

Chemistry and Happiness  
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I am most depressed, most deeply unhappy in the morning after I did not get a good night's sleep. I remember once while living in Maryland, I had trouble sleeping because I had an early airplane flight the next morning. I caught a shuttle bus to the Baltimore airport at about 6 AM. Arriving at the ticket counter at 7:00, I spoke to the desk clerk, saying that I could not see my flight listed on the electronic board. She checked and explained that my flight was leaving from Washington National Airport and not from Baltimore. I had gone to the wrong airport! A wave of despair swept over me. I looked behind me out the windows. Buses were driving by on the road. I imagined throwing myself under their wheels.

My rational side said "this is a minor event of no importance." My emotional side was hitting bottom. The clerk scheduled me to take a flight out of Baltimore. Her kindness helped. However, I was still feeling irrationally depressed. To lift my spirits I turned to drugs.

I drank a cup of strong coffee, ingesting caffeine and sugar. Within a few minutes I felt better. The cloud of hopelessness lifted.

Last week, I said that studies indicate that happiness is partially determined by genetics; some of us are born with a tendency to feel happy. However we have some control over our happiness because our mood is also effected by the comparisons we make. A simple conversation can make us happy after a day of silence. A shower makes us happy after a week of camping. But sometimes these are not enough.

Today I want to explore the idea that the chemicals we put in our bodies might make us happy. Because of time restrains, I am only going to talk about a few of the chemicals that we can *legally* put in our bodies to help us feel happy. If we were in Colorado, my sermon would need to be longer.

Unitarian Universalism is deeply rooted in British-American values. We promote individuality, self-reliance, and self-sufficiency. British-American cultural traditions teach that happiness originates from within ourselves, therefore happiness is something that we must earn. When we encounter problems, especially emotional problems, our culture teaches us to carry on, it teaches us to take responsibility for our own problems and not complain. An unhappy person is that way because of negative thinking, and thus they "earned" their unhappiness. The need to take medication for happiness is seen as a failure, something shameful, a sign of weakness that needs to be kept secret.

I see this value system in the power of positive thinking movement, which began more than a hundred years ago. In the nineteenth century a Portland, Maine man, P.P. Quimby, became known as a successful healer. People would come to Quimby with various illnesses and he would prescribe remedies. After some experience, Quimby realized that some of his patients were responding just as well to the cheap and simple remedies as they were to the expensive and complicated ones. This led him to conclude that his patients' belief in the effectiveness of the remedies played a decisive role in their cure. The healing was mental. He gave up other cures in favor of the power of mental suggestion. Quimby had discovered what doctors today call the placebo effect.

One of Quimby's patients was a woman who suffered from what were called nervous attacks. Her name was Mary Baker Eddy. Quimby's success in treating her so excited her that she founded the Christian Science Church in 1879, based on Quimby's methods. In 1891 Charles and Myrtle Fillmore, who had attended Christian Science classes, established the Unity School of Christianity on the principle that healing is in the power of mental suggestion. Both new religious movements attracted thousands of followers. In addition writers published self-help books on the power of the mind to heal. The children's story "The Little Engine that Could," came out of this movement. Saying over and over "I think I can, I think I can" was the way to success and happiness.

By the 1920s old line Protestant clergy began preaching this new mind cure religion as part of their own theology. Most famous of these was Norman Vincent Peale. A Methodist-ordained minister serving a Dutch Reform Church in New York City, Peale presented the idea of positive thinking as the way to happiness in the twentieth century. One of Peale's disciples was Robert Schuller who took the message to southern California, built a cathedral of steel and glass, and carried the message of positive thinking to millions in national television broadcasts. In this Century a minister in Houston, Texas, named Joel Olsteen, nicknamed the smiling preacher, has continued the positive thinking gospel. Seven million people watch Olsteen's television worship service each week.

This theology of positive thinking is the message that many unhappy people hear. They are told, "Happiness is a choice. You've got to work toward it. Come on! Cheer up! Pull yourself together!"

However, while the power of positive thinking movement was growing in popularity, medical professionals were discovering chemicals that influence the brain. Some began to suggest that deep unhappiness is not a moral problem, it is a biological illness. The first antidepressants appeared on the market in the 1950s. They did not work on everyone. Scientists continued to try to develop new drugs that might be effective in the treatment of depression.

The drug we today call Prozac was first developed in the 1970s. Its American developer, Eli Lilly, found that the chemical constituent of Prozac reduced hypertension in some animals, so researchers tried it as a blood-pressure pill. However, tests failed in humans. Then it was tried as an anti-obesity therapy. Again it failed. Next the company tried it on volunteers with mild depression, and they found it had a remarkable power to lighten their moods. After ten years of clinical trials, in December of 1987 Prozac received approval from the Food and Drug Administration for treatment of depression. Our culture started to change. In the mid 1980s drug companies started the first national direct-to-consumer television ad campaigns for prescription drugs. More and more of us started to believe that deep unhappiness is not just a moral problem. It can be, at least in part, a biological illness.

In the last few years at least twelve new drugs have been approved by the FDA for the treatment of depression. They are similar to but not identical to Prozac. They are called second-generation antidepressants to distinguish them from the first generation antidepressants that appeared in the 1950s.

The theory, which is hotly debated, is that between the cells in our brains are very tiny chemicals. These chemicals send information between the cells. We feel depressed when the amount of the chemicals between these cells decreases. Antidepressant drugs increase the amount of these chemicals that exist between the cells in the brain and thereby end the depression.

Today antidepressants are one of the most commonly prescribed classes of drugs in the United States. Prozac and other second-generation antidepressants have been proven to help relieve the symptoms of depression in at least 55 percent of the people who take them. None of the 12 different drugs have clearly been shown to be any more effective in relieving symptoms or bringing about a full recovery than any other, although doctors work with clients trying different drugs, hoping to find one that works.

Are people who take an antidepressant happy? About 45 percent of the people who take an antidepressant do not feel any better. However, About 55 percent of the people feel that they have returned to a more normal state. They no longer stay in bed all day; they no longer feel hopeless; they can enjoy being with people again. Here is one story by a writer named Maura Kelly, published in the *Atlantic Magazine* in 2012. She writes,

I'd never thought my own "moodiness" was serious enough to warrant medication; I had, frankly, scoffed at antidepressants as an easy way out, for the weak. (I preferred to fix my psychological problems the hard way-- through therapy; that seemed to me to be a more sustainable and "real" solution.) But then I found myself on the Brooklyn Bridge late one December night, contemplating a swan dive in terrifying detail.

The funny thing is, I thought it was less depression than insomnia that was driving me crazy. For close to a decade, I'd had major sleeping problems; I'd tried everything I could think of to cure myself (cutting out alcohol, cutting out caffeine, practicing better "sleep hygiene," melatonin, etc.); nothing had worked.

I'd never thought I was truly depressed before that point. Mopey, maybe; a little screwed-up, sure; in therapy to try to figure out why I had so much trouble with relationships, certainly. But, as it turns out, vividly envisioning your own suicide in the spot where you'd actually go through with it is a quite compelling way to start believing that, yes, you're definitely depressed.

After getting down from the bridge, I went to see my primary care doctor, and told her, in tears, about what happened. She got me started on an SSRI, or selective serotonin reuptake inhibitor, that magically solved my sleeping problems. (As she told me during that visit, insomnia can be both a symptom and cause of depression; if I'd heard that before, it had not really registered.) The more rested I felt, the more energy I began to have.

An antidepressant medication restored Maura Kelly to life, giving her a certain basic sense of well-being. This return to a more normal emotional state is the most common reaction when a depressed person has success with antidepressant.

This was threatening to some religious leaders. Because of the positive thinking movement, people have come to see churches as a place to come when they want to feel happy. In the 1990s I wondered, if people can take a capsule that lifts their spirits, and if they are going to church to get their spirits lifted, could the drug industry be taking over this role from the church?

I asked church-going people who take antidepressants. They all said essentially the same thing. The antidepressant, they said, "does not make it unnecessary for me to go to church. It makes it possible for me to go to church. Without an antidepressant I would say at home in a blue funk. With an antidepressant I can come to church, hear the music, participate in the conversations, and consider the ideas in the sermon. An antidepressant does not in any way replace the church. So relax," they told me. "With the invention of antidepressants you can look forward to a healthier congregation. We will still need the renewal we get at church along with the moral and intellectual stimulation the church offers." I am reassured.

Fifteen years ago, using the money from the sales of Prozac, Eli Lilly built a state-of-the-art drug research facility in Indianapolis, Indiana, where scientists tried to create a new antidepressant that would work even better. Other pharmaceutical companies also worked

on this, so far producing the 12 antidepressants that have received FDA approval. The hope was that, with advances in our mapping and understanding of the brain and advances in constructing new drugs, true happy chemicals would make the transition from science fiction to science fact.

Today, however, almost all the major drug companies have curtailed these research programs. The attempt to discover a better happiness chemical, one without side effects, has stalled. The research money is shifted to look at how brain networks work, and how they might be manipulated to make us happy.

One example of a non chemical treatment is Trans cranial magnetic stimulation. This procedure uses magnetic fields to stimulate nerve cells in the brain to improve symptoms of depression. A large electromagnetic coil is placed against your scalp near your forehead. The electromagnet creates electric currents that stimulate nerve cells in the region of our brain involved in mood control. It works for some people. Other research in this area continues.

Meanwhile, if you think you are depressed, I urge you to seek help. Positive thinking is a good thing, but sometimes it is just is not enough. Depression is an illness, not a sign of moral weakness. Antidepressants do not always work, but for many people they are an effective treatment for the illness of depression.

My own happiness chemicals of choice remain caffeine and sugar, both of which make me happy, although the drug sugar has a side-effect of weight gain. Still, properly caffeinated, my mind is clear and alert. Sometimes in these moments of clarity, I look at the complexity of life today—the automobiles, the airlines, the computers, the cell phones. I wonder, do the stresses of modern society drive us to consume chemicals like caffeine or Prozac so that we can be happy?

The Kentucky writer Wendell Berry teaches that frequent contact with nature is what is missing from our lives. He would say that our lack of contact with the natural world is why we need caffeine or Prozac to be happy. Berry wrote,

At the end of July I was using a team of horses to mow a small triangular hillside pasture that is bordered on two sides by trees. I was suddenly aware of wings close below me. It was a young red-tailed hawk, who flew up into a walnut tree. I mowed on to the turn and stopped the team. The hawk then floated to the ground not twenty feet away. I got off the mower, stood and watched, even spoke, and the hawk showed no fear. I could see every feather distinctly, claw and beak and eye, the creamy down of the breast. Only when I took a step toward him, separating myself from the team and mower, did he fly. . . . In some circles I would certainly be asked if one can or should be serious about such an encounter, if it has any value. And

though I cannot produce any hard evidence, I would unhesitatingly answer yes.

So in addition to chemicals like caffeine or Prozac, I would suggest the chemicals that come with smell of fresh sea air on a Florida beach, or the view of the green colors of the summer trees, or the touch of a June rain against our skin. These chemicals can also raise our spirits, give us joy and make us happy that we are alive.