

How did I ever get into the soul destroying profession of computer programming, coding in an old computer language called COBOL and working on one of those granddaddies of modern computing - IBM mainframe computers, of all things?

I put it down to a case of simply being in the wrong place at the right time.

Still, the old programming trade enabled me to work in England, New Zealand and even a lucky six month stint in Paris and it paid the way for all the travelling I've done over the years.

THE GREAT BRAIN ROBBERY

Jacob Lowe-Tignoff was Professor of Religion at Silicon Valley University for many years until his retirement in 2020. He is also an ordained rabbi in the Conservative movement within Judaism. His 1995 book, *Is Your Computer Stealing from You?* was a best seller. That book was intended as a warning for the people of his generation that computers could potentially steal important human capabilities and skills, and that human consciousness could atrophy as a result. In retrospect, his 1995 book was prophetic.

My mother, the *Sentinel-Observer* reporter, Pamela Pulitzer, included an interview with Professor Lowe-Tignoff in her award-winning book, *The Killer Robot Papers*, which was published in 1996.

Pulitzer: My mother interviewed you for her book and now I am continuing the family tradition.

Lowe-Tignoff: Do you have any children that can carry on the tradition?

Pulitzer: I have a son, who is ten.

Lowe-Tignoff: You better tell him to hurry. I'm eighty-two.

Pulitzer: Come on, Professor. You look as fit as a fiddle.

Lowe-Tignoff: People tell me that all the time. "You look as fit as a fiddle." The truth is, a fiddle doesn't go anywhere unless it is carried. A fiddle makes a terrible noise unless you stroke it in just the right way and when you are finished with it, you put it into a wooden case. So, when people say that I look fit as a fiddle, I worry.

Pulitzer: I was rereading the interview you gave to my mother back in 1996, and some of what you said back then was truly prophetic.

Lowe-Tignoff: Very frankly, I would have preferred if history had proven me wrong.

Pulitzer: But, it hasn't. Computers are clearly stealing from humanity, and I would like to discuss that with you.

Lowe-Tignoff: It's a catastrophe.

Pulitzer: I think that you gave a really insightful characterization of stealing back in 1995. You said that stealing involves diminishing oneself or another. You said that to diminish oneself or another is the primordial ethical and moral lapse. You also said that if we diminish another, then we diminish ourselves and if we diminish ourselves, then we diminish all other people simultaneously. Can you explain that?

Lowe-Tignoff: I think it is pretty obvious. If I diminish your humanity, I am actually diminishing my own humanity, because you are a part of me. If I diminish myself, then I am contributing less to life than I might have, so I am diminishing all other lives simultaneously.

The problem is that most people see this as some kind of poetry. But, it is reality. When you diminish yourself, you change the parameters of your own subjective experience. You actually change the universe that you inhabit.

Pulitzer: Would you say that modern technology is diminishing human being or is it augmenting human being?

Lowe-Tignoff: I believe that computers are diminishing human being to the extent that the damage may be irreversible. Computers are stealing our passions and our human prerogatives. They are

serving as jurists and as our ethical advisors. They are composing music, creating art and writing novels. They are now the leading experts in hundreds of technical fields and it is inevitable that this new form of intelligence will develop to the point that it will be able to program itself, to advance into new realms without human intervention. In my opinion, this is a life or death struggle for the human race, but the forces that control technology also control the media and the political realm. Tremendous amounts of money are flowing into this one tiny sector of human existence and, if you follow the money trail, the way that you suggest in some of your investigative reporting, you will see that dollars are flowing from the traditional professions, medicine, law, education, engineering, to the megacorporations that control the Global Landscape.

Pulitzer: Computers are also serving as county supervisors, accepting confessions, flying airplanes, and composing newspapers. The list goes on and on.

Lowe-Tignoff: Yes, and if you really like what's going on you can always have your life extended with a pig's heart transplant, or maybe you can arrange to have yourself cloned when the moratorium ends in 2050.

Pulitzer: In addition, computers are being used to treat psychological and spiritual ailments and they have radically changed the manner in which people interact with one another. Computers are being integrated into the human brain, yielding cognitive and perceptual prostheses, such as the Thinker and the Helmet.

Lowe-Tignoff: Some of this I didn't foresee back in 1995. I didn't believe that computer scientists could actually implement this cyberspace idea, with people actually projecting themselves as forms through cyberspace. It was a shock to me when this new self-projection technology was introduced a few years back.

It's a catastrophe.

Pulitzer: Why do you think it is a catastrophe?

Lowe-Tignoff: All of this technology amounts to a threat to the vitality of human consciousness. This has been obvious to me for the longest time, but now we have the scientific evidence that the human brain has begun to atrophy.

Pulitzer: You are referring to SSAs [specific subject aphasias].

Lowe-Tignoff: Yes. Even though I was talking about this possibility for decades, no one took me seriously until those British scientists actually discovered physical changes taking place in the brain.

Pulitzer: You are referring to the research of Falcon and Wilson.

Lowe-Tignoff: Yes.

Pulitzer: Does their research show that the brain is atrophying, or does their research show a reorganization of the brain, with some talents being strengthened at the expense of others?

Lowe-Tignoff: Their research shows, and I do not think that they would disagree with this interpretation, that many areas are atrophying and only a few areas are being strengthened. The areas that are atrophying relate to traditional forms of human creativity that are now being performed by computers. Only certain highly technical areas are being strengthened. Only certain kinds of reasoning and problem-solving are being strengthened. This is exactly what I was warning about over thirty years ago.

Pulitzer: Human expertise and human creativity are being channeled into a specific kind of problem solving, designing computer systems and writing computer programs.

Lowe-Tignoff: Exactly. Composing music in the way that Mozart did is quite different from composing music using an expert system. They involve different parts of the brain, a different kind of consciousness. Falcon and Wilson have shown that this change in consciousness is actually causing subtle changes in the microscopic structure of the brain.

We are becoming ever more adept at logic and the kind of thinking that goes into designing computer systems and programs. We are becoming less adept at the kind of thinking that used to give rise to great works of art and great scientific and mystical discoveries.

I am concerned about the dissipation of passion. Once we had a lot of young people who were passionate about chess. Now, a computer program is the unchallenged world's chess champion, and the passion for chess has completely disappeared. None of my grandchildren has the slightest interest in playing chess. When I was a youngster, during the 1950s and 1960s, chess was quite popular. I was the president of my high school chess club.

I fear that the same thing is happening or will soon happen with music, with literature, with other human endeavors that people used to pursue passionately. Soon, the only passion left will be the

passion to write a computer program to do something that people used to do passionately. But, then, computers might be more adept at programming and creating computer systems than human beings. Then what? Clearly, it is better for the human race if our passions are not focused in such a narrow way.

But, these are all generalities. If we look at specific systems we can *really* see the magnitude of the problem.

Pulitzer: How about the Berkeley Ethics Advisor?

Lowe-Tignoff: Do we have to start with that one? My doctor wants me to watch out for my blood pressure.

Pulitzer: We don't have to. We could start with the automated jury system.

Lowe-Tignoff: Like I said, it's a catastrophe! The Berkeley Ethics Advisor is not just an advisor, it's a decider. People are using the Berkeley Ethics Advisor to make ethical decisions, not just to help them to think out an ethical problem. People are using the Berkeley Ethics Advisor to *avoid* difficult ethical decisions.

I think avoidance is a key word to describe the motivation behind a lot of this new technology. It's not just that people want greater efficiency and accuracy. People actually want to avoid unpleasant emotions and spiritual challenges. They want to avoid any kind of psychological discomfort.

Making difficult choices is part of the training that the soul must undergo in this world. The soul must pass through this world, which is a mixture of the true and the false, of light and dark, in order to prepare itself for life in the next world. This life has a purpose and the soul must go through some difficulties until it has fully awakened to its purpose and to the nature of reality.

Waking up is difficult and requires suffering on some level. Many of these new computer systems, like the Berkeley Ethics Advisor, permit people to avoid suffering, to avoid the kinds of learning experiences that are important for the soul to succeed in its mission.

Pulitzer: What is it that we are trying to avoid?

Lowe-Tignoff: The deceptive advertising will never tell you what is actually going on. You need to study each system to see what is being avoided. In the Gospels, Jesus says that everything that is hidden will eventually be brought to light. Those things that we

keep in the dark will eventually manifest and recoil against us. But, people would prefer to keep things hidden than to confront their own personal demons. *The new technologies are helping people to keep aspects of themselves in darkness.*

Pulitzer: That's an important observation.

Lowe-Tignoff: The truth about technology is not something you'll find in the advertising.

Pulitzer: We're going beyond stealing here.

Lowe-Tignoff: Not really. To the extent that we allow a computer system to help us to avoid seeing the truth about ourselves, that computer system is stealing from us. These computer systems are actually intoxicants of a new kind. The alcoholic can use alcohol to avoid painful spiritual work. The heroin addict can use his habit to avoid seeing the desolation in his life. Alcohol and other intoxicants steal away a person's motivation and ability to do painful spiritual work, to see himself clearly. By allowing people to avoid painful spiritual work, by allowing people to keep certain things in the shadows, these computer systems are stealing something of enormous value. But, things can not be kept in the shadows forever.

Pulitzer: I think we are getting to the thrust of your latest writings on the subject of technology.

Lowe-Tignoff: Yes.

Pulitzer: Computers are stealing from us because we are permitting them to steal from us. We are permitting them to steal from us because we are avoiding certain kinds of suffering and pain. Yet, that kind of suffering and pain is important for spiritual growth.

Lowe-Tignoff: People have the tendency to want to be comfortable, but sometimes being comfortable is not the best thing. One hundred years ago, technology was being used to provide basic physical comforts. People wanted the latest conveniences in order to avoid the wind and the cold, and to avoid unnecessary physical exertion. Now, the physical comforts are assured, so technology is being used to provide psychological comfort, to enable people to avoid psychological distress on all levels. I think people are trying to avoid psychological exertion, the kind of exertion that might eventually lead to spiritual and psychological well-being. I think that this is a dangerous trend. And, again, it's not something that is blatant in the advertising.

Pulitzer: Perhaps you can tell us how some specific technologies help people to avoid pain and spiritual growth. How about the Berkeley Ethics Advisor? I know that it's one of your favorites.

Lowe-Tignoff: Making a tough ethical decision, really thinking it through and struggling with it, is essential for the maturation of the soul. The key thing is to make a decision from within oneself and then to stick to that decision even if it entails opposing social convention. Making a tough ethical decision engenders courage within the human spirit. This strengthens the Soul, enabling the Soul to experience and to express its innate powers. Indeed, making tough decisions is central to the purpose of human life, which is to embody the truth.

By its very nature going through such a process can reveal things about ourselves that we might prefer to avoid. Such a process can reveal our fears, our prejudices and biases, our attachments, our distortions. Most of all, such a process will reveal the extent to which we have deceived ourselves.

The Berkeley Ethics Advisor and systems of that nature allow people to avoid difficult ethical decisions. What people are really trying to avoid are the uncomfortable feelings that such decision making engenders. People are using computer technology in an attempt to achieve a state of constant psychological comfort. That is why I equate these technologies with alcohol and drugs.

Pulitzer: What about the automated jury?

Lowe-Tignoff: The JURIST atrocity here in California! My doctor keeps warning me to watch my blood pressure!

Pulitzer: We don't need to discuss it.

Lowe-Tignoff: *We do* need to discuss it. That's why you're here. It might seem that the automated juries here in California were put in place because the traditional jury system has broken down. Well, I agree that the traditional jury system has broken down, but to replace human jurors with a computer system It just doesn't make sense.

This could not have happened without the support of the public. It took a constitutional amendment after all, so why did people support that amendment? People do not want to serve on juries because serving on a jury is an uncomfortable experience. You are placed in the difficult position of passing judgment on another person. This raises the same kinds of feelings that arise when a person needs to make a difficult ethical decision.

Pulitzer: I supported that constitutional amendment. I served on a jury once and I came to the conclusion that what was going on in that court room had nothing to do with the pursuit of truth or justice. I think if the legal system had more to do with the pursuit of the justice, people would be more willing to serve as jurors.

Lowe-Tignoff: I'm sorry to hear that you supported the constitutional amendment that opened the door for automated jury systems. Nevertheless, because I believe in civility, I am not going to throw you out of my house.

I think it would have been wiser to reform the legal system: to change the way in which lawyers behave, the way in which evidence is presented, the way in which jurors are selected. I could even support professional jurors. But, computer-based juries? No.

In my book about stealing, I said that the human being represents a nexus where judgment, compassion, justice and mercy all meet. Judgment, compassion, justice and mercy have to emerge from the human being. This helps the human being to participate in the sacred, to be fully human. Now, we are removing this capacity from the human realm and giving it over to computers. All this for the sake of achieving psychological comfort, or at least, of avoiding psychological discomfort.

Pulitzer: The way in which computers mediate human interactions these days obviously involves the kind of avoidance that you mentioned.

Lowe-Tignoff: Obviously. When I meet you in cyberspace, when my cartoon image meets your cartoon image, when Daffy Duck meets Elmer Fudd, then it is one fiction meeting another fiction. When I meet you here in my home, as we are meeting now, then I can see your face, I can see all of the muscles in your face, how they tighten and how they relax. I can observe all of your gestures, whether you are smiling or frowning, how you nervously play with your chip recorder and your old-fashioned reporter's notebook. I can see your eyes with their cool blueness and I can observe your breathing. In this way, I can find out a lot about you and your motivations and your beliefs. Cyberspace filters out all of this useful information, the information that helps me to see whether you are being sincere.

It is easier for people to lie and to deceive one another in cyberspace than it is in ordinary space. But, maybe that's part of the attraction of cyberspace. People know that they are fake, that they are inauthentic, so they feel more comfortable meeting other people if they can hide between a cartoon facsimile.

Pulitzer: But in five or ten years, experts say that our cyberspace images will be completely life-like. Thus, we will have the kind of visual information that you mentioned, even when interacting with one another in cyberspace.

Lowe-Tignoff: But, people will always have the option of projecting false images, so-called cyberselves - . Where did I put my medicine?

Pulitzer: Are you okay, Professor?

Lowe-Tignoff: Just a little heart irregularity when there is too much stress. Where were we? People are afraid of the criticism that they might receive if they are just themselves, so they project this cyberselves, to which they have no commitment whatsoever.

Pulitzer: What about music and literature?

Lowe-Tignoff: This business about the Meltzer Prize is quite a circus. We now have an award-winning novel that was written entirely by a computer! Well, the novelist himself admits that writing a novel in this way - by feeding facts into a computer and allowing the computer to grind out the messy details like plot and character development - enabled him to avoid the uncomfortable feelings that honest writing necessarily entails. Writing is a process of self discovery. Writing has a lot to do with revealing the hidden spaces within ourselves, of bringing these hidden things to light. Writing is a tool for self-liberation and self-discovery. That liberation, that maturation is not going to happen for a so-called author who allows a computer system to do his writing for him.

In my earlier writings, over thirty years ago, when I was on the *New York Times* best seller list and I was being interviewed on an almost daily basis, what my wife keeps on calling "the good old days", I emphasized how computers could steal our passions, destroying human creativity. Computers would write our symphonies, write our novels, compose our newspapers.

Well, this is happening. But, what I see more clearly now than ever is that we are allowing the computer to steal from us because we are trying to avoid any form of psychological discomfort.

Look at the Helmet! You can put on this prosthetic device and it will actually filter out unpleasant messages. Well, it's not the messages that people are actually concerned about. It's the unpleasant reactions, like anger, that messages can provoke. People are afraid of their greed, their lust, and their anger. Yet, you see, there is

some truth in greed, lust and anger. People are afraid to see those truths.

Pulitzer: What kind of truth can you find in greed, lust and anger?

Lowe-Tignoff: We are afraid of these negative emotions because we feel that they are not acceptable to God or to our friends and relations. Therefore, we will use computer technology, drugs, alcohol, whatever it takes, to avoid our greed, lust and anger.

Yet, if we could really experience our greed, our lust and our anger, then we would discover the liberating truth in each of these emotions. Inside greed, one finds true altruism. Inside lust, one finds true love or Eros. Inside anger, one finds true justice. But, you can't get into the mystery hidden within these emotions unless you go through them.

Because we are avoiding these and a host of other negative emotions, we are not finding the truth that lies at the core of these emotions. If we could find that truth, we could transform those negative emotions into what I call holy emotions. The love for all humanity, the desire for the happiness of all sentient beings, the desire to eradicate injustice, these are all holy emotions, holy desires.

You know, there is a saying, the greater the satan, the greater the saint. The greedy person can become a great philanthropist. The lustful person can be transformed into a lover of all of humanity. The angry person can become a champion for human rights and justice.

Pulitzer: It seems like anything that allows us to avoid our emotions and the hidden truth within our emotions is incredibly destructive. So, computers, alcohol and drugs can be incredibly destructive.

Lowe-Tignoff: Obviously.

Pulitzer: Maybe we are trying to avoid certain emotions, but certainly that is only a small part of the picture.

Lowe-Tignoff: Why do you say that?

Pulitzer: Stealing is occurring on a tremendous scale, and the individual citizen does not have much say in the matter. You seem to be saying that the individual citizen has decided to avoid pain, to avoid spiritual growth, and this pervasive technology is the result of this. I don't think that the individual citizen has the power to effect

the way things are evolving. Only a tiny fraction of the human race is making all of these decisions, developing all of these systems that are stealing human capabilities.

Lowe-Tignoff: But, people are participating in this catastrophe in various ways, conscious or not. You supported automated juries. My wife bought a copy of that trashy novel that was written by a computer. Even I broke down and bought a copy of that so-called Tchaikovsky symphony that was composed by an expert system.

Pulitzer: Still, there's a tremendous concentration of wealth and power in a few hands and that by itself seems like a kind of stealing.

Lowe-Tignoff: Yes. These people are stealing money - well it's not technically stealing - and they are stealing power. The common person has much less autonomy these days than even in the last century and, increasingly, the freedom of speech is an illusion. You can get any kind of pornography that you want on the Global Landscape. You can have sex with a virtual dog, but a professor who criticizes the Global Landscape megacorporations can lose his job.

If you follow the money trail, as you so often advise, you will find that there is a flow of money involved in every act of stealing by a computer. When a computer steals some human prerogative, some human capability, there is a diversion of economic wealth and power going on behind the scenes. So, the psychological stealing that is going on, the loss of human passion, for example, is accompanied by a diversion of money. This money is flowing to the great Global Landscape megacorporations. As a result we are seeing a greater and greater concentration of wealth among a small elite. Of course, there seems to be more money to go around.

Pulitzer: I have written quite a bit, in my op-ed pieces and in a book I wrote several years back that did not receive much attention

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Lowe-Tignoff: Computers and the Human Spirit. I read it. That book deserved more attention than it received. Obviously, it was the kind of book that would interest me.

Pulitzer: Well, I wrote a lot about the imagination and the role of the imagination in the spiritual life. I said that computers threaten the human imagination. Now, in our conversation this morning before we started taping, you said that perhaps I had exaggerated this issue of the imagination.

Lowe-Tignoff: Did I say that you exaggerated this issue?

Pulitzer: Something to that effect.

Lowe-Tignoff: I think what I was trying to say is that this emphasis on the imagination is somewhat dangerous. Before a person can use his or her imagination in the service of the spirit, that person must build a strong moral and ethical foundation. The imagination is a double edged sword. The output of the imagination is not necessarily good or healthful. Obviously, the person who has built a moral foundation for his or her life and who has a free and playful imagination, has a happy life. God can infuse such a person with true insight into the nature of reality.

Pulitzer: But what about computers and their impact upon the imagination. Do you agree with me that there is a threat?

Lowe-Tignoff: Yes. First of all, as we mentioned earlier, computers are replacing human beings as creators. We have computers writing novels and composing symphonies these days. Furthermore, I think that virtual reality has become sort of an artificial imagination for people. It's all the same whether it is the old virtual reality or the new forms of virtual reality that are now emerging in cyberspace.

Pulitzer: That's what I've been trying to get at! Virtual reality is replacing the imagination.

Lowe-Tignoff: For example, we see hundreds of new psychological and spiritual therapies that use virtual reality. I don't think that most people realize that many of these therapies are based on techniques that were used for thousands of years within various sacred traditions, especially within the highly imaginative cultures of India and Tibet. Many of the developers of these new technologies have merely taken traditional meditation techniques and they have imitated them using virtual reality.

At issue, then, is whether these traditional healing techniques, using imaging, meditation and visualization, are more effective when implemented as virtual realities or whether they would be more effective when performed in the traditional manner, as meditation exercises to be practiced by the student, by the person who is in need of spiritual healing.

I think it is clear that it would be better for people if that healing came from within themselves.

Pulitzer: Why?

Lowe-Tignoff: Suppose you are suffering from a certain kind of spiritual ailment and you can choose between a therapy that uses traditional imagery, visualization, and meditation and a virtual reality system that does all of the work for you. Which therapy would be more effective? I believe the virtual reality therapies can help. This has been shown empirically. Still, I feel that a person who actually creates the visualization within himself is going to connect with the inner healer in a conscious way, whereas the person who is interacting with the virtual reality may not become conscious of the inner healer. Of course, drugs are even worse than using a virtual reality.

Pulitzer: Why is consciousness of the inner healer so important?

Lowe-Tignoff: Because, a person who becomes conscious of the inner healer can heal his spiritual problems using meditation and visualization on his own initiative, whereas a person who depends upon virtual reality, will believe that the virtual reality effected the cure.

Pulitzer: This is a kind of stealing then?

Lowe-Tignoff: Of course. Human beings are capable of curing their psychological and spiritual problems to an incredible degree. As soon as one becomes dependent upon any external source for this healing, one has weakened the Soul. This is why I oppose the casual use of psychological drugs and why I oppose the routine use of virtual realities to cure psychological illness. The patient must first make an effort to contact the inner healer. Otherwise, the patient may fall victim to the illusion that healing comes from some chemical or from a virtual reality.

But, as you wrote in your book, the medical profession depends upon perpetuating the illusion that healing comes from the outside because that is how they make their money. The medical profession does not want people to become too intimate with the inner healer, who is God, because the inner healer will put the medical professionals out of business.

Pulitzer: This sounds like Christian Science to me.

Lowe-Tignoff: I believe that the medical profession as it is currently constituted, with its mechanistic model of the human body and its denial of the inner healer, will disappear. It will be replaced by a new medical profession that acknowledges the inner healer and its miraculous powers. This new medical profession will be much more effective and much more compassionate than what we have

now. Actually, I am referring to a great battle that is going on in the medical profession even as we speak.

Pulitzer: Can you give our readers some tips on how to evaluate the new technologies that are emerging almost daily?

Lowe-Tignoff: When they read about a particular technology, they should ask themselves how that technology is stealing from the human race. They should ask themselves if that technology is simply a device that helps people to avoid psychological discomfort. They should ask themselves how that technology is discouraging people from contacting their own inner healer and how that technology is discouraging people from exercising their own creative imaginations. And, as you often suggest to your readers in the *Sentinel-Observer*, they should ask questions about the money trail and the growing centralization of economic power in a handful of megacorporations.

Pulitzer: This morning, you and I discussed my own theory, the theory that I propose to put forth in a new book that I am working on. My main thesis is that it is actually God who is doing the stealing. God is creating technology in order to steal from human beings because the ego has been stealing from God, the ego has been abusing the divine gifts that God gave to humanity. What do you think of this theory?

Lowe-Tignoff: It's wonderful! I did hint at this in my 1995 book about computers and stealing. However, your theory is much more explicit than what I wrote back then.

Pulitzer: Knowing that God is Omnipotent and Omniscient and seeing what is going on, people should be alarmed. Would you agree with that?

Lowe-Tignoff: Yes. People need to understand the spiritual meaning of technology. What does it mean if computers are threatening human sovereignty, creativity and passion? And what can we do as individuals to develop our full humanity despite the onslaught of computer systems that seem to be surpassing human performance in so many areas?

Pulitzer: Thank you so much for agreeing to this interview.

Lowe-Tignoff: I enjoyed this chat with you thoroughly. I learned a thing or two and that is the important thing. You might find it interesting to know that I was born in the year 1946. That was the year that the world first learned about the digital computer, the

ENIAC, that was built at the University of Pennsylvania during World War II. Some people consider 1946 the start of the computer era.

Pulitzer: I have long been a fan of yours. Your way of looking at technology has had a profound influence on my own thinking.

Lowe-Tignoff: I wish you success with your new book. Have you decided on a title?

Pulitzer: I'm thinking of calling it "The Great Brain Robbery".

Lowe-Tignoff: I like that! Please pass along my regards to your mother.