The Levels of Human Experience

— P. Lutus — Message Page —

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Introduction | Feelings (δ) | Beliefs (γ) | Facts (β) | Ideas (α) | Conclusion

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Introduction

People can think on four levels — with **feelings, beliefs, facts and ideas.** In a perfect world, people would process experience using all four methods. But many people limit themselves to the lower levels, and therefore cannot join the full human adventure.

Here is a description of the levels:

Level	**Feelings**	**Beliefs**	**Facts**	**Ideas**
Designation	Delta (δ)	Gamma (γ)	Beta (β)	Alpha (α)
Description	Emotion without reason	Values dictated by others	Basic reality testing	Creates new realities
Reasoning Method	None	Reasons only within framework of beliefs	Relies on factual descriptions	Understands that facts grow from ideas, constructs new ideas
Moral Accountability	None	Limited to belief system	Based on superficial information sources	Accepts individual responsibility
Behavioral Adaptability	None	Only as part of belief-group	Crude stimulus-response processing	Flexible, fully adaptable
Perception of Reality	Passive sensory experience	Reality is filtered by beliefs	Progresses by successive approximation	Proactively builds physical and mental environment

Like so many ideas, it is easy to understand the four levels of human experience, *but not understanding them can be risky.* If we don't understand this idea, we might become stuck in the lower levels and never even realize the higher levels exist.

For example, there are many people who adopt fixed beliefs early in life, become intellectually lazy and then insist that beliefs are all one needs in life. Some of them even spend their lives desperately trying to convert other people to their belief system, instead of moving on to the higher levels of experience. This is called "arrested development."

As we advance through the levels of experience, we recapitulate the development of human intelligence itself. At some point our ancestors could only experience emotion, then they possessed beliefs, then they developed true intellect. As individuals, each of us repeats this same development process — but only if we don't get stuck along the way.

We humans can build many wonderful things, but we'll never repeal any of nature's laws. Some people think we have to learn to coexist with nature, but this is wrong — we must learn how to *live in nature.* And nature is a process of continuous change. The reason we are the most successful species on this planet is not because we are stronger or faster than other animals. We succeed because we can adapt to nature's changes very quickly. We do this with intelligence.

Intelligence is surely the most fantastic creation of nature — it is nature's gift to us. We have the ability to perceive *what* goes on around us, and more important, we can learn *why.* We do this with human reason — a process of freeing our minds of old, fixed beliefs and observing reality with an open mind.

Each of us has a choice. We can choose to imitate our ancestors, who could only process reality on the basis of beliefs, or we can ascend to the level of ideas, of reason. If we halt our personal development at the level of beliefs, we cannot contribute to the human adventure — we are condemned to repeat old patterns and then die unnoticed.

If we fail to learn all four levels of human experience, we can still survive for a while on Earth — until nature deals with us as she deals with all inflexible, single-idea species. When looked at in a certain way, the fossil record is the sad story of those creatures that settled on a single idea and hoped nature wouldn't change anything ever again.

The people who ascend to the level of ideas are the same people who will cure diseases, who will colonize Mars, who will lead us into the next chapter of the human adventure. The rest can only be followers.

This is no less than a boot camp for the mind. Please learn the levels of human experience, then *experience all of them.* The human family — your family — needs you, and you must be properly trained. You must know how to think.

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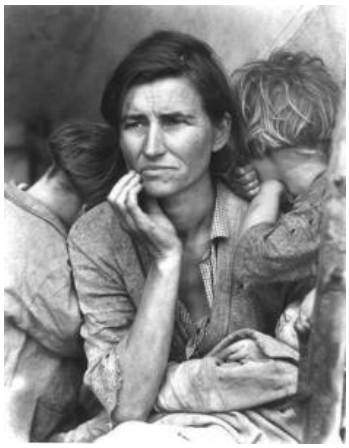
Delta (δ): Feelings

Emotion without reason

Far from being an annoyance best dispensed with, feelings are the foundation on which a person is built. It is safe to say most of our recognizable ancestors basically felt their way through the world, and only recently did nature begin to add some basic thinking ability to our lives. In other words, we are guided much more by feeling than by thought. This is both a blessing and a curse.



"Migrant mother"
California, 1936
Dorothea Lange

The power of feelings cannot be overestimated — they are the engine that drives us, the part of our lives that is hardest to share with others, and the companion of last resort. Every noble cause — and every crazed mob — lies dormant in our feelings.

It is the power of feelings that is most intriguing to religious leaders and politicians. A leader that manipulates passion can sweep reason from his path. This is why the great and terrible events in human history include at least some element of this conflict between feeling and reason.

To repeat a point I have made before, as individuals pass through the four levels from feelings to ideas, in a few years we take the same tentative, halting steps taken by our species over thousands of years. We make the same mistakes, get stuck in the same places.

We can read the histories of people who tried to move from pure feeling to reason, but who got stuck along the way as a persuasive leader enlisted their feelings in service of his cause. *In my opinion, it is better to remain in the realm of feeling than to begin a journey toward reason that stops at belief.* All great tyrants of history have been able to stir the emotions of a few travelers along this intellectual path, stop them in their tracks, and fix their attention on him.

Some may think feeling stands opposed to reason, but nothing could be further from the truth. Many artists, writers and scientists report the most wonderful mixture of intense feeling and creative thought as they shape their personal gift to the store of human knowledge. Nobel Prizewinner Richard Feynman said, "To those who do not know mathematics it is difficult to get across a real feeling as to the beauty, the deepest beauty, of nature ... If you want to learn about nature, to appreciate nature, it is necessary to understand the language that she speaks in." Many scientists say similar things — they see no conflict at all between the highest intellectual levels and the most profound emotions.

Some creative people are able to appeal directly to feeling, without any translation required. Music and poetry are just two examples of arts that possess this property — they appeal directly to emotion, largely bypassing the human brain's "higher" centers. Russian composer Sergei Rachmaninoff wrote a number of pieces of music with just this quality — a direct, rich appeal to human emotion. Rachmaninoff's intensely emotional work "Vocalise" is a good example, one I regularly recommend to students of classsical music.

Click to play "Vocalise"

It is important to realize many works possess emotional content we don't consciously understand, even while we are experiencing it. Much of modern advertising relies on this effect — advertisers do all they can to tell you to buy something *without actually telling you.* How many people, when told they cannot afford not to own brand X, simply say, "Oh, yes I can!" Or, when they hear, "It's on SALE!" can say "Well, I'm not!"

But the most important thing to understand about feeling is that it is an individual experience. If we all listen to a piece of music, or read a poem, each of us may have a different personal experience. Even when we think we are having the same feeling, we can be mistaken. Here is a joke about such a mistake: An optimist and a pessimist decide to have a debate. The optimist jumps up and says, "This is the best of all possible worlds!" The pessimist says, "Yeah!" Both think they've won the debate, so they go home.

This is why feeling alone cannot sustain a human being — it is entirely subjective. This is why feeling can only be the foundation on which a complete structure is built. This is why it is the first of four levels.

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Gamma (γ): Beliefs

Values dictated by others

Among people, belief has many definitions. When explaining the four levels of experience, the most important definition is, "Something accepted as true without evidence."

Belief is the uncritical acceptance that something is true — evidence is not an issue. And that is why belief can be dangerous. If someone can inspire belief without having to supply evidence, that person gains total control.

There are few things more comforting than knowing that something is absolutely true, with no room for doubt. This is why belief is like an addictive drug — it suspends reason as drugs do. And, just as with drugs, people exposed to the feeling of uncritical belief find they need more of that feeling over time.

The first danger with belief lies with the source of beliefs. If a leader can lie and be believed, that person's followers are in great danger. True believers generally do not suddenly wake up and say, "Wait a minute! This makes no sense!" That is because this kind of reasoning ability doesn't spring up all at once — it takes years of training. And True Believers don't spend those years learning how to think.

This is why Jim Jones was able to tell 914 of his followers to drink poison, lie down and die (British Guiana, 1978). This is why David Koresh was able to persuade 75 of his followers to stay inside a burning building and die (Waco, Texas, 1993). This is why about 500 members of the Ugandan "Movement for the Restoration of the 10 Commandments" could agree to a mass suicide and be led into their church, which was then set on fire, killing them all (Uganda, 2000). This is why a relatively small group of Islamic terrorists could kill themselves and thousands of others in New York City and Washington, D.C., raising religion's natural death toll to a new, horrible level.

Jim Jones' Church
Jonestown, British Guiana, 1978
914 dead.

People who have religious beliefs may think this is a bleak view of religion and belief — after all, not everyone who is religious commits suicide or murder, or even thinks about such things. But please think — if you boarded a ship for a cruise, wouldn't you like to know the cruise line's safety record over time? How many of the company's ships get to their destination safely, and how many sink on the way?

In fairness, the same questions *could* be asked about religion — what are the available destinations, and how safe is the ride? Are there other ways to get to the same destination? But no. Although these questions are always asked about ships, they are never asked about religions.

For those of you who have possessed religious beliefs all your life, please read this article very carefully. It is not meant to doubt your faith or your commitment. It is meant only to encourage you to think.

Movement for the Restoration
of the 10 Commandments
Uganda, 2000
500 dead.

Religion relies on human spirituality — an individual experience — as its energy source. Without human spirituality, religion would have no appeal. It is fair to say that religion is the marketing of spirituality. Just like any business, religion packages its product (spirituality), delivers it and receives compensation.

But, as with the rest of retail marketing, it is not enough to have a product and customers. You must make your product unique, set it apart, then encourage consumers to switch from another product to yours.

So religion's promoters are faced with a bunch of potential customers who possess a lot of natural human spirituality — people who might simply stand in the middle of a field, look at the stars, and marvel at their number, the vast distances, and the insignificance of this little planet (just an example — substitute your own favorite spiritual experience). People who might simply feel grateful to be alive, to be able to witness all that beauty. What does religion do to attract those people into a building, get them to join up, put money in a plate? Here is how one might build a religion:

1. **Explain that ordinary experience is not valid,** that standing in a field looking at stars is simply ignorant.
2. **Appropriate people's common-sense behavioral rules** — gleaned from everyday experience and shared human tradition — and give them the mantle of divine wisdom. Claim that morals emanate from religion, not from everyday experience. In other words, take common sense, rename it "commandments."
3. **Invent a prophet,** so there is no excuse left for people to interact with nature directly any more. In other words, instead of acknowledging that spiritual truths are everywhere, claim that there is only one true path to enlightenment/salvation/whatever, and your church has it for sale.
4. **Tell your followers that they are special,** chosen, superior to all those other people who don't "believe." Encourage them to feel separate and then become separate. Explain how the expression "God is love" can be meaningfully translated into "If only you weren't so ignorant, you would join my church and share my beliefs."
5. Instead of allowing your followers to comparison-shop, **tell them it is their duty to convert other people** to the One True Faith. Tell them the most effective way to do this is to always talk but never listen.

David Koresh's Church
Waco, Texas, 1993
79 dead.

This is why religions have been the source of so much suffering in human history — religion isolates people while explaining this is a good thing. Non-believers should not be respected, they should be converted (or killed). As a result, the very best thing that can happen to you in a church is — nothing. The worst? You might be invited to partake of a cyanide-laced sacrament. Even worse, you might do it willingly.

Religion is openly hostile to facts and ideas, the two experience levels above belief. This is because the application of even a few trivial facts undermines religion, and the application of ideas makes religion look downright ridiculous. Therefore, like greedy international corporations, religions have always tried to silence thinkers (their natural competition) throughout history.

Here's one of those stories. Giordano Bruno was a thinker, very far ahead of his time, who anticipated relativity theory in the late 1500s by saying:

"This entire globe, this star, not being subject to death, and dissolution and annihilation being impossible anywhere in Nature, from time to time renews itself by changing and altering all its parts. There is no absolute up or down, as Aristotle taught; no absolute position in space; but the position of a body is relative to that of other bodies. Everywhere there is incessant relative change in position throughout the universe, and the observer is always at the center of things."

This and other writings of Bruno came to the attention of the Church, which realized this way of looking at the universe made the Church seem unimportant (in those days, religious dogma had it that Earth was the only center of the universe, Rome was the center of the earth, and the Church as the center of Rome). So, after unsuccessfully ordering Bruno to recant his ideas, they took him outside and burned him at the stake.

Well, okay, this shows one difference between old-style religion and the new kind. In the old days, religious people mostly killed other people, especially members of other religions. Now (apart from some exceptions like murdering health care workers who happen to be in a clinic that advocates or performs abortions), they usually kill themselves.

But from time to time in the course of human affairs, we witness a public example of religion's essential nature, of religion unmasked. I am speaking of the terrorist attack that brought down the World Trade Center in New York City. This attack is a perfect example of normal religion brought to a new depth. Instead of clucking their tongues at the infidels, the ordinary pastime of the religious, a group of Islamic fanatics killed themselves plus a large number of the sworn enemy of all True Believers — *anyone who doesn't believe exactly what they believe.*

But why should this sort of activity be so surprising? Most religions explain that life on Earth is much less important than what follows — the afterlife. So religious people naturally feel an impulse to move along — if Planet Earth is really just a bus station in Kansas, and the afterlife is the "real thing," well, let's get on with it!

Religious followers, being True Believers, usually don't figure out that all the talk about the afterlife is just a way to get them to tolerate things they shouldn't. In the everyday world, if you want a raise, you ask for it. You boss might say, "Next week, okay?" and you can await the outcome. But if a religious leader says, "Your reward is in the hereafter," what exactly are your options?

Business owners much prefer to hire religious people (unless any originality or creativity is needed in the job, of course) because they are such sheep. This would be less remarkable except that religious writings are filled with references to sheep and flocks — why don't people get it? So, as a result of this, there are forces in society that most definitely support the religious outlook, forces having nothing to do with spirituality (assuming religion has anything to do with spirituality). Businesses want to exploit their labor force, and religion is a perfect training ground for that exploitation.

World Trade Center
September 11, 2001
Approximately 3,000 dead
Copyright © 2001, New York Post

But this is all less important than the biggest problem with belief, which I have saved for last. *Belief keeps people from adapting to change.* Belief is a fixed, rigid system, but nature's requirements constantly change. This guarantees the True Believers will be left behind over time. They can burn a few people at the stake for a while, blow up a few health care clinics, murder a few doctors, but pretty quickly the world moves on and leaves them in the dust.

Here's an example. At one time, it was accepted as immoral not to have a large family. There was a lot of unoccupied land, and people were dying left and right from diseases. Small families were seen as immoral in both the conventional moral sense (agreement between people) and in the religious moral sense (religious dogma).

Now (at the time I write this) there are six billion people and counting. *The human population doubles every forty years.* This means:

1. We are going to have to learn family planning, or
2. A lot of children are going to starve to death.

There is no option three, no "feed all the hungry." That is quite impossible. Every time we double food production capacity, the world's population doubles also. Pretty soon, *every new child born will guarantee that another child will die.* That is nature's math, not mine.

Because of this change since biblical times, in the conventional moral sense (agreement between people), it is now immoral to have a large number of children. Why? Because of human suffering, a cause not even listed among religion's priorities. But in a religious moral sense (religious dogma), it is still moral, even a duty, to have large numbers of children — religion hasn't adjusted to reality. In fact, worldwide and in general, religions will not even allow family planning knowledge or skills to be shared among their followers.

Why? Why would religion allow this tragedy to unfold? For our answer, we need only look at the history of religion. Religion always fights change, to the extent of murdering the messengers of change. And, of course, there's always those business owners, supporters of religion, for whom a system that perpetually produces more exploitable workers and customers is a dream beyond imagining.

In the largest sense, *belief brings evolution to a halt.* It stops the music of the human family, the movement that makes us who we are, that allows us to respond to nature's constantly changing requirements. Yes, belief is comforting to individuals, but it trades comfort for the suicide of an entire species.

To move beyond belief, we must listen to nature's messages (facts, the next experience level) and then we must become nature's partner by shaping our own experience in coöperation with nature (ideas, the highest level).

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Beta (β): Facts

Basic reality testing

Making the transition from beliefs to facts is simple: one just tests beliefs against reality, and those that pass the test are facts. Even though this new standard of evidence appears to build a bridge across a huge chasm, in reality the difference between beliefs and facts is not that great.

You might object, thinking the difference between beliefs and facts is no less than the difference between myth and reality. This is true, but like most truths, there's more to the story.

Here's an example. Bob, a 17-year-old newly licensed driver, believes he can stop the family car on a dime. Several months into his career as a driver, he discovers his belief is false — he skids, hits something, dents the car and receives a lecture about stopping distances from a policeman.

The policeman tells Bob that, at 40 miles per hour, after Bob reacts and steps on the brake, the car requires 80 feet to come to a stop on dry pavement. Bob manages to notice that his car's stopping distance in feet was twice the numerical value of its speed in miles per hour. Now Bob has moved from belief to fact. *What he doesn't know is that his new fact is nearly always wrong.*

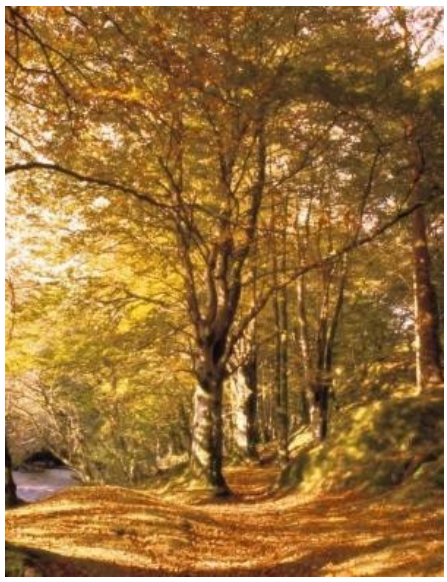
The very next week he invites all his friends to go for a ride, and, armed with his impressive new fact, he tell them he can safely go 80 miles per hour, so long as he allows 160 feet to stop his car. Boys being boys, they decide to test this assumption — and crash through a fence, destroying the family car and releasing 500 angry chickens.

The reason? Bob has falsely assumed that knowing a fact is a huge improvement over knowing nothing at all. *But knowing a simple fact is only marginally better than knowing nothing.* Bob has mistakenly assumed, because a stopping distance of 80 feet is required at 40 miles per hour (not counting reaction time), therefore 160 feet must be required at 80 miles per hour.

Bob has just fallen into the most common misconception in contemporary American life — that knowing facts makes you smart. American education is built on this foundation, and this is why American students know next to nothing about reality.

In truth, *all facts spring from ideas,* and if you do not understand the idea behind the fact, you have not learned *anything.* Bob absorbed the fact that his car could stop in 80 feet if he was traveling 40 miles per hour (neglecting reaction time), but the accident was caused by what he didn't learn — the idea behind the fact. Even though the fact was true, Bob and his friends could have been killed by it!

The underlying idea, by the way, is that *moving objects carry an energy that is proportional to their mass multiplied by the square of their speed* (this is the physics definition of kinetic energy). Because of this underlying idea, Bob's car needed 320, not 160, feet to stop at 80 miles per hour, not counting his time to react.



Instead of learning this idea, Bob learned a fact that can only be applied to a car, on dry level pavement, going 40 miles per hour, after he has reacted and pressed the brake pedal. The usefulness of this fact is arbitrarily close to zero. *By contrast, the kinetic energy idea can be applied to any object in the universe, going nearly any speed.*

Schools that teach only facts train people for a lifetime of intellectual poverty and dependence. The true riches in education are not facts, but ideas. *Facts are like leaves on a tree — the tree is the idea that produces the foliage of facts.* If a leaf falls from a tree, it quickly dies. In the same way, if a fact is separated from the idea that created it, it loses all meaning. Just ask Bob.

It is not an exaggeration to say *we live in a country of fact consumers* — people who know how to acquire facts, but cannot assimilate the ideas that created the facts. As a result, students know there are three branches of government (a fact), but cannot explain *why* (an idea).

Another example — people know it is hot in the summer, but most don't know *why.* Astonished? In a recent survey, some Harvard graduates were asked this very question — why is it hotter in summer than in winter? Most believed it was because the Earth is closer to the sun in the summertime (wrong: it's the Earth's axial tilt that creates the seasons).

A reliance on facts is incredibly inefficient compared to actually becoming educated, and it is hard to understand why it is thought more efficient to fill students' brains with facts instead of ideas.

Well, I can think of one reason fact-based education is so popular — people who rely on facts cannot generally assemble facts into ideas, or discover those facts that contradict each other, so in general they are more docile, easier to rule.

What does it mean to "assemble facts into ideas?" Well, let's say your entire world is a tropical beach. First, you build your grass shack right by the water. But by that afternoon (grass shacks don't take that long to build), the water has crept up the shore and washed your house away.

So the next day, you watch the entire day to see how far up the beach the water will go. You put a stick at the high water mark, and then you build your house again. But seven days later, the water climbs up the beach much higher than before, and washes your house away again.

Over years of time, you notice the changes in the tides (facts), and you gradually notice the tide is highest when the moon is full or new (correlation: a kind of fact). Then one night you have a dream — the moon is actually a big planet like Earth, floating in the sky, and as it passes overhead, it pulls on the water, making the water crawl up the beach. Then you notice when the sun and the moon are aligned, the water is pulled more than other times — the sun and moon are like partners, sometimes pulling in concert, sometimes puling in different directions. You have assembled your observations (facts) into an idea.

At this point you have a choice. You can simply share your knowledge with the tribe, tell the young people to watch the moon: when it is full or new, it's a good time to dig for clams (a fact). And you can explain why you think this is true (the idea), so the young people can pass the learning on. On the other hand, you could appoint yourself High Priest and dispense facts to the uneducated — "I will tell you when to dig for clams. I can do this because God tells me his secrets." The difference between these two choices is no less than the difference between one who actually loves his tribe, and one who is a natural parasite.

But remember about this story that no one can appoint himself High Priest unless the people in the tribe are too intellectually lazy to observe the world for themselves, to dare a peek beneath the outer layer of reality. *Every story about a tyrant, about a cult leader, is actually two tragic stories — one about the leader, one about the ignorant followers.*

Please remember the beach story — if you are only being taught facts, you may be in the presence of a preacher instead of a teacher. But don't jump to conclusions — you need to ask to be taught the underlying ideas, to be shown the tree hidden behind the leaves. Want to find out which is true (preacher or teacher)? Simple — ask your teachers *why.* If they won't tell you, change schools.

In summary, *facts are only the leaves in an idea tree. Without the tree, the leaves die.* Facts can never be more than tiny parts of a whole. A person who only has access to facts is dangerous to himself and others, and is scarcely better off than someone stuck in belief.

Dependence on facts alone is just a different version of dependence on beliefs. The faces change — teachers instead of preachers — but the reality is the same: you have no personal power. Someone else interprets reality for you. You're still stuck. For this reason, *the fact level can only be a steppingstone to the level of ideas.*

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Alpha (α): Ideas

Creates new realities

You may already have guessed that the term "ideas," as applied to this level, is no more than a handy label. The other names — feeling, belief, fact — are not very ambiguous in their meaning, but describing the entire human creative endeavor as "ideas" is only a convenient word, not a full description.

This is true because the idea level encompasses all those disciplines that shape the human world. It is the endeavor to understand our relationship with nature and build the delicate partnership between ourselves and nature.

It is not possible to overemphasize the difference between the idea level and the levels below it — there is little basis for comparison. Unlike the true believers discussed earlier, and those in the thrall of facts, alphas (people at the idea level) actually explore the world as they find it and learn how to maximize their own effectiveness in creating new knowledge. Alphas do this by minimizing the occasional negative effects of the lower levels in their own lives.

For example, a doctor who fainted at the sight of blood would not be very effective. For this reason, doctors learn to control their own feelings to some extent, replacing one feeling (shock and fear at the sight of blood) with another (a passion for the practice of medicine).

In a similar way, to produce useful results scientists must avoid their own emotional biases, fixed beliefs and an excessive reliance on facts. The discipline of science contains procedures to minimize the effect of these subjective forces, and the structure of the scientific method reveals our knowledge of our own vulnerabilities.

The safeguards built into science are meant to avoid the intellectual traps described in the previous sections, and instead focus our attention on — not a subjective, distorted view of nature — but nature herself.

Here's an example. In 1952, 58,000 cases of poliomyelitis, a virus-borne disease, occurred in the US. Polio is a disease that paralyzes those it doesn't kill outright. This is the story of how two very capable individuals — people operating at different levels — dealt with this disease.

Sister Kenny

Sister Kenny

Sister Kenny, a health practitioner originally from Australia, treated many cases of polio during her long, very successful career. She developed clinical methods for treating polio's paralytic symptoms that minimized the loss of function, the paralysis, that so often accompanied the disease.

Sister Kenny became famous for her novel therapies, therapies that confronted the more traditional (and largely ineffective) methods practiced by others. Many people owe their ability to function, even their lives, to the methods she pioneered.

Jonas Salk

In 1955, using the methods of science, Jonas Salk developed a vaccine that prevented polio. His vaccine, and to some extent the later live-virus Sabin vaccine, virtually wiped out polio. In the US, polio cases went from 58,000 in 1952 to less than 10 in 1961.

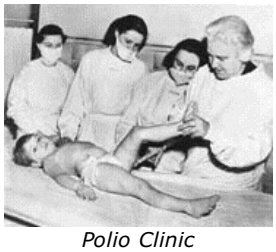
Salk knew that polio was caused by a virus, and that, if the body's own defenses could be prepared in advance using a dead copy of the virus, the real virus would not have a chance. The first virus vaccine was developed by Jenner in the early 1800s, used against smallpox. Jenner discovered that cowpox, a closely related virus that is harmless to humans, would prevent smallpox if people were inoculated with it. Salk built on this idea, using more modern methods.

Jonas Salk

The methods developed by Jenner, Salk and others are now the standard treatment for viral diseases. This treatment is possible because we know *why* viral diseases come about. We understand the life cycle of viruses, and we know how to control viral infection for many diseases. Today, as a result of this knowledge, widespread polio epidemics are a historical footnote, and smallpox has been entirely eradicated — wiped out completely by 1980.

Discussion

I should mention that the "sister" in Sister Kenny's name is not a religious title, it is an honorific that she adopted while she was a member of an organization of nurses — she was not a nun. So this story isn't really a medical version of "Inherit the Wind" (a play that dramatizes the trial of a schoolteacher who taught evolution), a classic conflict between religion and science — not at all. Sister Kenny was quite a character, very effective, patiently tolerating many stupid opponents over the years. Her personal motto was "It's better to be a lion for a day than a sheep all your life."



Polio Clinic

Nevertheless, the polio story starkly contrasts the idea-based and fact-based approaches. Sister Kenny treated the symptoms of polio. Over time, because of direct clinical experience, she learned increasingly effective treatments for polio's symptoms. But if her methods were our total understanding of the disease, we would have Sister Kenny clinics in every neighborhood in the country and we would expect to see very many polio-disabled people. If the trend set in 1952 had continued unabated, today we would see as many new polio cases every year as the total US death toll for the entire Vietnam War.

But this is not what happened. Jonas Salk developed a cure for polio. He used the methods of science and the fledgling discipline of microbiology to create an effective treatment for the disease, not just the symptoms.

Here is a comparison of the two approaches:

Sister Kenny's approach evolved over time, was based on a gradual accumulation of experience, and was *evolutionary.* It was based on facts.	Jonas Salk's approach attacked the root problem, it did so with imagination and vision, and was *revolutionary.* It was based on ideas.
Sister Kenny's method was *reactive* — it was developed as a response, a practical solution to the problems caused by polio's symptoms.	Jonas Salk's method was *proactive* — it looked entirely beyond the immediate issue of the victims of polio, and found a solution to the disease itself.

Science

Basically, the polio story is a story about science. Although it is not the only one, science is a good example of the idea level of human experience. Science is also misunderstood by many people — some think it is a vast collection of facts, or a rigid search for truth using telescopes and computers.

Science actually bears little resemblance to the popular view. For example, finding the truth is not the goal in science — in fact, truth is not even a proper word in scientific discussions.

Science relies on evidence — observations — to support or falsify theories about reality. Sometimes a theory is shaped before any evidence is collected, sometimes the other way around, but theory and evidence are both important. A theory without any evidence may be interesting, but it is not science.

Science is an open, basically anarchistic, system. Ideas have the highest priority, and those with supporting evidence become the new science. Authority means precisely nothing. This is how a lowly patent clerk, working in his spare time in Berne, Switzerland, could overthrow all the physical theory of his time with a few short articles (Einstein).

And scientific theories are never finally declared "true." This is why, in science, truth is not an appropriate word, along with common brainless expressions like "a proven scientific fact." A scientific theory can be disproven, but it can never be declared proven. There is always the chance that new evidence will appear to disprove a theory, or a new, better theory may come along that explains more things, predicts more observations, and retires the prevailing theory.

This statement about science, that theories are never declared proven, never become laws, comes about because the core of science is not the theories or the evidence, but the *process.* Science doubts everything, re-examines everything, tries to avoid hidden assumptions. It tries to find alternative explanations, tries to create new theories that describe more, or are more "efficient" — meaning theories that use fewer rules to explain more of reality.

Efficiency

The car stopping-distance example in the "facts" section of this article is a trivial example of an "efficient" explanation (kinetic energy) compared to an inefficient one (a list of facts). Without the kinetic-energy explanation, people would have to carry around a list of stopping distances — imagine it! In fact, guess what? Americans do just that. In this country, young drivers are handed a list of stopping distances without a word of explanation.

But when this happens, students are not surprised in the least — most of American education consists of handing out of lists of facts. This is just another list, another fact to add to the collection. By the way, here's the list:

Speed MPH	Reaction Distance	Braking Distance	Total Distance
20	44	20	64
40	88	80	168
60	132	180	312
80	176	320	496
100	220	500	720
120	264	720	984

This list gives distances in feet for automobile speeds in miles per hour. The reaction time is assumed to be 1.5 seconds, a conservative assumption now that car radios are standard equipment. The results apply to dry, level asphalt.

It is important to realize that, without the key idea (kinetic energy), creating this list is like tearing a leaf from a tree — it

promptly dies. The leaf is still there, it has marks on it, but it is quite dead. *American education is based on a teacher handing out leaves ripped from the knowledge tree, which the teacher briefly glimpsed, once.*

Can someone please tell me how the above list constitutes an improvement over:

(1) Braking distance (feet): bd = (s^2) / 20

Where s = the car's speed in miles per hour. Then

(2) Reaction distance (feet): rd = t * s * 22/15

Where t = reaction time, and s = the car's speed in miles per hour.

Combining the two equations:

Total stopping distance (feet): d = (s^2) / 20 + s * t * 22/ 15

Many educated people in the Western world will say "Indeed! Why would someone want the list when the equation is available?" But not in America — for most Americans, mathematics is not learned beyond some simple exercises like memorizing multiplication tables, learning long division and, for some students, a little algebra later on. But after school lets out, in everyday American life, people don't use mathematics. That's for scientists.

People who have been properly educated will glance at this equation, see the "s^2" term, and say "Whoa! Stopping distance increases roughly as the square of speed!" Guess how many Americans know this about their beloved cars? The same number who know people don't speak Latin in Latin America — almost none.

I wonder — how many American teenagers have been handed the stopping-distance list without comment, only to die later because they never learned the idea that created the list?

Efficiency is a good general term to describe the idea level. People who create new realities have more than imagination going for them — they also know how to be efficient. And know this — for each idea, there is an optimally efficient expression, as shown above.

The difference in size and processing time between a set of dependent facts, and the idea that creates the facts, is why the idea is more efficient. And in one of the great ironies of intellect, *the efficient expression, the idea, often reveals meanings the inefficient one cannot.*

If you have only the car stopping-distance list, you are not likely to realize it contains within it the kinetic-energy idea. But if you ascend to the level of the idea, you might use it to compute the size and speed of the asteroid thought to have killed off the dinosaurs, or anything else that has mass and moves. Your mind needs much less storage space for the kinetic-energy idea than for the list, but the idea is much more powerful.

This is how ideas work. This is how you work, at the alpha level.

The Levels of Human Experience

— P. Lutus — Message Page —

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Conclusion

The alpha level, the level of ideas, is the primary source of human creativity. It works in concert with the other levels, but it is the key to producing new knowledge. The power of the alpha level cannot be overestimated — it allows people to build different realities, instead of merely accepting whatever reality exists.

To emphasize this again, each individual who struggles through the levels from delta to alpha, from feelings to ideas, is repeating the events in the evolution of the human race itself. We've evolved into creatures who can feel passion, and who can reason at the highest levels, all in the same moment. We can sit under the stars in simple wonder, or we can picture the inner workings of a star. But this is only true if we accept our destiny — if as individuals we learn all the levels of human experience.

Sunset on Mars
Mars Pathfinder Mission, sol 24

George Bernard Shaw said: *"The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore, all progress depends on the unreasonable man."* If we change Mr. Shaw's dated language to "people" instead of "men," this describes the alpha level perfectly — people who are unreasonable, but who know how to reason. Instead of treating diseases, these people find cures. Instead of complaining about the world, they redesign it. Instead of gazing at the stars, they build spacecraft to visit them.

We must heed the central lessons of paleontology and evolution: If we fail to accept the challenge of ideas, if we decide fixed beliefs are good enough, nature will remove us from this planet. Nature changes, therefore we must change. We can struggle against change, in the process maybe destroy ourselves and this planet, or we can learn nature's ways, accept her rules, form an active partnership with her.

The levels of experience are your moral property. No one can take them away from you — except you. Most people wonder what the future will hand them, but people at the alpha level hold the future in their hands.