consist of oscillating neural networks which pulse at particular frequencies.

- When particular frequencies become predominant within our neural networks, we experience a shift in consciousness.

- The frequencies of our neural networks often "sync up" with external stimuli.

- Therefore, we can induce altered states of consciousness through the deliberate use of external stimuli.

The connection between auditory driving and ritual possession and trance now becomes clear: religious rituals combine cultural expectations with auditory and photic driving to induce altered states of consciousness. Rituals and rites designed to produce ecstatic experiences often include more than one element which increases the likelihood of entering a trance state: fasting to induce hypoglycemia, repetitive dancing to exhaust the participants, incense to induce hyperventilation, etc. Note that many of these elements are present in our modern culture as well. "Raves" featuring loud, repetitive music and the ingestion of pharmaceuticals, video games with flashing lights and encouragement of hyperfocus, etc.

We can draw a much deeper conclusion from this data, however - one that helps us to confront the most profound illusion of human existence.

DECONSTR UCTIONIST

This is what we mean by optimal experience. It is what the sailer holding a tight course feels when the wind whips through her hair, when the boat lunges through the waves like a colt...it is what a painter feels when the colors on the canvas begin to set up a magnetic tension with each other, and a new thing, a living form, takes shape in front of the astonished creator...Such events do not occur only when the external conditions are favorable, however: people who have survived concentration camps or who have lived through near-fatal physical dangers often recall that in the midst of their ordeal they experienced extraordinarily rich epiphanies in response to such simple events as hearing the song of a bird in the forest...

Flow: The Psychology of Optimal Experience, Mihaly Csikszentmihayli.

If you realize that all things change, there is nothing you will hold on to. If you are not afraid of dying, there is nothing you cannot achieve.

Lao Tzu

THE ILLUSION OF CONSCIOUSNESS

There is an important fact of our day-to-day lives that often slips past our notice, and that is: *we are our current state of consciousness.*

What were you doing just before you read this sentence? Remember. You were probably reading the earlier sections of the essay. During those moments, when you were engaged in the act of reading, where were *you*, mentally? Most likely, you were *in the act* - in a very real way, you *were* the act. You didn't have two separate mental processes, one for reading and one for "being you," running simultaneously; *you* were *reading*, and that was all.

Now that your attention has been drawn to your own thought processes, is there a part of you outside of the part that is currently examining yourself? Do you have two separate states of consciousness, one for whatever you are thinking now and one dedicated to "being you"? Or are *you* consisting of the thoughts and experiences you are having right now?

We do not have one, constant self. The image of the tiny man inside our heads operating the machinery of our bodies is one that "feels" right but is objectively wrong. We are many selves, many consciousnessess, and we change deftly between them whenever the moment is right. Our intellects are expert at knitting these selves together after the fact and explaining why each change occurred - this is where our "sense of self" comes from. No matter what we do, no matter how we act, we will invent explanations for our actions that match the pattern that has emerged so far, preferably one that paints us in the best of all possible lights. This is why we can pass someone on the right on the highway one moment, and then curse the person who passes us on the right in the next - because, of course, *we* had a legitimate reason.

In a very real way, we are the stories we tell ourselves to explain our own actions.

Trance and possession states, viewed in this light, are aspects of our experience, and thus aspects of our selves. They are just as much "us" as any of the other states we inhabit - being hungry or angry, being lustful or ecstatic, reading a book or driving a car. That these states are hard to access, buried deep within our minds, makes them interesting. You learn the most when you explore the deepest places - caves, ocean floors, or levels of consciousness. It is the "frontier personality," the person who has been to very edges of existence, that has the insight as to what this life is really all about.

The profound truth that is hiding here is that *our consciousness is an extension of our environment.*

All day long we are exposed to stimuli which affect our consciousness. Light, sound, tactile sensations, the actions of others, chemical signals - all of these shift our states of mind, which in turn changes who we are at any moment. Much as a wave begins its movement deep beneath the surface of the water, and ends its motion by crashing onto the shore, so do ripples in the environment begin outside of our bodies and continue their motion within us. A frequency percolates in the atoms of the air and pushes its way through our sensory organs into the frequencies of the electrical pulses of our brains, bringing our current selves into harmony with the world outside: a person who would help a dying man becomes someone who walks past him, a chess player disappears into the complexities of a game, a teen commits suicide by jumping off a popular bridge, and a young woman is possessed by the spirit of her father.



The greatest illusion of consciousness is that consciousness is not an illusion.

This is the point at which the ego truly disappears - in which the painter becomes part of the painting.

We are slipping in and out of "trance" and "possession" and "flow" states every day, but they pass by too quickly for us to notice. Our conscious minds don't bother to knit them into our sense of self. We lack the cultural background to notice and appreciate these states; Western culture, largely materialistic, pragmatic, and self-centered, sees little value in an experience of ecstatic egolessness.

I, however, am still interested in discovering what the Buddha learned beneath the Bodhi tree, what a Vodun priest feels when his soul is replaced by a *loa*, what Black Elk saw in the darkening skies of South Dakota, and what happened to me when I pulled that hood over my face and sat down in front of the piano.

I don't know if this is possible, and I don't know if we can do it in the way I've outlined in this essay. But I think it's worth a try.

HOW TO LISTEN TO THIS RECORD

It should be clear by now that this recording is not *music* in the traditional sense of the word. It is an experiment in inducing trance states, an attempt to expand the consciousness enough to include an egoless universe in a manner similar to meditation and ceremonial possession.

To this end, all of the music on this album has embedded within it *binaural beats*.

Binaural beats are a tool used in auditory driving. A pulsating tone of a particular frequency is pumped into one ear, while another, slightly different tone is pumped into the other. The brain, hearing both tones simultaneously, will unconsciously create a "wobbling" sound at a frequency matching the difference between the two tones. This third, phantom frequency, is the frequency your mind will entrain to. For example, playing a tone of 3Hz into your right ear and a tone of 4Hz into your left will cause you to "hear" a phantom tone of 1Hz.

The use of binaural beats is one of the most effective methods of auditory driving and has the benefit of being fairly simple to engineer in a digital recording. However, there are two drawbacks: binaural tones can be difficult to listen to for the durations required to achieve deep entrainment, and they lack any cultural connections which might hasten the onset of an altered state of consciousness. After all, *believing* something will happen can go a long way

towards making that something happen.

To aaddress this, and to hopefully intensify the trance experience, I have recorded "ritual music" of my own over these tones. I say "ritual" music because the recording process of these "songs" was very specific:

- All music on the record was improvised while entraining myself to these tones;

- Repetitive, chant-like rhythms and drones were used wherever possible to increase the chances of entrainment;

- Distorted and slowed recordings of my original "trance" experience during the recording of Giles Corey were used and manipulated to amplify entrainment frequencies and provide a pseudo-cultural background to the experience.

To further increase the likelihood of achieving the intended (or unintended) effects, the following guidelines should be observed when listening to the record:

- The record should only be listened to in its entirety, and in its intended order. The songs are carefully arranged in such a way as to guide the listener gently through deeper and deeper levels of consciousness. *You should not skip any songs for the first several listenings.* If you feel the need to stop before finishing a piece, simply put the entire record to the side and start again from the beginning when you feel able.

- The record should be listened to in a dark room, preferably while lying down or while sitting in the lotus position ("Indian style").

- The eyes should be covered. A blindfold is best, but sunglasses will suffice if listening in a suitably dark place.

- Entrainment effects can only be achieved when using headphones.

Sound-canceling headphones are best. **Please note that the entraining effect** of binaural beats is lost when played through speakers.

- If you wish to intensify the experience, you may do the following. Please be advised that both of these additional techniques can be dangerous, and should only be pursued with great caution:

- 24 hour fast before listening (drink only water);

- Duct-tape oven mitts over hands before listening (this technique is sometimes applied by the CIA, along with over sensory-deprivation methods, to induce a dissociative state).

If you are sensitive to seizures or have a history of mental illness (particularly disorders with a high rate of dissociative states, such as multiple personality disorder), you probably shouldn't listen to this at all.

Please note that it is possible that you will experience nothing in particular. Different people entrain most easily at different frequencies, and some people show a natural resistance to entrainment. Repeated listenings will actually decrease the amount of time needed to entrain fully, resulting in deeper and more profound experiences.

Good luck.



Thanks for checking this out. If you'd like to talk about your experiences or share your thoughts, please do so by joining us at <u>www.enemieslist.net</u>, or the Facebook group at <u>www.facebook.com/enemieslist</u>.

Thank you, really.

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