VITAL Controversy

Why Educated People Are Turning to Natural Healing

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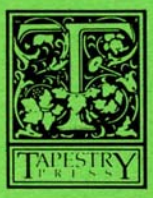

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A study published in the Annals of Internal Medicine *showed that people who prefer natural healing tend to be more educated, on the average, than people who prefer medicine alone. This seems surprising, since medical experts call natural healing "unscientific." As it turns out, however, natural healing, in some ways, is more scientific than medicine. Here's why...*

History of a Balancing Swing

The healing philosophy that became modern medicine began nearly 400 years ago. That's when humanity's leading thinkers began to reject an ancient idea called "vitalism." Curiously, the science these thinkers founded is turning again to vitalism, although in a very different form. This return to vitalism represents a balancing swing of scientific and public opinion away from medicine and toward natural healing. Let's see how this intriguing turn of events has come about.

The first of these anti-vitalist thinkers was Francis Bacon, a British philosopher who lived between 1561 and 1626. Vitalism was then

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associated with the occult. Illnesses were caused by demons, and cures were acts of magic. Bacon rejected spiritual and magical forces that he couldn't see. *We must question what we can't see*, he said, *and test our ideas with experiments*. One science historian wrote that Bacon "bridges the passing of vitalism into mechanism," mechanism being the philosophy behind modern science.

The next great thinker to pick up on Bacon's ideas was probably the Frenchman Rene Descartes. Descartes argued that the "animal body" follows the same physical laws as the rest of the universe. And he argued that rational people must eliminate all doubts before they believe, which

they can do only by observing and understanding physical facts. Though he believed in a mind separate from the body, he more or less did away with the difference between living and non-living things. *Life must be explained by natural physical and chemical laws*, he said.

By 1660, these ideas had gained such force that they led to the founding of the *Royal Society of London for the Promotion of Natural Knowledge*. The Royal Society's goals, according to Robert Hooke, were "to improve the knowledge of natural things and all useful Arts, Manufactures, Mechanical practices, Engynes and Inventions by Experiments — (not meddling with Divinity, Metaphysics, Moralls, Politicks, Grammar, Rhetorick, or Logick)." Hooke's jab at Divinity and Metaphysics meant, *No Vitalism Allowed!*

To avoid vitalism, the Society's founding scientists resurrected a very old Greek philosophy called "atomism," which held that all matter consists of tiny particles called atoms that (a) may not be destroyed, and (b) are always in motion. Atoms obey physical laws, and so, therefore, does everything they make up, including the human body.

The Royal Society's most famous member joined in 1671. He was Isaac Newton, inventor of calculus, and discoverer of Newton's laws of Motion. Newton's first law says, for instance, that objects don't change speed or direction unless some force acts on them. His third law (probably the most famous) says, in essence, that for every action there is an equal and opposite reaction. The motions of stars and planets confirmed Newton's laws, and it didn't take people long to realize that the apparent truth of those laws meant everything that happens must be *determined*. If scientists knew the position, speed, and direction of every particle, they could figure out the entire history of the universe from past to future. This idea became known as "determinism." It seemed to show that scientists could learn to predict and control *anything*, and people began to see science as mankind's salvation from poverty, disease, war, and every other social, mental, and physical ill.

Newton's ideas also seemed to strike a death knell for vitalism. A 19th-century German physiologist named Emil Du Bois-Reymond put it like this: "A deficiency in the conception of vitalism is first of all very much on the surface. We have seen that all motion . . . [is] divisible into straightlined movements and forces between the presumed particles of matter. This has not been taken into consideration at all with that idea."

A Determination to Evict Vitalism

It was one thing to say that life is nothing more than physical forces. It was quite another to *explain* those forces, and this is what scientists set about to do. They naturally relied on the explanations of their day, which were largely chemical and mechanical. Some scientists suggested that interacting chemicals in the body exploded like gunpowder. Others considered more likely a bubbly sort of energy like fermentation. To explain how such forces might move muscles, they proposed systems of shunts and valves, imagining us to be very much like their machines.

But their science also required that they test their explanations, which they did in rather ingenious ways. An Italian scientist named Borelli concluded that explosions and fermentations, being gaseous sorts of forces, must show themselves underwater as bubbles. So he held an animal underwater, and as it struggled to survive, he slit its muscles with a knife and, in what must have been one of science's most difficult observational feats, saw no bubbles along the slit. The forces, he concluded weren't explosions or fermentations, so scientists struggled on to find other physical principles to account for life.

The breakthrough came in 1786 when Luigi Galvani discovered "animal electricity." Galvani touched a nerve in a severed frog's leg with a pair of scissors during an electrical storm, and the leg jumped. Later, he saw the same jumping when he touched a frog's leg with a scalpel while an electrical machine was activated. He became convinced the force that moves the body is electrical.

At first this seemed a turn back to vitalism. Electricity and magnetism had long been considered metaphysical properties belonging to the occult. Galvani even called his animal electricity "a heretofore neglected innate, vital force." Other people began equating electricity and Life itself. But scientists learned to explain electricity as a purely physical force, one that could be generated within the body by chemical means, and all need for vitalistic explanations seemed to disappear.

The move to oust vitalism now began in earnest. A Russian physiologist named Elie Cyon spoke of his "determination to evict vitalism from physiology." Emil Du Bois Reymond, the German physiologist I mentioned earlier, wrote of this goal he held with a colleague named Ernst Wilhelm von Brucke: "Brucke and I, we have both sworn to expose the truth, namely that there are no other forces operating in the organism except those physico-chemical ones." As a measure of their success, consider that Brucke died in 1892, while Edouard Pfluger, "the last eminent physiologist to retain a trace of vitalism," died barely eighteen years later, in 1910. One science historian describes Pfluger's death as "the release of natural science from [vitalism's] bonds."

The Victim Refuses to Die

Yet the release from vitalism hasn't been as clean as zealous atomists would like to believe. Throughout this entire history, discoveries with vitalistic overtones have consistently emerged.

Osmosis, for example, was a surprise. In the mid-1700's, a French scientist named Nollet put wine in a small bottle and sealed it with an intestinal membrane. He stuck the bottle inside a tub of water, and when he took it out later, a rounded dome of membrane, filled with wine, was bulging high above the level of the bottle's opening. He poked the membrane with a pin, and wine squirted a foot high. He concluded that water had moved through the membrane into the bottle — with a considerable force, judging from the bulging membrane and the foot-high squirt.

He thought a temperature difference between wine and water must have done it. To test his idea, he reversed the liquids. This time he put water in the little bottle, and immersed the bottle in a tub of wine. Now the membrane got sucked *into* the bottle. Apparently, whenever water and wine both touched a membrane, the water always shifted through the membrane to dilute the wine.

This shifting didn't match Newton's Laws of Motion. By Newton's laws, particles change directions only when things hit them, and each particle moves on its own. But Nollet saw molecules move as a group, with no force seeming to move them, and nobody could explain why until scientists came up with a completely new set of principles called "thermodynamics."

The challenge thermodynamics poses for atomism is that it says natural systems tend *irreversibly* to move from order to disorder, but living systems do just the opposite. And in the body, you can find many instances of particles moving where thermodynamic principles say they shouldn't move. So scientists had to start wondering again, what force creates order when scientific laws demand disorder? Is it a "vitalist" force?

Another chink in the armor of atomism appeared in the 1860's when the great German physiologist Hermann von Helmholtz discovered that "timbre" (pronounced *tam-ber*) comes from complex, multi-component sound waves. Timbre makes a trombone sound like a trombone, or a clarinet like a clarinet. It's the distinctive quality of a sound, whether from a musical instrument or a bellowing frog. Timbre comes from the intermixing of many different vibrations, yet it exists in none of them. In fact, it has no physical existence at all, yet it clearly exists as a mental event originating within our physical nervous system. This didn't bother von Helmholtz, who remained a committed anti-vitalist, but it clearly points to the existence of phenomena that neither Newtonian physics nor thermodynamics explains very well.

Roughly the same time, a third threat to atomism came about when the great French

physiologist Claude Bernard developed the concept of the *milieu intérieur*, or "internal environment." He showed how the body, in the face of external threat, adjusts itself to keep its internal environment constant. "All the phenomena of a living body," he wrote, "are in such reciprocal harmony, one with another, that it seems impossible to separate any part without at once disturbing the whole organism." These ideas are clearly "holistic" (another name for the natural healing principle), yet Bernard, like Helmholtz, remained, to his death, a committed atomist. Biology is deterministic, he proclaimed, completely founded on physical and chemical laws, and no "vital force" lies beneath the purely physical phenomenon we call "life."

From Reflex Arcs to Oscillators

Perhaps the greatest threat to atomism comes from the very field that first sealed its apparent victory — the study of the body's electricity. When scientists first studied the operation of the nervous system, they concluded that its basic unit was the "reflex arc." We see an example of a reflex arc when the doctor strikes our knee and our leg jumps. The usual conception of a reflex arc is that a nervous impulse enters us, gets transformed somehow, and gets sent back out again as an automatic response. When Pavlov made his dogs salivate in response to a bell, he was tinkering with a reflex arc. He *altered* the reflex arc in a form of learning that he called "conditioning." So the idea developed that we are made up of reflex arcs. Learning modifies them, but that's basically all that we are. From this conception came the psychological "behaviorists," including John Watson, who claimed he could condition a child to become anything, from beggar to president, regardless of what the child had "inside."

The reflex arc is neatly scientific, perfectly within the atomist tradition, and *contrary* to vitalism. No energy or "force" exists *within*. If no outside force strikes the reflex arc, nothing happens: the reflex arc sits still. And when an outside

force *does* strike the reflex arc, it reacts in an entirely predictable way. The body's actions are *determined* by what strikes it from outside.

There's an obvious parallel here to medicine. According to medical philosophy, the drug enters the body, and the body reacts. It's all perfectly predictable, perfectly determined, as simple as a reflex arc.

But reflex arcs, it turns out, aren't the basic units of the nervous system. The basic units of the nervous system are *oscillators*. An "oscillator" swings back and forth, or pulses in wave-like cycles. The heart, for example, is an oscillator, and we have thousands more of them, though none so apparent as the heart, with the possible exception of our breathing. Every cell is an electrical oscillator. Our chemical levels go up and down in an oscillating fashion. Even atoms are oscillators, which is why we can have atomic clocks. We have oscillators that operate in microseconds, others that operate in seconds, still others whose cycles are minutes, hours, days, months (as women well know), and even years.

The important point about oscillators is that *they don't stand still*, at least not until we die. A reflex arc, without external stimulation, stands still, but not an oscillator. An oscillator has its own built-in source of energy. It is a force — possibly a *vital* force — that resides within the body itself.

Medical scientists too often forget this point. For example, a medical researcher named Edmund Crelin once tried to test the chiropractic

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theory that an out-of-adjustment spine (a "subluxation") could interfere with nerve flow. Using cadavers, he concluded he couldn't produce subluxations serious enough to impede nerve flow without severing the nerve. Chiropractors

naturally disagreed. Making light of their disagreement, William T. Jarvis, Ph.D., president of the National Council Against Health Fraud, Inc., wrote the following:

> Instead of the scientific response of attempting to replicate his research, the ACA [American Chiropractic Association] wrote a tirade of verbiage, concluding that his work was invalid because it was done on cadavers. In fact, Crelin states [that] the absence of a reflex response in a dead body should make subluxations easier to produce. Faced with this evidence, a true-believing chiropractor once remarked to me that the reason Crelin had failed to demonstrate the chiropractic hypothesis was that he worked with cadavers in which the innate Life Force was no longer present!

Both Crelin and Jarvis assume a cadaver differs in no significant way from a living body, since both are simply collections of molecules. However, while a living body may not have an innate Life Force by Jarvis's definition, it does pulsate with thousands of internally driven oscillators, and the presence of these oscillators truly does make a difference between life and death.

Required: Absolute Freedom

In fact, the difference is likely to be profound. This is because oscillators *entrain*. This "entraining" of oscillators is a very large and important part of what keeps the body harmonious and whole.

Imagine an oscillator, pumping away. Another oscillator approaches it until each begins to affect the other, meaning that their energies interact. Where the energy of the two systems clashes, it dissipates, leaving only the harmonious energy, so that the two oscillators, before long, begin to beat in rhythm.

You can see the same thing in a store that sells grandfather clocks. Visit one sometime, and you'll probably see that all the pendulums are swinging in rhythm. Their energies have interacted, dissipation has cancelled the disturbances, and their cycles have locked together. This is "entrainment." It's also called "mode locking," and it operates in all systems made of oscillating cycles. It's why we always see just one side of the moon, for example: the two oscillators that govern it — its rotations on its axis and its orbit around the earth — lock in a one-to-one ratio. Entrainment of oscillators is a basic physical principle.

Obeying this principle, therefore, two living cells, oscillating side by side, entrain. Like the grandfather clocks, their cycles lock together. Some people believe that cancer begins when oscillations become disturbed so that cells *dis*-entrain, or become somehow out of sync. I mentioned earlier that the body consists of oscillators at many levels, and this entrainment, or locking, of oscillators across all those levels helps keep the body healthy.

Entrainment obviously follows physical laws, the most important of which is probably this: to entrain, oscillators must be *absolutely free*. The slightest outside energy disturbs an oscillator, and disturbance in one oscillator spreads to others. Pressure against a nerve may not disturb the typical measures of electrical force like frequency and amplitude, but it most certainly *will* disturb the nerve's oscillating. And if a nerve's oscillating gets disturbed, so does its entrainment with other oscillators. *But only in a living body*. Cadavers don't have oscillators. So the idea that you can test the complete effect of subluxations in a cadaver is simple nonsense.

Keeping Balance

The problem with cadavers is they don't adapt. In fact, that's the main difference between living things and dead things: living things adapt; dead things don't. Adapting means compensating, or keeping balance. If a gust of wind blows a tightrope walker to the right, he leans to the left to compensate. That's adapting. The body stays alive by doing more or less the same thing. It "leans into the wind," so to speak, meaning that it compen-

sates for whatever might throw it off balance.

For example, suppose you head for north Alaska to help rescue some trapped whales. From the moment you arrive, you start changing inside to compensate for the cold. The energy-producing parts of your cells — the mitochondria — increase in size and number. Some of your fatty tissue changes from the kind that burns when you exercise to the kind that burns to produce heat. Your nerve fibers get bigger, and so on.

Paradoxically, you change at one level so that you *won't* change at another. Your body's been keeping your temperature at 98.6 degrees when challenged only by the mild climate of your home town. Those frigid Alaskan temperatures now threaten your body because if they lower your inside temperature, you'll die. So your body adjusts itself to keep your inside temperature where it's supposed to be. Your temperature doesn't shift, but the processes that maintain it do.

This steadying principle is called "homeostasis," and it's caused, in part, by those oscillators we've been talking about. Outside energy disturbs the body's oscillators; inside energy — the energy of the oscillators themselves — re-entrains them, or locks them into harmony again, although their levels may be different now because the circumstances they interact with are different.

Adapting to Unwholesomeness

But sometimes the harmony isn't as harmonious as it ought to be. For example, suppose you're living in clean air and you suddenly get exposed to some strongly toxic pollutant. Without help, your homeostatic mechanisms will get overwhelmed and you'll probably die. However, if you're exposed to the pollutant gradually — just a tiny bit at a time — you build resistance. After a while, you can be in air as polluted as in the first instance, only this time you don't die because you've adapted to it. Your homeostatic processes have managed to keep you steady.

But the steadiness isn't the same as it was in the clean air. Your oscillators and the processes they

govern have settled into new, compensating levels. You don't have the energy you used to, and you probably don't feel very good. If you were to measure your body chemicals, you'd probably find many of them too high or too low. And after a while, you'd very likely end up with arthritis, diabetes, cancer, or some other chronic illness.

Now, your homeostatic processes are still working. In fact, they're stronger than they used to be *for the current circumstance* in the sense that they're coping now with a threat that would have killed you before. But in another sense, you're weaker. It's costing you to fight the pollutants, and the adjustments your body's been forced to make to them aren't ideal for all-around health.

This shows the difference between acute illnesses and chronic illnesses. Acute illnesses exist when something disturbs the body, and the body struggles to keep itself steady. Here our homeostatic processes need support because they'll be overwhelmed without it. This is what happens during a severe infection, for example, where the immune system gets overrun. Or during a severe allergic reaction, where homeostasis literally gets turned on its ear and transformed into a vicious cycle that causes blood pressure to plummet.

In contrast, chronic conditions exist when the body adapts to unwholesome surroundings. Arthritis is an adaptation. Cancer is an adaptation. Heart disease is an adaptation. In that sense, these diseases are normal responses. What's abnormal is the unhealthy context that provokes them.

Acute vs. Chronic: The Difference

The difference between acute and chronic illnesses, then, is this: our homeostatic processes *fight* an acute condition; they *maintain* a chronic condition. The chronic condition is *an adaptation*, which is to say that homeostasis created it.

This is why drugs work for acute conditions, but *don't* work — and never will work — for chronic conditions. In acute conditions, the body's homeostasis — its *steadiness* — is threatened. Meeting the threat with a drug

relieves our homeostatic processes, and gives them a chance to regroup. When drugs wipe out an acute infection, or arrest the vicious cycle of

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anaphylactic shock, they protect our homeostatic processes, which were in danger of being overwhelmed by the acute threat. Here the drug and our homeostatic processes oppose the same threat, and work in the same direction.

But chronic conditions are different. Our homeostasis doesn't oppose chronic conditions; it *maintains* them. So when a doctor attacks a chronic condition with a drug, he *opposes* our homeostatic processes, and the body responds as it would to any threat: it compensates.

We see this easily when we again picture the body as a system of interacting oscillators. Our body chemicals — the ones doctors check when they do blood tests and urinanalyses — operate within that system. They oscillate. They go up and down in rhythmic cycles. And their oscillations are entrained — *locked* — within the oscillating systems of the body as a whole. Drugs *interact* with these oscillating chemicals, and, based on *how* they interact, fall into two main categories. *Mimicking* drugs duplicate the chemicals; *blocking* drugs inhibit the chemicals, or neutralize, them. With these two classes of drugs, doctors seek to raise our chemical levels, or to lower them.

Drug Therapy: Jostling the Oscillators

With those thoughts in mind, imagine now a smoothly changing chemical cycle tracing a beautiful, oscillating, up-and-down curve. It's steady and stable for being firmly locked within

the entire system of oscillators that make up the body. Suddenly, here comes an injection — the doctor's drug. This is an intrusion of outside energy, like a hand jostling a pendulum. Jostling entrained oscillators can only *disentrain* them, and that's what happens in the body when we take drugs. By the most basic laws of science, drugs enter the body as a *disturbance*.

But the disturbance doesn't last. The body's system of interacting oscillators is so strong that disturbed oscillators usually re-entrain rather quickly. Undisturbed oscillators draw the disturbed oscillators into harmony. This is *homeostasis*, and it refers to the body's ability to steady itself following a challenge. Oscillators are one aspect of the mechanisms that make it happen.

When we take drugs repeatedly, however, those same homeostatic mechanisms more or less reset the oscillators at new, compensating levels, just as they reset oscillators in response to any chronic challenge — moving to a higher altitude, for example, or starting an exercise program. When this resetting happens in response to drugs, we call it *drug resistance*, and it literally *reverses* the intended effect of the drug.

To understand this reversing, consider this question: Did steroid drugs make Ben Johnson more masculine or more feminine? Ben Johnson, you'll recall, is the Canadian athlete who won the Olympic gold medal in the 100 meter dash, only to lose it after testing positive for steroids.

If you saw Ben Johnson race, you'll probably say steroids made him more masculine. He has, after all, an immensely impressive body. But only on the outside. On the inside, his body compensates for the steroid drugs by producing less testosterone, which makes him more feminine. The external change is artificial, sustained only by the drug. The internal change is the drug's *physiological* effect. It is the body's adjustment to the athlete's pharmacological meddling. Physiologically, steroid drugs make men more feminine.

This same reversing principle applies to all chronic uses of drugs. Chemotherapy tends to

make cancer worse. High blood pressure drugs tend, over time, to raise blood pressure. Clot-busting drugs provoke more clotting. And so on.

Natural Healing: A Constant Principle

For chronic illness, therefore, we use *natural healing*, not medicine. Natural healing means discovering and applying principles that strengthen these adaptive powers we've been talking about. We eat wholesome foods. We think optimistic, harmonious thoughts. We act wisely. We challenge our body with exercise. Natural healing includes chiropractic, which creates a healthful context for the critical nerves of the spinal column. It includes many herbal therapies, in particular, the herbal therapies of the Chinese, who've understood this distinction between natural healing and medicine for centuries. It includes color therapy, humor therapy, play therapy, massage. In short, natural healing includes any principle of body, mind, or spirit that builds harmony and health within us.

Of the two health principles, natural healing and medicine, natural healing is the most comprehensive. I call it a primary, or superordinate, principle, with medicine secondary, or subordinate, to it.

"Natural healing includes any principle of body, mind, or spirit that builds harmony and health within us."

For example, I used to get anaphylactic reactions from food allergies. I kept hypodermic needles and little vials of adrenaline handy just in case I reacted to something. I was grateful for the drug, and in one instance, I know it kept me from almost certain death.

But later I discovered certain natural healing principles, and my allergies went away. I don't need the drug any more, and while I'm grateful I had it before I understood, I see now that those acute conditions I suffered from time to time

came from a chronic weakness I'd let develop by not taking care of myself.

The same thing is true with infections. Most of the time, if we suffer a life-threatening infection, it's because we've let our immune system get weak. AIDS victims probably have chronically weak immune systems. They look desperately for an AIDS drug, but they might also find natural healing principles useful for building up their immunity. In those cases where people have overcome AIDS (and such cases exist), it's probably because they overcame some chronic, underlying condition that was breaking them down.

As you can see, while medicine can be useful in acute conditions, natural healing *always* applies. Medicine is, at best, a *temporary* expedient to keep us alive so we can apply the principles of natural healing.

In fact, the money we spend for medical research on chronic illness is probably wasted. Much of it is directed toward overcoming the body's resistance to drug therapies, despite the fact that drug resistance is a product of fundamental physical laws. Consider the progress medicine has made so far against chronic illnesses, and you'll see that the billions we've spent to this point haven't really paid off. Those who seek funds for such research typically claim they just need to learn a little more, but the real problem, I would wager, is that their principle is wrong.

Nature's "Vital Force"

The same deterministic principle led to behaviorism in psychology and medicine in health care. That principle has turned out to be wrong, or at least severely limited. Psychologists have seen the limits of behaviorism. Medicine has been slower to see its limits.

Yet scientific evidence of medicine's limits continues to build, including the discovery of interacting, oscillating, electrical and chemical systems within the body. Conceived as a mass of reflex arcs, the body seems easily controlled from the outside. Conceived as interacting, self-entraining

oscillators, however, it suddenly acquires an inner, self-acting power that *resists* outside control. Might it not be reasonable to call this self-acting power a "vital force"? And might we not suggest that it is nature's way of allowing us to resist outside challenges, whether from bacteria, the stresses of daily living, or the doctor's drugs?

If so, we seem to have come full circle. We have returned to a vitalistic principle. This one, however, doesn't depend on demons and magic, but on the most fundamental scientific laws. The body truly is subject to the laws of nature, and it is those laws that give the body its vital force. It is nature's laws that declare, *No Long-term Meddling Allowed!*

The simple truth is this: Two equally valid health principles exist: medicine for acute conditions, and natural healing for chronic conditions. When used for chronic conditions, medicine can only worsen the very illnesses doctors hope to cure, for the body's fundamental principle is not reflex reaction, but *resistance.*

A survey of several hundred cancer patients published in *The Annals of Internal Medicine* showed that people who prefer natural healing tend to be more educated than people who choose medicine alone. Why? Because they want to strengthen their body's own *natural* resistance, which medicine doesn't do. Even so, eighty-five percent of the natural healing patients surveyed were also working with their medical doctor. They were drawing the best from both principles, applying it to their particular challenge, but seeking eventually to rely on natural healing alone. That's the sensible thing to do.

For a complete set of references for the material presented in this booklet, send a self-addressed, stamped envelope to Tapestry Press, PO Box 653, Springville, UT 84663.