

# Technology & the Human Condition

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From this course, you will gain insight into how to live with technology. You will possess a method for sorting out five practical issues in which technology plays a role:



- ▶ How does anything improve our human condition?
- ▶ How does our human condition decline?
- ▶ How does technology contribute to the decline of our human condition?
- ▶ How can we reverse a decline in our human condition?
- ▶ How can technology help improve our human condition?

What follows are 13 chapters on the topic. In a classroom course they would be the content of classroom lectures. But I wrote them for a totally online course: no classroom.

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# 1. Technology & the Human Condition

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Since about 150,000 years ago, when our ancestors first pounded out stone tools, technology has been part of our human condition. But recently the role of technology has expanded immensely: The compass, gunpowder, the steam engine. Then electricity, the automobile engine, the telephone, TV, nuclear power, genetics in medicine, the hand calculator, the computer, e-books, the Internet, global satellite positioning. This raises one important question—the main question that we will pursue in this course: *What sort of controls do we need to ensure that technology benefits our human condition?*

To answer this question, we first need to understand what the essentials of our "the human condition" are, and how technology relates to them. So this chapter will define the essentials of both "the human condition" and "technology."

Further chapters will rely on these definitions to examine the sort of controls we need to ensure that technology really makes our lives better.

## The Human Condition

Most philosophers agree on four things about the human condition:

1. **We are aesthetic.** We love beauty. This aesthetic love draws us to hike into forests and row out on lakes. We are mesmerized by the stars. We furnish our homes handsomely and decorate them for holidays. We beautify ourselves, as if to show in our bodies what is beautiful about our spirits.
2. **We are creative.** Creativity is the source of all the progress made by the human race. The driver of all creativity is our *intelligence*. It drives us naturally to look for better ways to do things—ways that are more efficient, more effective, and more economical. It is our intelligent creativity that is the source of all technology.
3. **We are moral.** We want to do what is better and avoid what is worse. By our *conscience*, we naturally sense a difference between right and wrong. By our *emotions* we experience spontaneous feelings about better and worse. It is our moral nature that approves one use of technology and condemns another.
4. **We can act in ways that are ugly, stupid, and immoral.** We act in ways contrary to our love for beauty, our creativity, our moral sense. And when we do, our life together suffers. We let neighborhoods turn ugly. We block the smooth running of businesses.

We set up cultural standards for "the good life" that fail to make unhappy people happy.

Obviously, our human condition is a condition of stress. We have great potentials, but we don't use them well. We have the capacity of feed the entire world, but large parts of Africa are starving to death. The comfort of First World people is purchased by the suffering of Third World laborers. Within the next few dozen years all major nations have access to nuclear weapons. Ethnic and religious hatred continues to kill thousands of people every year. In short, while technology is capable of providing for the basic needs of every man, woman and child for centuries to come, our human condition is a wounded condition ever on the verge of self-destruction.

### ***Technology as a Creative Institution***

Technology is only one part of a web of social and cultural institutions that are part of our human condition. The web is not simple, yet it is explainable. To explain the various parts of this social and cultural web, consider the following story:

In Peshawbestown,<sup>1</sup> Michigan, the Ojibwa teenager, Doug Deepwell is laying white cotton nets into Belanger Creek where trout swim up to spawn. He notices that the larger trout either hold back or try to swim around the nets. His curiosity releases an insight: "What we need is an invisible net." He recalls seeing the women of his tribe using black plastic netting to keep rabbits out of the vegetable gardens. So he thinks, "Maybe trout can't see black." So he pays \$5 for some black plastic netting and in no time he's catching the larger trout.



Obviously, Doug is using technology to produce more food more quickly. What is not so obvious—but far more essential to technology—is that Doug is intelligent. He's using his sense of practicality to notice a problem, to get insight into what's wrong, to imagine a solution, to recall potentially useful materials, to conceive a new arrangement, and to test his insight for effectiveness.

This little story gives us a working definition of technology as it relates to the social and cultural dimensions of the human condition:

**Technology** is a material product of creative, practical intelligence asking, "How can we make things more efficient and effective?"

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<sup>1</sup> Pronounced "Shaw-Bee-Town."

Notice that our definition is scientific, not "commonsense." A commonsense definition regards technology as all the "stuff"—the computers, planes, chemicals, metals, electronics, and so on. But this view doesn't help us understand how technology affects our human condition. A scientific definition relates technology to other systems on which it relies and which it affects. This is why, here, we relate technology to its source in practical intelligence.



To see the effects of practical intelligence in making our human condition more efficient and effective, let's return to our story.<sup>2</sup>

Doug's intelligence doesn't stop with technology. Doug is netting larger trout than his teenage friends. So they ask him how he does it. He answers, "It's all in the net. I'll sell you a good net for \$10." Now Doug no longer nets trouts; he buys and sells plastic netting. He is not producing fish; he is

producing the means of producing fish. By his practical intelligence, he understands the role of capital equipment in building a productive business.

**Science** reveals the potentials of nature to be exploited for improving our human condition.

**Economics** is the system of monetary exchange that facilitates the production of goods and services.

**Capital** is the financial and material means of producing goods or services regularly.

Not everyone likes Doug's offer of one net for \$10, so he sits down with them and talks money. "You can sell a large trout for \$2, and you can net five of them in an hour. So, after the first hour of fishing, you've paid for my net. The rest of the profit is yours."

What is Doug doing here? He's using his intelligence for "marketing

**Marketing** is the act of persuading people to purchase goods or services.

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<sup>2</sup> The painting is from a sketch I did at Belanger Creek, which runs under MI-22 by an old mill near Pshawbestown, MI. While I was sketching, I noticed a young Ojibway boy standing quite still by the creek with a two-by-four in hand. Suddenly, he smacked the water hard and pulled out a knocked-out trout. He shoved it in his backpack and walked off.

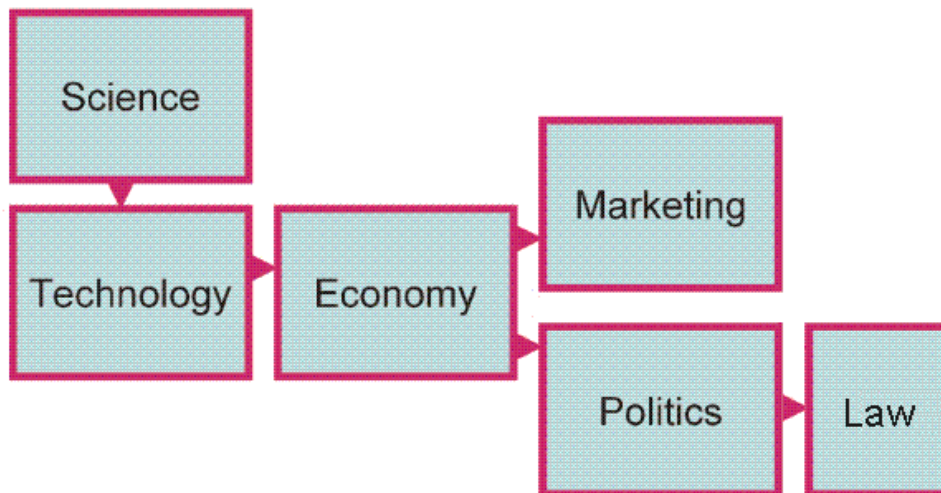
Doug's tribal elders are concerned that Doug and his friends are catching larger trout than their elders, who use the old cotton nets sewn by the tribal women. So they tell Doug that plastic nets are now forbidden because they veer from the path of their ancestors and leave the women without work. Doug points out that these revered ancestors were the ones who first made nets when the Algonquin and Iroquois were using hook and line. He convinces the elders that invention is essential to the Ojibwa tradition. He also points out that people will be needed to sell and deliver the larger trout to restaurants, casinos, and local companies—a perfect opportunity for the tribal women to use their intelligence for more than sewing cotton nets. So they allow his new plastic netting after all.

This is Doug is using his intelligence for "politics." What is politics?

**Politics** is the act of persuading people to support social and cultural change.

Doug needs to make sure his emerging fish business meets federal and state regulations. So he studies these laws to see if he needs to lobby for changes that help his business thrive. Now he is using his practical intelligence for "law."

**Law** is the set of regulations designed to ensure people's health and safety, and to prevent any practices that unjustly favor the advancement of any group.



The graphic here illustrates how technology is part of our human condition. It's part of a system in which practical intelligence connects technological insight to science, an economy, marketing, politics and law. This web of science, technology, economics, marketing, politics and law is the "system" of our human condition that we will examine when we assess how beneficial or damaging any particular technological achievement really is.



We will refer to this system as a “social system.” It is not “social” in the sense of socializing with friends. Rather it is social in the sense that people “associate” to work together on common goals. It may also be called a “collaborative system.” It is the entire “setup” of the agreements and commitments aimed to deliver some sort of goods and services regularly. Its primary criteria for success are efficiency and effectiveness.

## **Culture as Moral Institutions**

Each of the above social systems specializes in exploring what's possible. But what's possible is not always beneficial. Hitler used science, technology, the economy, marketing, politics and law to eliminate people, while Jonas Salk, the inventor of the polio vaccine, used these systems to save people.

So besides these *social systems* that deliver goods and services to us regularly, we also set up *cultural systems* that name what is beneficial and what is not.

Social systems are about order, as our practical intelligence explores what we might do. Their operating standards are efficiency and effectiveness.

Cultural systems are about morality, as our consciences explore what we should do. Their operating standards are moral appropriateness and genuine human well being.

It helps greatly if we imagine these two kinds of public institutions as the *social order* and the *cultural order*, respectively—corresponding to what is efficient/effective and what is better/nobler.

Much of any culture, of course, is made up of millions of informal agreements on "how we do things." You don't wear a bikini in a New York bank, but you might in Papua New Guinea. During dinner, you don't belch in Boston but you might in Beijing.

Again, let's come back to our story. Doug has an aunt named Lucy Goosefeather, who is one of the tribal elders. Like the other elders, Lucy is concerned that the changes going on in technology, the tribal economy, the marketing, and the politics are going to be a genuine benefit to everyone concerned. So she proposes several initiatives:



She proposes that a tribal **judiciary** should designate a judge who will deal with any disputes about wages and labor that come up between workers and management in their fish enterprise. The judiciary will also interpret what the laws mean

and eliminate certain laws to ensure that everyone's rights are protected fairly.

She recommends that their schools offer **education** in the tribe's tradition of starting new enterprises like this.

The elders have an **arts** council that oversees the artwork, plays, musicals, and dances that celebrate the tribe's heritage. So Lucy encourages them to celebrate this emerging fish industry in special ways.

Lucy also looks to **religion**. She meets with the tribal healer and the Jesuit priest who ministers to the tribe. She asks that they pray that Doug's enterprise will benefit everyone, that they promote the mutual care needed to ensure cooperation by all, and that they thank the Great Spirit for its success. Her grandmother taught her a saying in Ojibway which translates, "The Spirit counts everyone; so everyone counts."

In this small example, we can see four major *cultural* institutions that most societies rely on to make sure the social institutions provide genuine benefit. These institutions are dedicated to maintaining any society's formal agreements on what benefits our human condition and to changing any social arrangements that harm it. Where social institutions aim at efficiency and effectiveness, our moral institutions aim at making life actually better.

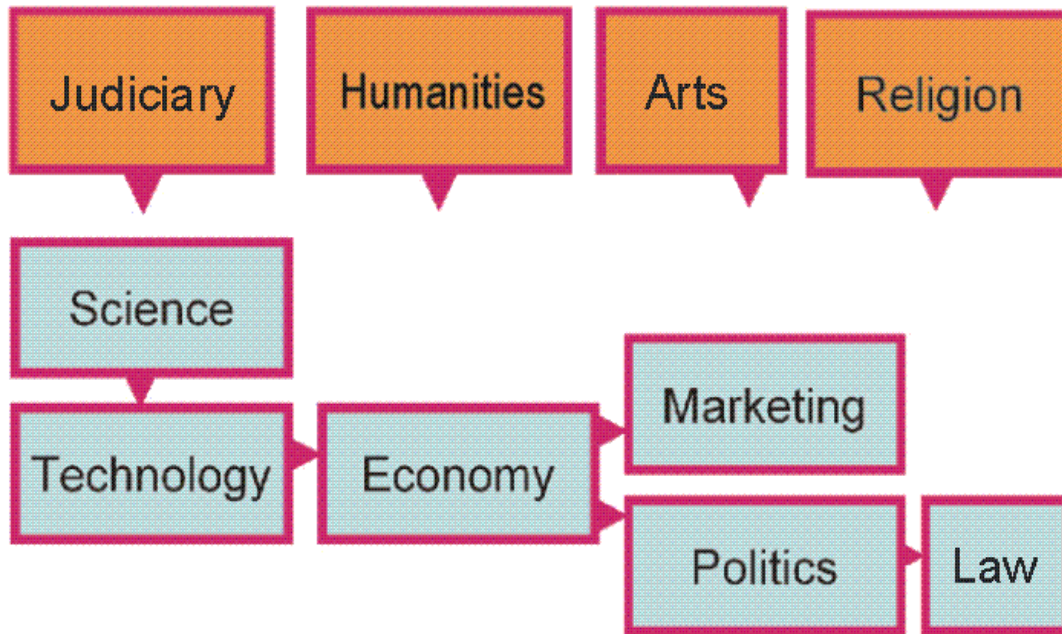
A **Judiciary** decides which laws should be eliminated and how certain laws apply in specific cases. (Where a legislature makes laws, a judiciary "adjudicates" their appropriateness.)

**Humanities Education** ensures that a society's moral priorities are passed on to newcomers. (Humanities = the study of history, literature, philosophy, and theology.)

The **Arts** touch one's conscience about what improves and what degrades our human dignity. (Arts = music, painting, dance, drama, attire, landscaping, poetry, etc.)

**Religions** promote virtue and mutual love, which are the foundations of moral behavior, as well as an openness to a love they did not invent but comes from above.

Here, again, is a fuller diagram showing how our cultural institutions are designed to oversee, direct, and regulate our social institutions from a moral perspective:



So Doug's social enterprise is being watched by Lucy's cultural initiatives. The judiciary ensures that laws protect the fish industry as well as the health of the consumers. Humanities education aims to ensure that Doug's enterprise really improves everyone's life, not just make lots of money for himself. In the arts, paintings, poems and plays will highlight Doug's initiatives to raise the standard of living of his tribe. Religion will promote thanking the Great Spirit for the bounty of the rivers and the enterprising spirit of the Ojibwa for whom everyone counts.

### ***Technology and Our Human Condition***

We have considered the place technology holds amid nine other institutions that are found, more or less formally, in all societies. These ten institutions, in turn, are parts of the three major aspects of our human condition mentioned earlier: It involves a collaborative effort (1) to appreciate beauty, (2) to understand what we *can* do, and (3) to decide what we *should* do to make life better.

But there is still a fourth major aspect: Our nature is crippled. We act against our better judgment. Life is agonizing for the majority of people breathing air at this minute. Indeed, this effort is lifelong and difficult. So besides our social institutions, we develop cultural institutions aimed to ensure that all our creative efforts, technology included, actually improve life.

We imagine our actual human condition as an abiding need to get along with each other, and a felt awareness that we don't get along very well. There are many blocks to our practical intelligence discovering what we might do,



just as there are blocks to our consciences discovering what we should do. In later units, we will identify these blocks and then explore how they may be overcome.

**[need an intro to next chap?]**

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## 2. Beauty

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In the previous chapter, we noted that part of our human condition is that we are aesthetic. We both love beauty and create beauty.

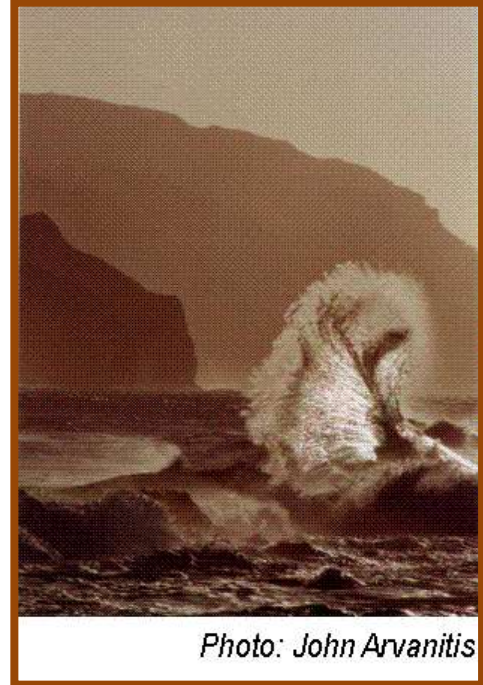
### Forms of Beauty

Beauty comes in many forms, but three in particular stand out.

We experience it in *nature* when we see the sun sinking into a lake or the color of peach radiating from the delicate bowl of a tulip.

We experience it in works of *art*—not only by seeing a painting but also in hearing a song, smelling a wine, and by running our hands over a sculpture as if we were blind.

We experience it in our *bodies*, as, every morning, we prepare our faces and dress our bodies to present ourselves to the world.



### The Experience of Beauty

We say that beauty is in the eye of the beholder. This is an important point. It says that beauty is not a property of an object, as, say, gills are a property of fish. Rather, beauty is a property of an *interaction* between an object and us. This is why people disagree just how beautiful a flute sonata is. Two people can smell the same rose but describe quite different feelings about it. Beauty touches something different in different people.

(Notice also that in saying “eye of the beholder,” we don’t want to exclude non-visual experiences of beauty. The blind, after all, can respond to beauty too. We say “eye of the beholder,” but it’s really the *psyche* of someone whose senses respond to an experience of a pattern or flow. We may experience that pattern or flow through seeing, or hearing, or smelling, or tasting, or touching, or moving about bodily.)

Yet no matter which senses we employ to experience beauty, there is one experience common to them all. It’s a feature that even many artists and philosophers overlook, namely, that beauty is something *sought*. They sometimes talk about beauty as if it were a concept, an idea. But essentially,

our concepts about beauty come *after* a spontaneous and ongoing *urge* we feel to seek beauty. To realize how spontaneously this urge for beauty is part of our nature, just imagine how we react to something ugly. Without having to think about it, we're disgusted by ugly things. ("Disgust" is related to Latin words for "throw up.") We wrinkle our faces. Also, we spontaneously forget ugliness: Just think of an ugly building that you drove by for years and that was torn down one day. Difficult to picture, isn't it?

In contrast, beauty is something we seek not only "out there" but also, and simultaneously, "in here." Our attention is captured. When we walk in the woods and come upon an open meadow, we are stopped. When city-dwellers hike across a frozen lake at night, the sight of a million stars overhead drives all other thoughts out of mind. Something in us insists that we stop and gaze. This same demand drives good artists. They feel the urge to create something of infectious natural beauty. Not all artists understand that we are by nature thirsty for beauty, but those who do will fix their attention on tapping the same thirst in others about some specific peculiarity of life.

The experience of beauty can raise at least the question of an order above the natural world—a super-natural order. Our desires for ever richer beauty and ever more comprehensive harmony have no inherent limitation. Our human condition is to be aesthetically unsatisfied. Perhaps it's only the fear of becoming holy that suppresses the question of a supernatural source and fulfillment of beauty.

So, while we often say that beauty is in the eye of the beholder, it seems more accurate to say that *beauty is a demand of the heart for order, harmony, wholeness*. Beautiful art, dance, music, sculpture, and gardens create feelings in us that naturally want to:

put *order* into our lives,  
*harmonize* the different dimensions of our experience, and  
make our lives something *wholesome*.

Beauty in nature has these same outer and inner dimensions. It cannot be restricted to something "out there" without someone's "in here" seeing with an aesthetic eye. No one has been able to draw up the list of features that a beautiful scene must have. We are often startled by forms of beauty in nature that are totally unexpected. When we are startled by beauty, part of our own spirits unexpectedly expand as well. As everyone knows, friends can look at the same scene and be unmoved. What everyone may not know is why. A major reason is that friends may not yet be familiar enough with aesthetic experience to let their spirits expand.

Still, I don't want to identify nature with what is "out there" to be experienced by our "in here." The reality is that we cannot step back from nature and observe it all because we too are part of nature. For example,

imagine that you have been hiking all alone for an hour, taking in the beauties of trees rustling in the wind, birds singing, and clouds scudding across the sky. Then you notice a woman hiking far down in a valley, whistling as she walks. And you realize that nature is always on the move—not only in the trees, birds, and clouds, but also in a whistling woman. Nature itself is the mud from which all things human emerged. Nature itself has the capacity for whistling a happy tune—indeed, also for remarking how beautiful all of nature is. Might it then dawn on you who you are? You too are a beautiful child of the universe. To realize this is to be deeply arrested by nature.

### ***Diverted Beauty***

Unfortunately, too many of us never learn how to get arrested. The demand of our hearts for order, harmony, and wholeness can be diverted by two other needs.<sup>3</sup>

**Control.** One kind of diversion arises from our needs for *control*. By control I would include both the *power* to manage people's reactions to us and a mastery we achieve when we elicit *honor* from them. And these needs are eagerly met by advertisers eager to sell us magic. It's magic because there's a trick going on, and the trick is an illusion, not reality. We are tricked into believing that driving a Hummer makes us powerful, or that using Biosilk hair conditioner improves our well-being. Almost all advertising aims for magical powers. Some of the more shameless even use the word "magical" to sell their products.

And not only are we tricked into buying these products, we also hope to trick others by our stunning appearance. We "power dress" to pretend we are self-sufficient. Those of us who wear uniforms easily rely more on our outfit than on our minds and hearts to earn respect from others.

But there's a difference between the advertiser's trick and the buyer's trick. Advertisers know that it's just a trick. They are the sales personnel for magic stores. But when the trick works well, we buy it, sincerely believing we become more powerful, more honorable, or better off than we really are. We put our faith in this magic and spend big bucks on it as well. We get tricked.

**Sensation.** A second kind of diversion relies on sensations in our neural systems. Its roots lie in the pleasures of *intense sensate experiences*. Many mediocre artists craft their works with an overall aim to excite certain

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<sup>3</sup> The notion of *diverted beauty* is based partly on reflections of R.G. Collingwood, in his *The Principles of Art* (New York: Oxford University Press, 1958; originally published in 1938), in the chapters entitled "Art as Magic" and "Art as Amusement," pp. 57-77 and 78-104, respectively. The notions of "genuine beauty" have been developed from reflections of Bernard Lonergan in his *Topics in Education* (Toronto: University of Toronto Press, 1993), chapter 9, "Art" (pp. 208-232). (Originally presented in 1958 at Xavier University, Cincinnati.)

physical, organic feelings in their audiences. We see in every field of art, be it painting, sculpture, dance, song, music, landscape, or architecture. The feelings that are titillated can be quite different from one another. They may be feelings of humor or horror. They may be bombastic or erotic. They may be sentimental or indignant. Yet they all have in common the convoluted phenomenon of having feelings about our neurological sensations.

The welcomed effect is on inner neurological experiences and not any appreciation of some objective order, harmony, or wholeness. Unlike the magical uses of the arts, the demand is not for control over our outer environment. Rather, it arises from our inner nervous system. What we “feel” is not some attraction to the truly better but a pleasure in just having certain sensual feelings. In an ironic burst of honesty, these artworks are unashamedly presented as “sensational.” The feelings do not really take us outside of ourselves; they turn us toward our sensations; they are self-absorbing.

Even feeling sadness or hurt can be self-absorbing, , as we see in people who rather enjoy feeling sorry for themselves or who spend their lives replaying the many ways they have suffered. All artists are tempted to produce works that arouse certain physical sensations because intense experiences sell. And intense experiences sell because the pleasure of a pure experience of an organic, physical reaction easily becomes addictive. Indeed, isn't all addiction some dysfunction in the nervous system that needs its “fix” regularly? When artists succumb to the temptation to excite, they almost always find audiences whose have come to put their faith in “sensational” entertainment.

### ***Discernment.***

These distinctions between genuine beauty and the magical and sensate diversions are neither abstract nor irrelevant. Quite the opposite. They represent easily recognized actual experiences. Every person who hopes to live a genuinely better life must learn to distinguish between the demands of the heart to be fully open to life and the addiction to mere magical control over people's reactions to us and mere inner excitement of our sensibilities. If we don't learn, through ongoing personal experience, how the demand for genuine beauty feels like a movement toward order, harmony, and wholeness, we will easily settle for living in the illusion of being capable and the recurring need for more excitement of our senses. We lose our soul.

This sort of discernment is not between types of images. Since beauty is a demand of the heart, images cannot simply be categorized as genuine, magical, or sensate. This is because the property of *beauty* lies not solely in the objects we encounter but in the encounter itself. So to discern these differences in our own lives, it is crucial to consider the *interaction* of some



image or sound or movement with the person who finds it appealing. A picture of a sailboat gliding into a sunset may inspire you with a deep sense of harmony with the universe while it moves me to want to buy a boat. Movies with sex scenes may arouse your erotic juices but fill me with awe at the beauty of love. While most ads aim for the "magic" of a purchase, some cleverly draw us in by images that do uplift our spirits but only as bait. In no time, we are reeled in to imagine ourselves as more powerful or more excited. In short, to discern genuine beauty, make a habit of noticing whether your *experiences* of "the beautiful" are fulfilling or distracting.

In this respect, technology and beauty are not enemies. Indeed, the products of technology can be the objects that stir our demand for genuine beauty. The iPod, the Plymouth Viper, and the Jay Pritzker Pavilion in Chicago (pictured) can touch our thirst for harmony. This is why technology connects directly to marketing. The visible beauty of a technological product stops us immediately, while our questions about its technical capabilities come later. Of course, using these products does not automatically cause inner peace, but they make a symbolic promise that life will somehow be better if we pay money for their use. Here is where discernment of genuine beauty is essential. Unless we carry forward that promise by using these products in self-transcending ways, by resisting the impulses to feel just excited or powerful, we will be diverted from that peace our heart longs for.



### **Bringer of Peace**

What is it that the heart really demands when it urges us toward beauty? One thing is some sort of peace. But peace as opposed to what? While we each suffer from our particular stresses, there is one general type of stress that affects everybody. It's the stress of being a cooperative member of society. By that I mean the stress of having a certain role, with certain duties, with deadlines, all under the eye of others who have vested interests in our performance. This is true not only where we work, but also at home, and even when we're on vacation. It's the "I gotta" voice -- all the things we feel we must accomplish for the lives we share with others.

Here is where beauty offsets some of the stressful demands peculiar to technology. Technology shapes how we work together to improve our common well-being. But this work involves taking responsibility, doing our part, keeping our promises, and earning a living for the well-being of our

families. For some people, their whole life is their work. They have no time for beauty. They are "married to the job." They are cogs in a social machine whose incessant grinding has deafened them to their inner demand to smell the roses. But a self-transcending experience of beauty drives social duty out of mind for a while. A genuinely beautiful interaction is a temporary liberation from the lock-step march of enterprises. This temporary getaway is not always a shirking of our duties. In fact, it seems to be a property of human creativity that great insights come when we liberate ourselves from the daily grind for a spell, so to speak.

## **Symbol of Hope**

A second thing beauty does is nourish our hope in the face of difficulty. After all, our lives are in process, with many hard times. We often wonder how long we can put up with the pressures of life. A spiritual portrait of you might have a question mark over your head. It is our human condition to live in hope.

But let's not confuse hope with *hopes*.

*Hopes*, the plural, are specific goals. We move toward them with clear vision of the things we want, even though we well know that we will not reach them all. Nor are all specific hopes or goals truly good for us. We saw how in the arts magical thinking seeks the illusion of control, and the desire for sensual massage turns our feelings upon themselves.

Hope, the singular, is that inner longing that keeps us seeking to learn more, to choose better and to let love dominate our lives. Hope is open about how it might be fulfilled. Hope moves forward somewhat blindly.

Hope keeps hoping, so that no matter how many *hopes* come true, we think up yet more *hopes*. Also, we can *fail* to fulfill our *hopes* and yet still have hope. And the contrary is also true: Highly ambitious people may realize their *hopes* and yet be on the verge of hopelessness.

Hope is often about what seems impossible: We hope to gaze again on the face of a love we lost. We hope to see our children thrive after we've left this life. We hope the balm of our love might heal someone who is out of our reach. We need not, should not, forget that we *want* these experiences.

Hope has its seasons.<sup>4</sup> There is a winter, enduring hope when times are hard. A springtime, rising hope when the future looks bright. A summertime,

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<sup>4</sup> These analogies are borrowed from Northrop Frye, *Anatomy of Criticism* (Princeton: Princeton University Press, 1957), pp. 158-239. He presents the four seasons as analogs for four kinds of literature, driven by dialectics of desire and dread. Briefly, spring is desire rising over dread; summer is desire dominating dread; fall is dread rising over desire; winter is dread dominating desire.

relaxed hope when all seems well. An autumn, nostalgic hope when our losses mount and skies darken.

As a symbol of our loftiest desires, hope has tremendous power in countering the many ways technology worsens our condition. It is hope that inspires people to fight against pollution, nuclear weapons, identity theft, commercializing the wilderness, and irrational restrictions on access to new medical technologies.

The best artists know this very well. In painting, song, or dance they represent the loftiest aspirations of our hearts. They do not assure us of magical control over our environments, nor do they feed our preoccupation with poignant feelings. They give us courage to keep on striving to become more open to learning, to doing better, and to living deeply in love.

So I recommend that you let beauty represent your hope. Not your "hopes" to impress people or to jiggle your nervous system, but that inner demand that everything be well. Listen to a Beethoven sonata, or hike to a hilltop to survey distant forests. Then let the beauty you experience echo these words of St. Julian of Norwich: "All shall be well. And all manner of thing shall be well."



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### 3. Symbols

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Our very first notions of technology are through symbols. That is, we *imagine* technology in our minds. We think of it in *pictures*. Also, we usually have some *feelings* about various technologies. For example: How do you feel about automobile factories? Some will feel positive because they love cars, but others will feel negative because they picture polluting smoke billowing from tall stacks. So, before we analyze technology, let us consider how the symbols of technology affect us.

#### What Symbols Do

Some people say they hate "Sports-Utility Vehicles" because they burn up diminishing oil reserves. Others say they love them because they're safer in a crash. But aren't they bluffing? Don't most SUV haters just hate the symbolism of a big bully on the road? And don't SUV lovers just love the symbolism of being the bully? Even the name, *Sports-Utility*, is meant to symbolize something about the kind of person we like to imagine ourselves being -- athletic and handy.



What is it about a symbol that has such a powerful effect on us?

One factor is that symbols skip our minds and work directly on two other parts of our psyches--our imagination and our feelings. Our minds specialize in knowing what's true or false, and understanding why and how. But our feelings specialize in indicating what's better or worse, and our imaginations specialize in representing the objects of our feelings to us.

#### Feelings

We need to say a bit more about feelings. Our feelings are not thoughts. Feelings are about values. They are the initial "gut" reactions to better or worse. They can be positive; they can be negative. On the positive side, we may feel ....

enchanted, tender, infatuated, brilliant, proud, gratified, amazed,  
valiant, consoled, important, appreciated, delighted, eager, concerned,

capable, brave, hopeful, excited, jolly, determined, amused, glad, elated, enthusiastic, courageous, sexy, zealous, alert, daring, ....

On the negative side we may feel ...

depressed, dissatisfied, fatigued, guilty, disgusted, resentful, bitter, frustrated, embarrassed, inhibited, bewildered, anxious, dismayed, antagonistic, mad, indignant, furious, angry, cynical, trapped, humiliated, edgy, impatient, sullen, annoyed, listless, regretful, indifferent, bashful, ....

We have many different feelings, so many, in fact, that St. Augustine observed, "The hairs on your head are far easier to count than your feelings and the movements of your heart." (*Confessions* 4.15)

Also, our feelings have objects. But the direct objects of our feelings are not "real" things. Rather, our feelings are our reactions to our *images* of real things. This is an important distinction because every "thing" we consider worthwhile or worthless is represented to us by an *image* in our *imag*-ination. If, say, I discover one day that I underestimated my father, it's not because he changed; it's because I adjusted *my image* to fit his reality more closely.

Notice that the same image can stir quite different feelings to different people. For example, the Christian cross can instill pride in Christians but resentment in Jews and hatred in Muslims. Notice too that the same image can stir remarkably different feelings in the same person. A biker may feel *enthusiastic* about a motorcycle one day and then *apprehensive* about it the day after a tragic accident.

## What Symbols Are

What exactly is a symbol?

First, we should note a difference between those images that are *symbols* and those that are *signs*. A "sign" image can represent what something is -- the "H" sign that indicates a hospital, a computer icon depicting a printer. A "sign" image can also give directions -- a red traffic light says "stop;" a silhouette of a female says "ladies' rest room in here." In contrast, a symbol instills feelings -- the way a bank's architecture might instill trust, the Pope's garb might instill respect, or an ad for chocolates might instill desire.

Also, a sign is outside of us, while a symbol is within. If the image of a bank's architecture, the Pope's garb, or of chocolate don't move you



emotionally, then for you they're just signs; they name what things are. But if they do move you, then they're symbols for you.

We easily ignore signs we're familiar with because we no longer need names and directions. But symbols are different. Even the most familiar symbols can instill feelings over and over. This is because symbols are what carry our value system. When we see a bee, we don't have to think; it symbolizes danger, so we shoo it away. When we see a quarter on the sidewalk, we don't have to think; money symbolizes value, so we pick it up. We keep photos of dear friends because we *want* to feel our love for them.

So here's the definition we'll be using:

A symbol is an image linked to a feeling.

So symbols don't tell us anything about truth. They don't explain why things happen or how things work. Rather, they urge us. They move us emotionally toward what is good, worthwhile, advantageous, pleasant, better -- and they pull us away from what is bad, worthless, risky, unpleasant, worse. In this perspective, then, when people say "I like SUVs because ..." we really won't understand why they like SUVs. Instead of asking, *Why do you like your SUV?* we should ask, *Can you describe how your SUV makes you feel?* Or we could ask, *What images do SUVs remind you of?*

## **Technology & Marketing**

Technology may sound like it has nothing to do with symbols and feelings, but nothing could be further from the truth. Recall how our social systems are linked together. Technology goes nowhere without *marketing*. Advertisers don't aim to pour technical information into our minds; they aim to stir feelings in our hearts. Because symbols are images linked to feelings, the strategy that marketing experts use is to imprint an image in us that will stir a feeling of desire for their product (and often an aversion to competitors' products).

This is why, when companies market their technological goods and services, (and politicians market *themselves*) they often don't bother much with truth. Even when truth-in-advertising laws force them to reveal dangerous risks, it's no great loss because they know that images normally have a far stronger effect on our preferences and aversions than data and explanations.

Also, don't overlook movies and TV shows. They too "market" products and "sell" a notion of "well-being." When we see Tom Sellick driving a Mercedes,

or "E.T." eating Reese's Pieces, we can bet that it's marketing that got these images into our heads.

## ***The Human Condition & Marketing***

This brings us to a question about our human condition: What do marketing images say about our needs? What do they say about the threats to our well-being?

What marketing images promote are often opposed by what our cultural institutions promote. That is, what humanities instructors teach, what the fine arts express, what law courts uphold, and what religions preach can be the exact opposite of what advertising images promote. Each side gives quite different images of what our needs really are, and what are the real threats to our well-being.

So to begin reflection about this question, here is an exercise in noticing how marketing relies on symbols. You don't need to hand it in, but this will be the topic of this unit's discussion.

First, leaf through the advertisements in a magazine or newspaper. Notice any pictures that grab your attention. They could be photos or illustrations. They don't necessarily have to depict anything explicit about technology.

Then go back and select the one that engaged your *feelings* the most. Take your time about this. Focus on feelings like being attracted, or repulsed, or fascinated, or calmed, or excited, etc. Don't "edit" your feelings just because you may feel embarrassed to admit them.

Then reflect on the people who brought this image to you. Consider how they selected this image for impact. They wanted you to feel something. They wanted you to want something. Or they wanted you to *not* want something. Maybe what you felt is exactly what they wanted. Maybe not.

As far as possible, keep your focus on the image, and not on any nearby text. (We want to analyze symbols here, not language.)

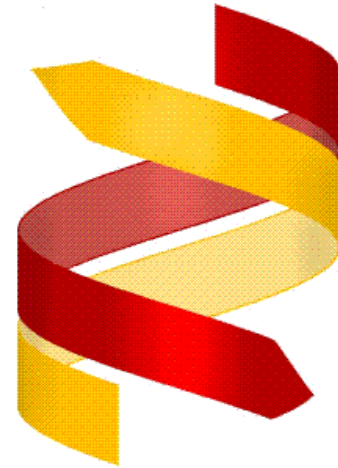
For the discussion about this, we will try to make connections between the image you selected and the values associated with them.

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## 4. Wounded Creativity

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In an earlier chapter we defined our human condition as being naturally aesthetic, creative, and moral, but often acting in ways that are ugly, stupid, and wrong. What is going on in our creative nature here? And why we often violate it in ways that make us functionally stupid?



### ***Making Life Better through Creativity***

Our story of Doug Deepwell illustrates how spontaneously creative we are. Everywhere, we humans demonstrate that we have an innate practical intelligence that persistently looks for ways of improving our human condition. We not only get insights into getting some particular thing or having some particular experience. We also get insights into getting these particular things and experiences *regularly*. So we spontaneously create the setups that will keep these particulars coming without interruption. Our efforts may focus on any of the six different kinds of initiatives that make up a "social system."

We look to science for developments that might improve our technologies. We look to technologies for more efficient ways to do things. On an economic front, we create contracts that ensure a regular wage for regular work. On a marketing front, we advertise our ongoing commitment to deliver products and services. On a political front, we persuade people to vote for politicians, parties and referenda that are in our best interests. On the legal front, we align our enterprise with state and federal regulations.

These scientific, technological, economic, marketing, political and legal routines that make technological improvements actually possible are each the result of our creativity. All these routines not only deliver particular good things to individuals. They also link us together in a collaborative effort and in a sharing of the benefits of technology. In other words, all these routines are dimensions of our "social" condition.

### ***Why Can't Creativity Keep on Improving?***

But, over time, some societies get better while others get worse. Why is this? Why is Detroit no longer a safe city? What's the key for ensuring that Afghanistan will emerge as a better society? Why does Canada keep on

improving while Mexico cannot get going? Why do some marriages break down? Something tragic happens to our creativity.

Let's start by asking a simple question: Why don't things *keep on* getting better? We know the creative power of our practical intelligence to improve our human condition. But why doesn't it *continuously* improve things? If we can answer this, we may be able to pinpoint exactly where things go wrong.

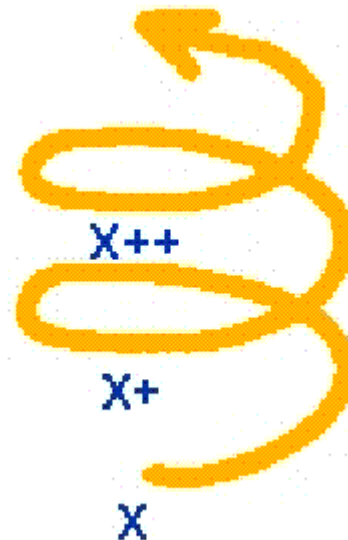
## The Creative Process

So let's look closely at how the creative process works in society. Things don't improve by fate or magic or superstition or official decrees. Even happy accidents of nature do not sustain their benefits to us without people using their practical intelligence effectively. Improvements in life do not last except where people *attentively* notice shortcomings, *intelligently* optimize opportunities, *reasonably* shun half-baked ideas, and *responsibly* do better. These are the key events in all human creativity.

Note that creativity is not the exclusive possession of artists. Creativity is *any* effective inventiveness. It goes on in us every time we try to solve a problem or improve a situation. Creativity not only goes on all the time; it also reinforces itself. We can see this if we imagine the creative process as winding around and up like a helix:<sup>5</sup>

Suppose you have Situation X, representing how things are currently working. If you like, you can imagine a school, or your workplace, or a friendship, or the health care system, or Port Huron, or perhaps your own family. In any of these situations, many things are working well but not all. Life can interrupt a well-working situation with a destructive hurricane or the death of a leader.

So practical intelligence kicks in to understand the problem and create a solution. The keener the minds, the more likely an effective solution will be found. As a plan is made, the helix begins to rise and turn. Usually the plan will involve a change in what things are used (technology), how money flows (economics & marketing), and in persuading others to agree and cooperate (politics &



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<sup>5</sup> This analysis is based on the work of Bernard Lonergan. See his "Healing and Creating in History," in *Third Collection* (New York: Paulist Press, 1985) pp. 100-109.

law). As the plan is implemented, the helix turns further. The people involved will experience a change in the setup—a new technology, a modified economy, new political agenda, different ways to advertise, changes in the laws. As people adapt to these changes, the first turn of the helix is completed. Situation X has now become Situation X+, now a better situation. The human condition has improved.

We then notice what still doesn't make sense in situation X+, or we notice new problems brought on by new challenges. By our creative, practical intelligence we see new opportunities, we validate our technological, economic, marketing, political, and legal plans, and we decide what to do next. Our next action transforms an improved situation X+ into an even better situation X++.

And so the cycle spirals upward, as long as we continue to be creative.

This description is not a recipe that ensures success. It is simply an explanation of how better situations get that way. It makes clear that no human situation really gets better without human creativity using practical intelligence successfully over time.

### ***The Change in the Creative Person***

Keep in mind that we are part of any situation, any "X" that puts demands on us, such as a plugged sewer line, a painful relationship, or trying to make ends meet financially. When we say that our situations improve when we act creatively, it is not only our external circumstances that have improved. Our own *creative ability* to make things better improves. Those who have grown up environments that have generally been getting better will more quickly discover the importance of being creatively intelligent rather than depending only on luck and the good will of others.

Still, the discovery of what is happening to our mental ability usually occurs gradually and imperceptibly. As we grow up, we don't notice that we are gaining rather specific skills in being creatively intelligent.

Youngsters catch on to the difference between being intelligent and just memorizing. They learn that asking Why, How, and What For is quite different than committing a fact to memory. They can actually explain things, not just rattle off names and numbers.

Teenagers learn rely on their intelligence to *verify* what they've been told. They ask whether the stories about their grandparents or those in the Bible are true. They ask whether or not the explanations they took for granted— *granted* mainly by parents—are really valid. They're learning critical thinking.



Adults recognize that creative intelligence also requires taking *responsibility*. It means actually making the solution work—by applying new technologies, new financial arrangements, and new efforts to persuade the people involved to change.

Concretely, all this occurs in an environment that may be getting better or getting worse. The better the environment, the fewer the problems, and the better equipped are the participants to spot new or residual problems and to meet them with creative solutions.

And the more people yield themselves to being fully open to new questions like these, the higher the odds that situations will improve, moving upward, as it were, along the creative helix.

### **Wounded Creativity**

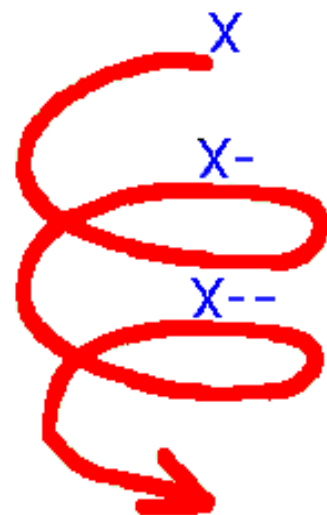
In the business world, promotional speakers praise creativity as an unadulterated good. Many religious preachers encourage creativity as sharing in the Creator's own nature.

But many situations are getting worse. Our creativity isn't working as it should. Creativity itself can be dysfunctional. Many a "creative" solution makes things worse because key questions were overlooked. The creativity of a successful thief lies largely in foreseeing all eventualities. Bring on more dysfunctional creativity and nothing really gets better. Praise creativity as an unadulterated good and you may sometimes inadvertently foster creative ways to make things worse. In other words, *creativity is wounded*.

So we need to take a second, closer look at how situations change. This second look reveals how a wounded creativity can reinforce its own malfunctioning, winding backward and downward:

Suppose, again, we have situation X, which includes some things that make sense and other things that do not. We feel the impulse to do better, but now we fail to notice what doesn't make sense, or fail to see opportunities for improvement, or fail to validate which opportunities are workable, or fail to take responsibility for action.

Now situation X has fallen into the worse situation X-. More things are going wrong. Again, we overlook the additional elements that make no sense in situation X-, or we skip thinking about new opportunities, or we forgo checking our plans for effectiveness, or we fail to decide



what to do next. Our inaction, or inappropriate action, transforms a bad situation X- into a worse situation X--.

And so the situation spirals downward, as long as we apply a wounded creativity to problems.

### ***Changes in the Creative Person***

Again, remember that we are part of any situation on which we have effect. While we may imagine a declining situation as crumbling houses, bad roads, disgusting food, unreliable services, unruly children, and the like, we should also include *our declining ability to turn things around*. With each downward turn of the slipping helix, the situation gets worse, which only increases the odds against even the brightest and most dedicated people successfully halting the slide. This is why good situations tend to get better, owing to fewer challenges to our creativity, and bad situations tend to get worse as our creativity itself is less able to face problems that have grown more numerous and complex.

Moreover, chaotic situations delay and often prevent the normal maturation of our minds. Some children grow up never hearing an adult who knows the difference between just memorizing and really understanding. Some teenagers never realize the importance of backing up their opinions with data or with reference to authoritative sources. Some adults who excel in criticizing society never tackle the more difficult work of understanding how our human condition can be improved.

### ***Five Ways Creativity is Wounded***

How is our creativity wounded? An answer to this will help us target where healing is needed and where a recovering creativity can begin improving things again.

All creativity is the result of insight, and an insight is the result of asking, What Does That Mean? Why? How? What For? Answers to questions for insight are *explanations*. They are not facts or dates or names; they are explanations about facts, dates, and names. Insights reveal *what* people in a situation mean by their words, *why* a situation is in trouble, *how* the problem manifests itself, and *for what purposes* people are acting.

The problem is that there are many insights that we prefer not to have. *That is, we have certain biases against thinking*. This may seem preposterous, but consider these five cases:

**Neurotic Obsession.** We are continuously fixated on one issue—a certain fear, a persistent hope, a recurring memory. We can even be fixated on a way of being our selves—like being perfect, or helpful, or

successful, or sensitive, or knowledgeable, or law-abiding, or being excited, or dominating others, or avoiding conflict.<sup>6</sup> In each of these fixations, there is a trap mechanism: Because obsession strengthens our skills and understanding in a narrow area, the more likely our acquaintances will show admiration for these strengths, and the less inclined we are to question even the existence of the obsession. In other words, obsession creates its own defense against its undoing by blinding our curiosity to the very possibility that we are obsessed. Should an inner voice say "stop," our we spontaneously say, "Oh, I *won't think* about that right now."

**Egotism.** We are closed to questions about the well-being of others, and we are uncritical about our own closed-mindedness. It is not stupidity that defines egotists. They have many insights, but because they entertain only those questions that will improve their personal lives, they lack creative insight into improving the lives of anyone else. Investment bankers shuffle high-risk loans around for personal gain, knowing that their gains would mean disastrous loss to others. We have all met people who are driven by the raw desire to dominate others. Should such people hear the inner voice that would question their self-absorbed behaviors, they say to themselves, "Oh, I just *won't think* about that right now."

**Groupism.** We are closed to questions about the well-being of other groups and uncritical about our own group. Groupism is a group egotism, a group self-centeredness. It is often mistaken for loyalty, but there's a difference. Loyalty is a good thing, as long as it doesn't suppress good questions. But questions about the shortcomings of our own group and about the strengths of another group *are* good questions. To suppress these questions is the essence of groupism. So an "unquestioning loyalty" is a contradiction in terms. Ironically, we will not find strong egotism in people infected with groupism. They can be quite self-sacrificing, but only for the sake of the group. And the very camaraderie that tends to heal egotism, only deepens the groupism that spontaneously avoids wondering about anything good elsewhere. A University of Michigan graduate will see a flyer for an interesting event at Michigan State, but he says to himself, "Oh, I *won't think* about that right now." Too bad his expensive education left him so functionally stupid.

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<sup>6</sup> The enneatype theory proposes that everyone is at least somewhat obsessed with one of these nine fixations. See Tad Dunne, *Enneatypes: Method and Spirit*. (Universal Publishers, uPublish.com, 1999 ) For a short article on this, see "Being a Teen" in my website: <http://www.wideopenwest.com/~tdunne5273/>

**Commonsensism.** We easily assume that common sense is all we need. We are closed to questions that may require more strenuous mental work. We don't bother learning about the history of situations. We skim-read articles on complex issues. We assume TV programs on philosophy would be totally abstract. We restrict our curiosity to the practical—what will show quick results. We take pride in being "practical." We believe in "pragmatism," meaning that we focus on immediate results and put aside any questions that might force us to study the dynamics and the history of situations more deeply. We assume that "plain old common sense" is adequate for solving any problem. A woman reads in the Bible that Jesus said he came not to bring peace but division (Lk 12:51), which doesn't jibe with what she's been taught. But rather than study what scripture scholars say about this text, she says, "Oh, I *won't think* about that right now."

**Secularism.**

We easily avoid thinking about anything deeper than the obvious, particularly the mystery of our own lives. We assume that it's quite enough to be "worldly wise." But questions about the mystery of life itself arise all the time:

Are we self-sufficient? Is humanity, left on its own, forever doomed to churn out its usual mix of achievement and disaster, or is there within reach a healing of the hubris, fear, and dysfunctional heritages that bring on these disasters?

What is this unrelenting yen for beauty burning in us for expression?

Did everything really just happen?

Is our "good world" good in the same sense that our deeds are good—namely, that the world appeared through a good deed of a Someone?

Because answers to these questions cannot be found in philosophy or science or logic; indeed, because many religions preach answers that have little to do with the questions, many people say, "Oh, I won't think about that right now."

What is important to notice is that each of these five ways is a *bias*—a permanent tendency in our creativity to limit itself by avoiding thinking. While it is part of our human condition to be creative, it is also part of our condition that our creativity is wounded by these endemic biases.

Note that in this view, I am using *bias* with a technical meaning. In ordinary language, we might say "I have a bias for chocolate." But we mean only a

preference, not a refusal to think. For an in-depth analysis of the wounds in our creativity, we need to use technical terms. So keep this in mind:

In this course, a *bias* will not mean a preference. It will mean an avoidance of thinking in areas like those mentioned above.

## ***Effects of Biases on Technology***

We have described the wound in our creativity as a bias against thinking. But in order to avoid thinking, we must also prevent what stimulates all thinking: Questions! This is important to see. We may picture, say, racial bias as being against people of a certain race. But it is more precise to note that the bias works by ignoring legitimate *questions* about the well-being of another racial group. So let's look deeper into these five biases against thinking to focus on the *questions* that each bias avoids.

**Neurosis.** The form of neurosis which is most clearly related to technology is the obsessive-compulsive disorder and its relation to "consumerism."

It is no secret that many people in industrialized countries can be obsessed with "the new." Particularly in the United States, "new" is used by advertisers to sell cars, computers and drugs without much explanation of how these products make life any better.

Likewise, many are obsessed with diversions from the sense of genuine beauty that seeks wholeness, harmony, and order. Some go for that "magical" beauty they hope will cause people to admire them, promote them, or step out of their way. Others shell out money for that "sensate" beauty they hope will just excite the nerve endings in themselves and others.

We experience these compulsions to buy without asking questions like these:

"Will this really improve my life?"

"How will I feel tomorrow having spent my time doing this shopping today?"

"Is my enthusiasm for this product a symptom of a disease in my thinking?"

Neuroses represses these questions. (I'm using *repressed* in psychology's technical sense that we don't let ourselves even notice that we are avoiding these questions.) This combination of obsession with the new, a compulsion to buy, and repression of critical questions constitutes an abiding disorder. It distracts people from seeking what really will improve their lives. And the disorder is reinforced by a massive technological, economic, marketing and legal setup that urges us to buy something.

**Egotism.** Regarding technology, egotism works differently in the consumer and the producer. Egotism in consumers focuses on technologies that will make their personal lives easier. Egotism in producers focuses on those that will increase their take-home pay. True, there's no sin in making our personal lives easier, nor in increasing our take-home pay, but when our egotism will not even consider questions that might make the lives of others easier, we are making no significant contribution to society.

One effect of egotism on technology can be seen in the sciences. Recently, the Korean veterinarian Hwang Woo-suk claimed to have cloned 11 human embryos to produce stem cells. Our practical intelligence jumps at claims like this, given its potential to redirect the resources of the medical technology industry toward developing cellular tissue that can replace cells damaged by diseases such as Parkinson's. It turns out that Woo-suk's claim was fraudulent, based most likely on his personal ambition to become a somebody. His egotism *suppressed questions* about truthfulness in research.

The effects of egotism on technology can also be seen in economics in the person of Bernie Madoff, former non-executive chair of the NASDAQ stock market. In a giant Ponzi scheme<sup>7</sup> it is estimated that 18 billion dollars were "lost," in the sense that no one could claim any of it as assets owned. It appears that personal ambition alone drove Madoff. Such greed in high places effectively *suppressed any questions* about the well-being of employees, customers, and the average citizen.

There is also an escapist version of egotism. It is not a desire to gather riches, honor, and power for ourselves. Nor is it the just the desire for solitude that we all experience. Rather it is a fear of the mutuality of engagement with others. It is people who say to themselves, "I really don't care what anyone else needs; I just want to do my thing; stop bothering me."

And there is a version of egotism that wears a mask of loyalty. It shows in company CEOs who promote the effectiveness brought about by cooperation and humane work conditions, but whose personal goal is to make as much profit as possible, with little thought given to what might genuinely benefit the community. As I say, this can look like loyalty to a company. But what shows the true colors of the egotist leader is when he or she leaves the company for the sake of making more money somewhere else with barely a farewell.

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<sup>7</sup> In a Ponzi scheme of investments, early investors are paid handsome returns drawn not from the companies whose stock they owned, but mainly from later investors who wanted to get in on the payoffs. It cannot succeed in the long run because as soon as reputable investors smell trouble and start selling, others quickly follow suit.



**Groupism.** The effects of groupism on technology are usually related to *access*: Who gets the technology? Expressways, TV cables, and wireless hotspots are usually built to accommodate the well-to-do.

Health insurers more readily cover Viagra (to help men have orgasms) than birth control pills (to help women make responsible decisions about birth).

A famous case of racial groupism is the 1933 experiment conducted in Tuskegee, Alabama on 399 African Americans who had advanced cases of syphilis. White researchers wanted to compare the effects of syphilis in black men to that in white men. Ten years later, penicillin was discovered, which cures syphilis. But none of the participants were even told they had syphilis, let alone there was now a cure. A total of 128 people died from the disease or related illnesses. The experiment was not ended until 1972.

The issue of access also relates to who gets the big technological contracts. The lucrative contracts for rebuilding Iraq obtained by oil giant, Halliburton, may have been guided by the hand of politicians in high office who serve as the corporation's advisors.

In all these cases, the well-being of "other" groups is *not regarded as a relevant question*. Questions of the well-being of ordinary people—women, African Americans, wage-earners, the poor—are simply laughed at.

**Commonsensism.** This bias is probably the most damaging to the potential of technology to improve the human condition. As we have defined it, commonsensism is a bias against understanding scientific analyses, against taking history into account, and against philosophical and theological reflections on what makes life truly better.

For example, among the many articles and books like Edward Abbey's *Desert Solitaire* that promote preserving "natural" habitats, hardly any mention the experience of European countries, who have tackled this problem long before Americans have. They have *avoided these questions*.

Besides ignorance of history, we're ignorant of economics. Today, for example, is it better for our society to *invest* in tech firms or to *buy* their products? Reasonable answers are available, but few people want to plow through the supporting analyses. So they *won't let the questions bother them*.

Notice that people with the commonsense bias against studying can be quite ethical. When they are not controlled by any other bias, they can seem to do no wrong. But what's wrong is about what they *don't* do: they don't consider complex questions. And many bad situations are quite complex. Their situations get worse, not by any direct

wrongdoing but by failing to do what their intelligence is quite capable of doing—*asking relevant questions*. Situations get worse not by their *fault* but by their *default*.

People with the commonsense bias against study are the first to throw up their hands in the face of difficult problems, to pronounce them as beyond redemption, and to withdraw from positive action altogether. Again, this is because they are dead set against taking difficult questions seriously. Indeed, it is a dead set of the mind.

Finally, you are probably experiencing right now the difficulty of following these reflections. Like being in love, philosophy isn't fun, it takes time, and the payoff is uncertain. You have probably felt something in you pushing the questions out of mind or enticing you to skim the surface quickly so you can get back to "real" life. But it is necessary to tackle questions like these if we are going to have a clear idea of what really improves our real lives and will set our minds and hearts to making it happen. Without the long-range views that history, science, philosophy and theology give, our creativity is limited to half-baked ideas, incompatible enterprises, deeply entrenched problems, and an abiding sense of hopelessness.

### **Secularism.**

By suppressing questions about the mystery of life, secularism assumes that this world is all there is. People are born. People do what they can, though few things turn out as they plan and those that do are soon gone. Every person and every accomplishment passes away, not just out of memory but out of existence.

The connection between technology and this secularist avoidance of ultimate questions lies in how we hope. If our hope is for the obvious world only, then our hope is a series of hopes for outcomes we envision. Some come true and some do not. That's what hopes are. But the sum of all hopes do not equate to hope. Hopes (plural) are goals; hope (singular) is a virtue. If our hope is for things not obvious, things that lie beyond the obvious, things about why we are, what we are up to, and where we are going, then our hope is a strength of spirit that respects the mystery of life and is not shaken by any of our many dashed hopes, even death.

We express and carry this virtue of hope through beauty. There's the beauty of nature when a glimmering sunset stops us, or when a starry night sky over a frozen lake seems to be telling us something. This is why we have the arts. Not all artworks lift our hope, but many do. Many kinds of music, dance, song, poetry, painting, sculpture, drama, architecture, and landscaping lift our sense that there's more to everything than meets the

eye. And it opens our eyes that there's more to *everyone* than meets the eye. We are all part of something total, universal, all-encompassing.

Those who let the question of God and the mystery of life into their ordinary awareness know this. If technology can help them do this, they embrace it; if not they avoid it.

## Summary Overview

So we are spontaneously creative but our creativity is wounded. Neurotics waste valuable intellectual resources on nourishing their obsessions. Egotists dedicate valuable intellectual resources to themselves alone. Group-centered people focus technology on the advantage of their groups. People for whom common sense is sufficient for all problem dedicate technology toward short-term enterprises that fail to improve the human condition. Secularists direct technology exclusively toward making hopes come true to the neglect of using it to let beauty and hope shape their lives.

In this analysis, notice what it says about *problem solving*. Common sense typically thinks of all problems as having causes. When things go bad, we naturally ask why.

*What happened* that caused this mess?

*Who* did something that brought everything down?

But by noticing that bias is essentially the *absence* of the questions that should have been faced, we realize that many problems have no direct cause but rather the absence of creativity that would have been intelligent, reasonable, and responsible. Since common sense tends to assume that all problems have causes, let me say it baldly:

Not all problems have causes.

In other words, there may not have been any *cause* of a problem, but there may well have been a *block* to our natural creativity to avoid or resolve a problem. So, when you face your next problem, ask yourself this:

Did something *block* our ability to ask the right questions here?

Did I, or some others, *avoid the questions* that would have prevented this problem?

Now I have been describing these biases as distinct caricatures. In reality, we are all biased in all five of these ways. That is, we all have tendencies to avoid certain kinds of questions. I say "tendencies" because that's what a bias means. It doesn't mean that any bias necessarily controls our behavior. Rather, it means that our spontaneous reactions tend to be narrow. In situations where we overcome these spontaneous reactions by paying attention to all the relevant questions, then we have overcome our biased

tendencies. We took seriously those questions that bias might otherwise have suppressed. On the other hand, in situations where our behavior made things worse, then we can suspect that at least one of these five biases was the main block to our natural capacity to consider all important questions.

This too is our human condition. And we have yet to mention the worst part (to be explained in the next chapter) —the most baffling yet widespread habit of acting against our better judgment.

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## 5. Wounded Morality

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No doubt, technologies such as penicillin, asphalt, eye glasses, and computer chips have improved our human condition. At the same time, other technologies have worsened our condition: in the 1950s, thalidomide produced deformed babies, the pesticide DDT triggered premature births and seizures in humans, and many technologies create a wall between us and the unspoiled places of pure nature. However, the value of most technologies must be judged on how we use them. For example, developments such as atomic energy, antibiotics, and genetic sequencing can be used for both improving and worsening our condition. As we noted earlier, technology explores what we *can* do, but we also need to understand what we *should* do. So to understand how technology relates to our human condition, we need to ask what we *should* do to improve the human condition.

There are three ways that we call things "bad" in our human condition. One way occurs through the ordinary workings of nature. A second occurs in any social system that makes life worse. A third occurs when individuals act against their better judgment. Each type of "bad thing" challenges us in its own way. We will examine each of these bad things more closely and ask how they challenge us to *use* technology to overcome them.

### 1. Challenges from Nature

Nature challenges our well-being in two ways. One is through "physical nature," as Mother Nature sends hurricanes, earthquakes, floods, and the like. She also is responsible for human diseases and deformities in our bodies and minds. Here, technology has helped immensely in preparing us for these threats and in moderating the damage.

The other way nature challenges our well-being is through our "human nature" of our growth. In physical nature, growth is along fixed pathways; every oak comes from a similar oak and every case of hepatitis is like every other. But in human nature, growth occurs through a great variety of pathways. Children are regularly unlike their parents and civilizations emerge with unprecedented ways of living. It is our nature as humans to consider our present stage of growth as "bad" insofar as we hope a later stage will be "better." Whether anyone can be considered fully grown up, I don't know, but as long as each of us has more growing to do, we are challenged by our "human nature" itself to know ever more about life and to do what we can to improve it.

To meet these challenges from nature, technology can certainly help us know more about *can do*. With technology, we can prepare for storms and

earthquakes, develop medicines to ward off disease, and establish the material and electronic infrastructures for education to ensure continuing growth in our bodies, minds and hearts. Of course, technology can also be used to ruin lives, not only through careless pollution of our environments but through deliberate choices to wage war through the most advanced technologies available. So we also develop the cultural institutions of a judiciary, a humanities education, the arts, and religion to direct the uses of technology toward improving life.

## **2. Challenges from "The System"**

You will recall from Chapter 1 that "The System" includes only the particular goods and services we want, but also the social processes we set up to keep these goods and services flowing our way. Technology is one of these social processes, along with science, economics, marketing, politics, and law. But sometimes these social processes make no sense. They can become dysfunctional systems. Examples of nonsense in social processes can be found in any history book as well as in today's paper. Here, technology may be part of the problem (as when giant electricity grids crash from overload), or part of the solution (as electronic file transfer technology moves money swiftly and accurately).

But from Chapter 4 (Wounded Creativity), you may also recall a proposal that shocks many people: *There are many creative insights that we'd rather not have.* We discussed how neurotic obsession narrows a person's practical creativity, how egotism excludes creativity on behalf of anyone else, how groupism excludes creativity on behalf of other groups, and how common sense pragmatism excludes finding creative solutions when they demand difficult and long-range thinking. The effect on our social processes is a hodgepodge of half-baked ideas, dim-witted proposals, and enormous wastes of resources spent on defending one's turf. This is indeed a challenge. And because bias cannot ever be permanently eliminated, the challenge to diminish bias and reverse its effects is ongoing. If we do not meet this challenge, we allow our society to slide steadily downward toward complete chaos.

So if the biased mind does not want certain insights, then insights from technology into creative solutions may be brilliant but ineffective because they are simply not wanted. And technology is not equipped to deal with bias. Again, technology needs the directives of our cultural institutions--particularly education in philosophy and theology--to uncover bias and reduce its power.



This “system”—the socio-economic institutions that govern modern life—is not just something “out there.” These institutions both depend on and affect our personal habits. They depend on us as workers to develop skills needed for the job and habits of dependability, teamwork, courtesy, and cleanliness. But our habits are permanently vulnerable to bias, making us functionally blind to certain questions that would normally contribute to improving life. In other words, what we might think of as “my way” or “our way” of doing things may be dysfunctional in ways we prefer not to think about.

This is why many critics use the term, “systemic evils.” What it means is that besides evil deeds done by individuals there is an “evil” in socio-economic systems that thrive on biases of individuals. And the many individuals who do not clearly realize that they do regularly avoid asking certain kinds of questions cannot be blamed for “doing evil” because they literally didn’t know what they were doing.

### **3. Challenges from Our Wounded Morality**

At the end of the chapter on our wounded creativity, I mentioned that bias is part of our human condition, but that is not the worst part. Besides the threats from nature, and besides “systemic evils,” there is also a “basic evil.”

Basic evil is a free act against our own better judgment.

It is basic because every other event in the universe makes some sense except this one. It is a wounded morality.

It seems incomprehensible, does it not, that there are occasions when we value one thing yet choose another? But suppose you are convinced that X is something you ought to do. Suppose, further, that you feel ready, willing and able to do it. Would you ever deliberately *not* do it? Keep in mind that I’m talking about a situation where you’re totally convinced about what you should do, where nothing prevents you from doing it, and where you’re willing to go ahead with it. In other words, no “extenuating circumstances” force your hand. Is it really possible that you would deliberately and knowingly act against your own moral and intellectual commitments?

In Ovid’s *Metamorphosis* (7, 21), Medea complains about an ailment that affects us all. She was heartsick in love with Jason and convinced that she would do wrong to pursue him. But she admits:

I see the good, and I approve it too,  
Condemn the wrong – and yet the wrong pursue.

And St. Paul’s *Letter to the Romans* (7:18-19):

Wanting the good is in me, but not the doing.  
I don't do the good I want, but rather the evil I don't want.

And St. Augustine in his *Confessions* (2.4.9):

I wanted to steal. And I did it. I was not compelled by hunger or poverty, but rather through a distaste for doing good and for the lustiness of doing wrong.<sup>8\*</sup>

What Medea conceived as our human *fate*, Paul conceived as our human *sin*, and Augustine conceived as an *alienation* from both God and himself. For Medea, we can be destined to oppose our better selves, even unto death, and the gods seldom lift a finger. For Paul, we are called to a destiny beyond this world, where a loving God heals us of our self-opposition. For Augustine, we are called to be reconciled to both God and ourselves.

For the sake of speaking, let us call this sad, irrational phenomenon "willfulness." By that I mean the deliberate choice to act against our better judgment, to violate our own reason by making an unreasonable decision, to sin against God. For example:

I realized that I simply must not buy any more clothes this year on my credit card. Then I went out and bought a jacket I didn't need.

I know I shouldn't have my employees to dump the excess carbon tetrachloride into the city sewer. I should purchase a hazardous materials disposal service. I can make that call right now. I don't make the call.

As State Representative, I just voted against additional funding for anti-drug education in our schools. I know this was wrong. I actually believe we can and should fund this education. My only reason was that this is my party's position and I want its support in the next election.

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<sup>8</sup> I wanted to steal. And I did it. I was not compelled by hunger or poverty, but rather through a distaste for doing good and for the lustiness of doing wrong. For I stole things I already had plenty of, and more besides. Nor did I care to enjoy what I stole, but rather enjoyed the stealing and the sin itself. There was a pear tree near our vineyard, full of fruit whose color or taste were hardly tempting. Some mischievous young friends and I often played in the streets until late at night. One night, we went out to shake a pear tree and steal its fruit. We took away huge loads, not to eat but to pitch them at hogs, although we did taste a few. We did it for no other reason than that we wanted to, and because it was forbidden. ... I was tempted to do wrong for no reason except for doing wrong. It was foul; and I loved it. I loved to perish. I loved my own error, not what drew me to error but the error itself. Wretched soul that I am, that I looked for nothing through the shame but shame itself.

These are examples of deliberate choices to do X and not Y. But, to relate this to our biases, we need to realize that biases are *habits* that govern choices. In other words, a choice made under the influence of a habit—here a bias—is not a deliberate choice. Since biases cloud our judgment, we do not directly act against our better judgment because biases cloud our deliberation about what truly is the better judgment in any particular situation. So there is a second level, as it were, of our choices. Besides being able to deliberately choose to do X and not Y, we can also choose to nourish our biases. For example:

I know that my pride is making me brag too much, but I don't do anything to stop bragging.

You realize that you distrust the street-sellers in a nearby Chinatown without any evidence whatsoever, going so far as to warn others that "they're all crooks." But you do nothing to test your assumption.

Harry Bluster is convinced that the United States has higher taxes than most other countries, and he loves complaining about it at every opportunity. But when someone suggests he check his conviction online, he won't.



In other words, it's one thing to have a bias, another to *recognize* that have a bias, and yet another to *nourish* it against your better judgment.

#### **4. Meeting the Challenges**

The basic evil of willfulness is indeed unexplainable. Natural evils have explanations. Even systemic evils have explanations. Our biases can often be explained by poor upbringing or the pressures of our culture. But there is no explaining willfulness. It is a mortal wound in our moral integrity. And among the causes of some systemic evils there are the deliberate, free, yet irrational choices of individuals to act against their better judgment. Their willful lies, thefts, and vengeance not only degrade their social environments; they also set up habits of lying, thieving, and vengeance in others. Then the habits themselves make conversion to genuinely moral living all that more difficult.

Technology has no ability of its own to prevent or undo the basic evil of willfulness. Willfulness infects even the minds and hearts of people engaged in the arts, law, education, and religion. Here, then, is the truly bad news:

Technology is helpless against willfulness.

And willfulness is the ultimate source of many bad uses of technology. In Unit 4 we will outline how an attitude of "critical thinking" is needed to analyze each of these types of "bad things." Then in Unit 5 we will outline a corresponding attitude of "critical healing" that aims to undo the damages, heal the source of problems, and restore our creativity to its naturally progressive path.

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## 6. Issues and Questions

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### *Relevant Issues*

#### The Field of Ethics

There are many ethical issues that technology brings up. Below are some of the main ones. This will help you situate the topic of your paper among the thousands of possible topics on how technology affects our human condition.

Ethics, of course, is about values. But our values can range from the absolutely essential value of just staying alive to the most excellent value of living in love. Staying alive is deeply rooted in our animal nature, while living in love lifts us to the heights of our spiritual nature. Indeed, the history of the human race shows that we continually seek to rise along a scale of values going from vital, to social, to cultural, to personal. So I have arranged the main ethical issues related to technology, along this scale.<sup>9</sup>

#### Main Ethical Issues in Technology

##### *Vital Values*

We seek food, water, shelter, air, warmth, health. These are necessary to survive. Technology certainly benefits our basic living through improved medicine, food, energy resources, and shelter. Yet technology also impairs basic living through:

- Pollution of our air and water
- Depletion of energy from our natural resources
- Marketing high-health-risk products
- Landscape changes on which ordinary people depend for drainage, shade, and oxygen-producing plants.

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<sup>9</sup> The issues listed here are drawn in part from Ian Barbour's, *Ethics in an Age of Technology, The Gilford Lectures, 1989-1991, v.2.*, (San Francisco: HarperSanFrancisco, 1993), pp. 3-16 and *passim*; and from Thomas Friedman's *The World is Flat. : A Brief History of the Twenty-First Century*, (New York: Farrer, Straus and Giroux, 2006). I have arranged them according to the hierarchy of values proposed by Bernard Lonergan in his *Insight: A Study of Human Understanding*, Volume 3 of The Collected Works of Bernard Lonergan (Toronto: University of Toronto Press, 1992), pp. 624-25.

## *Social Values*

To ensure we get our vital values regularly, we see the social value of cooperating with each other. So, with Doug Deepwell, we organize our collaboration into social institutions, the main ones being science, technology, economics, marketing, politics, and law. As part of our social institutions, technology allows nearly immediate communication of vital information for business and daily living. It makes good roads and buildings possible. It decreases manual labor, and makes travel easier. It makes billions of fund transfers possible every day. It gives individuals more options about jobs. It has raised the standard of living for millions.

Yet technology is often controlled by, and provides benefits to, *only certain classes of people*. For example:

- It concentrates economic and political power into the hands of the wealthy, so that the wealthy receive far more benefits than the poor. This is particularly evident in people who invest in company stocks: only those with surplus dollars can invest, and when they do, they usually earn yet more dollars for very little work.
- Dollar outlays for technology mainly go either to commercial goods and services or to military improvements. Far less outlay goes to technologies aimed at improving education, making cities safe, and providing a safety net for the poor and homeless.
- Technology concentrates its own controls in the hands of experts specializing in what is technically possible, and out of the reach of ordinary citizens who are interested in what is better for living.

Also, our *large-scale technologies lack effective controls*. Over the past 50 years the monster has grown beyond the control of the Doctor Frankenstein who created him. For example:

- *Nuclear power* requires extremely reliable measures of maintenance and safety, which were clearly lacking in the meltdowns at Three Mile Island (1979) and Chernobyl (1986). Efforts to establish world-wide controls have been nipped in the bud. In 1949, after the Soviet Union refused to halt development of nuclear power, the United Nations Atomic Energy Commission decided to adjourn indefinitely.
- Our *global technological networks* have grown larger than any one agency can monitor. Consider, for example, the world-wide networks of airlines, of food production, and of Internet communications. These are currently moderated with varying success at local levels without any global oversight over these highly complex and fast-moving processes.



## *Cultural Values*

To ensure that the vital values and the social values we seek are genuinely better for the human condition, we look to ethics, moral reflection, and philosophy. This is why, with Lucy Goosefeather, we set up the arts, humanities education, and a judiciary. We also look to religions to issue moral standards that will guide both our personal living and our social policies. To a large extent, technology plays a positive role in promoting such cultural values. For example, through computerized publishing of books and online *educational* courses, far greater numbers of people have access to the cultural sources of wisdom and morality. By freeing men and women from the drudgery of production work, technology allows for deeper engagement with one's *neighbors* and the creating of *artistic expressions* of the highest noble sentiments.

However, economic interests have overshadowed these quality of life interests. This is probably the most significant cultural issue raised by technology in our day.

- For example, notice the power of economic interests over education. Over the last half century, most colleges today have shifted their emphasis from a liberal arts education that promotes wisdom and moral integrity to *mere job training*—both white collar and blue collar. Indeed, technology-related disasters are almost always a failure to see long-range, which is the perspective of humanities education.
- Economic interests also make it more difficult for individuals to work where they please. It is increasingly the case that it is the employer who makes the decision where the employee will work, and often enough, where he or she will live. Associated with this income-driven social mobility is a *disengagement with a "neighborhood"* where residents stay long and relationship run deep.
- It is said that technology brings the arts to the masses. Today, it's easy to listen to a Mozart sonata or view a painting by Picasso. But are people more often than before even listening to Mozart *while doing nothing else*? Is this really anything more than the *ongoing sensory overload* that technology makes so easy? Are people today really more free than before to be creative in the arts, in writing, in building, in gardening, in music?

## *Personal Values*

To ensure that we will actually recognize the values that our cultural institutions ought to promote, we see the value of personal integrity and freedom. By our integrity, we obey what conscience tells us; by our

freedom, we can voice our demand that technological decisions are based on moral standards.

Unfortunately, technology has very little to contribute toward personal values. In fact, the reverse is true: The personal values of being intelligent and reasonable are what make technology possible. Actually, in two important ways, technology plays a negative role in deepening personal integrity.

- One is that the voice of the most conscientious person is generally lost amid the onslaught of advertising that technology makes possible. Voices of excitement *drown out the calm voices of reason* available on public broadcasting.
- The other way is that the entertainment industry and cosmetic interests easily *distort our image of beauty*— particularly, what it means to be a beautiful person. As we saw in Chapter 1, real beauty expresses the demands of the heart, particularly (1) to liberate us to think beyond our everyday duties and (2) to symbolize our hope that all things shall be well. Fake beauty, on the other hand, is used by the entertainment industry mainly to excite the viewer (sensate), and by the cosmetic industry to hypnotize customers into thinking they will be more powerful (magical) by changing their physical appearance.

### Using and Allowing Technology

Common wisdom says that technology is ethically neutral. What makes it good or bad is in how we use it. This may be true, but the full truth is more complicated. Besides *deliberately using* technology for evil purposes, we can *inadvertently allow* technology to worsen the human condition. We can allow our excitement over what we *can do* to cloud our concern over what we *should do*. We can neglect looking at long-range consequences of implementing new technologies.

Now, nobody made it their goal to increase pollution, to deplete energy resources, to divert talent and education away from the humanities, to prohibit classical standards in the arts, or to fool everyone about being truly beautiful. There are two basic reasons that these negative impacts on our human condition occur.

The first reason we saw in Chapter 3 (Wounded Creativity): Our creativity is wounded by a bias that does not *want* to understand. Here, the bias is the commonsensism that does not want to project the benefits and risks in the long range. Practical-minded people who think common sense is all we need, are always caught by surprise at the many unintended consequences of technological developments.

The second reason we saw in Chapter 4 (Wounded Morality): By our willfulness, we can act against our better judgment. This willfulness is often combined with the bias of an egotism that is out to benefit oneself alone or the bias of a groupism aims to benefit only one's immediate community. So besides the short-sighted dynamics of "unintended consequences" there is also the generally positive dynamic of "repurposing" technical achievements but distorted to support acts of violence and hatred.

In short, technology can worsen the human condition because *we are not paying attention*. When we do pay attention, we raise questions, we identify problems, we propose solutions, and we take up the burden of implementing those solutions.

Perhaps a better way of expressing our ideas about the ethics of technology should be something like this:

The ethics of technology  
depends on how we use it,  
and on how we allow it to use us.

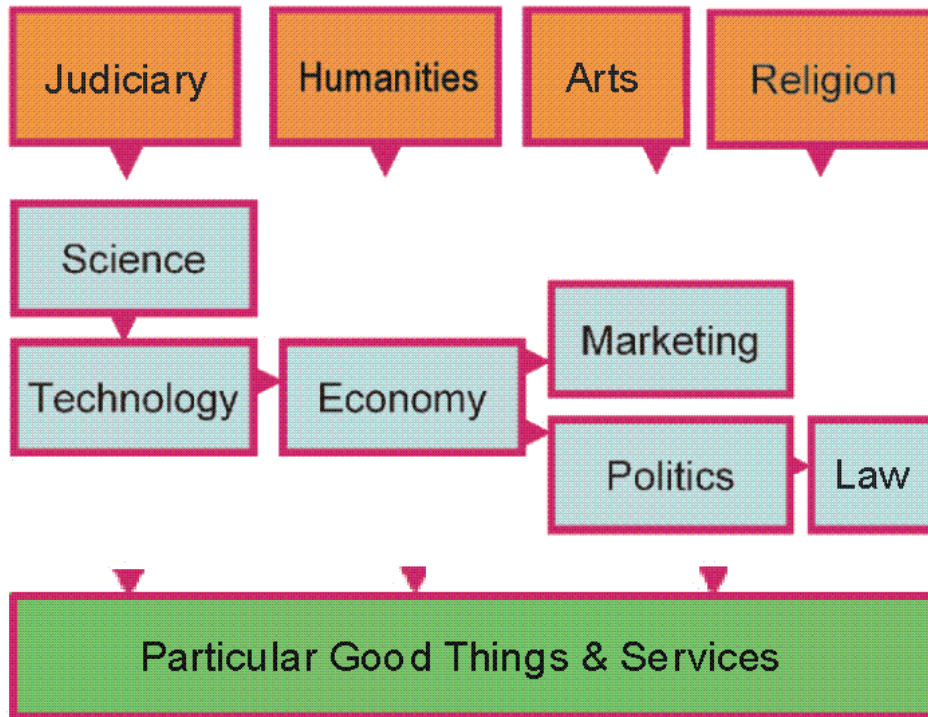
## **Relevant Questions**

We have seen how technology is one system within a larger group of social/collaborative systems, which itself is overseen by cultural processes in order to produce everyday goods and services that actually contribute to our well-being.

One group (the moral order, constituted by cultural processes) includes all the collaborative ways that conscience seeks to identify what should be done – law, education, the arts, and religion.

A second group (the social order, constituted by social processes) includes all the collaborative ways that our practical intelligence devises to explore what can be done to deliver these goods and services regularly – science, technology, economics, marketing, and politics.

The third group includes all the particular goods and services (G/S) we need or want.



In other words, there are basically three levels of "goods" that we seek to obtain:

1. The millions of particular good things and services (G/S) we want. For example: fish for dinner tonight or advice from a friend.
2. Because we are creative, we organize social setups to deliver these good things regularly. This includes all the collaborative ways that our practical intelligence devises to explore what can be done to deliver the G/S we want regularly – science, technology, economics, marketing, politics and laws. For example, Doug's enterprise of providing fish regularly to many people or getting advice regularly from a counselor.
3. Because we are moral, we develop cultural institutions to monitor how wisely we select the particular good things and create the setups to deliver them. This includes all the collaborative ways that conscience seeks to identify what *should* want and want regularly – law, education, the arts, and religion. For example, Lucy's effort to ensure that this entire fish operation really improves the human condition or her effort to ensure that psychological services are providing appropriate care at a reasonable price.

These three groups of process make up the framework what may be good for our "human condition." That is, we not only seek specific things or services, we also use our practical intelligence to make sure we get them

regularly and efficiently. So we develop social institutions, which make up the *social order*. Moreover, our consciences tell us which of these G/S are actually better for us, and which setups for delivering them are actually better. To make sure our choices are morally sound, we develop cultural institutions, which seeks to maintain the *moral order*.

### Organized Questions

As a collaborative effort, then we can right away identify the questions that are most relevant to our human condition.

For research, these are the questions that you should raise about any theme in technology and any opinions of philosophers who deal with technology and the human condition.

These questions are the key to the "system" of which technology is a part. I will organize these questions into the three groups of processes mentioned above.

The following are questions that you should consider regarding your paper. Only some of these questions will be relevant. Perhaps only one or two. But to make sure you consider each one, I put a box next to each one. I recommend that you print out this chapter and enter an "R" for "relevant" or an "N" for "not relevant" in each box.

**Particular G/S.** *These questions are about particular commodities or services*

- With regard to my issue, what are the particular G/S that people want? How strongly?
- What are the particular G/S that people need? How urgently?

**Social Institutions for Delivering G/S.** *These questions are social. They are concerned about organization, collaboration, process, efficiencies, and effectiveness. Answers to these questions explain how collaboration works.*

- What dimensions of collaborative setups are relevant to the issue I'm studying? (Science? Technology, Economics, Marketing, Politics, Laws? Other dimensions may include the family or local community.)
- What roles do people play in their contribution to these setups? What status is accorded to these roles?
- What authority structures direct the work? How are decisions made?
- What skills are necessary to contribute to these setups? How is skill training ensured?

## **Cultural Processes for Assessing G/S and Collaborative Processes**

*These questions are moral. They are concerned about better and worse, values, genuine benefits. Answers to these questions assess the value of particular G/S and collaborative setups for improving our human condition.*

- What assumptions about what improves the human condition are held by consumers of the G/S related to the issue I'm studying?
- What are the assumptions about what makes life better held by the people involved in producing these G/S? (Including scientists, technical experts, economists, advertisers, politicians.)
- What legal restrictions affect the issue? Why are they important?
- What moral standards are upheld? What is their source? How does education affect these standards?
- What aesthetic values are upheld or undermined?
- What religious values are upheld or undermined?
- How free are the people affected to promote improvements?

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## 7. Critical Thinking

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We defined "technology" as the material product of our practical intelligence seeking to improve the human condition. And we defined the "human condition" not as a static state but rather as an ongoing process of seeking more beauty, being more creative, and being more moral. Our "condition" involves a collaborative effort to learn what we can do and what we *should* do to make our lives better. Technology plays key roles in this collaboration, sometimes for the progress of our condition but sometimes for its decline.

Upon closer examination, it turned out that the practical intelligence of technology is not only biased but also willful. That is, besides being generally prone to ignore certain kinds of questions, even when we face questions squarely we can still act against our better judgment. We are wounded both in our creative intelligence and our moral conscience. In this unit, then, we will examine how these factors contribute to the decline of our human condition.

We are not saying that decline is inevitable. Rather we are saying there's something to understand about decline when it occurs. By understanding more clearly how decline occurs we can understand what is needed to offset and reverse decline in our human condition. In particular, we can give a very precise and workable definition of that popular but vague term, "critical thinking."

### ***The Bias of Practical Intelligence***

The human condition is an ongoing effort to make progress in the quality of our lives. Making progress is something only humans can do. While animals may react to threats in their circumstances adequately enough, only we humans can take charge of our circumstances, foresee problems, and invent ways to avoid them altogether.

Today, our "circumstances" are too complex for any one person to understand fully. Although Doug Deepwell (Chapter 1) may have developed a technology, an economy, a market, a political process, and laws, these tasks are now distributed to millions of individuals, few of whom understand how their particular tasks connect to the big picture. Technical experts are not immune to this bias. The best of them typically explore their fields more deeply, but ignore any wider exploration of other fields. For example:

- The Manhattan Project scientists who developed the first atom bomb were exultant when the first nuclear explosion worked. Only a few understood how deeply they were involved in the geopolitics of war and felt deep concern for the future of the globe.

- Auto engineers pride themselves in designing cars that are economical to drive. The question of whether they are economical to build—by outsourcing to cheap-labor countries—does not concern them.
- AutoCAD technicians can produce stunning ads for TV, Internet, and print media. Whether these ads misrepresent the product is a question they leave to their clients' lawyers.

At the same time, many people with practical intelligence pride themselves on having "common sense." And this is a problem. Common sense specializes in seeing obvious problems and proposing obvious solutions. But to understand complex circumstances requires complex thinking and complex solutions. So common sense is ill-equipped to take charge of our highly complex circumstances. Few people can foresee dangers in new scientific discoveries. Few can talk intelligently about economics. Few can appeal to history to warn of dangers. Few can speak authoritatively on the effects of advertising on the psyche. Few can identify what standards should govern the conduct of our political representatives.

Common sense can be very practical, but to be practical in complex conditions requires long-range views and deep analyses. Studying history instills the habit of seeking the long-range view. Studying economics, communications, and political science instills habits of asking for deep analyses. Studying philosophy, particularly philosophies that explore the workings of our minds and hearts, instills the habit of scrutinizing one's own thinking, feeling, and deciding. *But practical common sense commonly lacks the sense to see these studies as practical.* So it doesn't bother listening to the historian, the economist, the media analyst, the political analyst, or the philosopher. While common sense may *admire* these experts, it is slow to learn anything from them. By itself, common sense wouldn't even know how to choose its experts even if it wanted to.

It gets worse. By failing to see the ultimate practicality in long-range views and in-depth analyses, common sense sells itself as being more practical than any other specialized ways of knowing. "My mind assures me that it is well enough equipped to handle most problems, thank you." So it marginalizes the contributions of experts who understand the deep roots of problems. Popular opinion uses the term "academic" to mean "irrelevant." Today, popular views on education (and many colleges) promote job training in narrow specialties. They shun human studies—which include (a) theories and histories of how complex societies work, (b) fiction and poetry that portray the actual struggles of humans to get along, and (c) the philosophical and theological dimensions of how human wisdom is enhanced.

## **The Effects of Common Sense Bias**

In Chapter 4 (Wounded Creativity), we called this view "Commonsensism." We also called it "pragmatism." We named it a bias of practical intelligence, meaning that everyone has a tendency to prefer quick fixes and quick profits. It's essentially a tendency to be *insufficiently* practical. Even among "specialists" there are many who will not tackle problems that require study outside their specialty.

We also described the effects of biases on the social order as a downward helix: When we allow bias to narrow our intelligence we come up with short-sighted ideas and implement piecemeal solutions. These make bad situations worse. What's more, pragmatists don't analyze their blunders; they don't see that short-sightedness is ultimately not practical at all. So the worsened situation remains populated by pragmatists applying still further short-sighted solutions.

Here are a few examples of how common sense rushes into one blunder after another:

- We enforce Western style democracy on Iraq without any reference to, say, the efforts of the French to democratize Viet Nam or the English to democratize India.
- Psychologists tolerate their clients' obsessions with buying things, without pressuring them to stop, despite psychological theories that promote challenging clients on their self-destructive behaviors.
- Some government officials promote spending more money now to keep the economy going, but other economists promote first investing in new companies that will improve goods and services available to more people later. To promote spending and investing simultaneously very often undercuts the positive effects of both.

## **Willfulness**

Besides our biases against asking certain kinds of questions, there is also our willfulness. We can be very aware of the relevant questions in any situations; we can know exactly what we ought to do; and we can refuse to do it. As we saw, this willfulness is the only instance we know of in the universe where a creature can act against its own nature.

Examples of willfulness are all too familiar: We lie, cheat and steal. Knowing better we choose worse. What's more, the harm we do is principally against

ourselves. There is an interesting erosion in our moral character that typically occurs here:<sup>10</sup> \*

- First, we seek to be rich. There is nothing wrong with *being* rich, but the love of money has been called the root of all evil. This is because this love typically moves us to choose riches just because we love money, even in the times when our better judgment sees the value of doing with less.
- Then, as if having money is not enough, we seek to be honored. Again, there's nothing wrong with being honored, but the love of honor typically moves us to seek out praise and respect even in times when our better judgment sees the value of humility and anonymity.
- Finally, we come to domineering pride. The slide to pride is not just the prerogative of the rich and famous. We all feel the pull. It is exactly what we mean by "willfulness." It shows in the claim that "I did it my way." This not only isolates us from concerns about the good of others; it is also domineering. It typically shows in the desire to be the dictator to whom everyone bows. The prideful urge to dominate effectively drives out any question of sacrificing oneself for the good of others.

## ***Understanding the Bad Situation***

The blunders that stem from bias, and the deliberate wrongdoing that stems from willfulness, are found in almost any situation we call "bad." Common sense assumes that these situations have a large number of factors but, with dedication and good will, we can sort everything out. But the reality is that dedicated and good-willed people are themselves prone to bias. Their good will becomes impotent when they act against the better judgment of that good will. Mere dedication and good will combined with wounded creativity only makes bad situations worse.

Moreover, the commonsense assumption that all problems have causes leads biased people to proclaim they discovered the cause and to initiate efforts to eliminate the cause. But with many problems, there is no cause; the problem was a block in the natural creativity of participants—that is, a bias.

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<sup>10</sup> The triad of riches, honor and pride are found in *The Spiritual Exercises of St. Ignatius*, at the meditation entitled "The Two Standards." The association of pride with the domineering other people is identified by St. Augustine, in his *City of God* as "libido dominandi"—the urge to dominate—which he proposes is the ultimate cause of all human evils.

## Critical Thinking

What is needed then, are rules for dealing with absurd situations. They should be based on an understanding of the workings of neurotic obsessions, egotism, groupism, commonsensism, and secularism. They should also be based on an effective response to willfulness, or "sin," or "acting against one's better judgment."

This approach gives us a precise and workable definition of "critical thinking":

Critical thinking seeks to expose the workings of bias and willfulness in absurd situations.

By this definition, I mean to require that critical thinking actually criticizes mindsets and decisions manifested by wounded creativity and wounded morality. So critical thinking is opposed to the liberal approach that celebrates all diversity without criticism.

Critical thinking also goes much deeper than the currently popular "rights thinking." By that I mean looking at bad situation strictly in terms of people's rights. Of course, when people's rights are violated, something needs to be done. But what is done usually focuses only on outlawing behaviors—Thou shalt not ruin someone's reputation, sell mortgages to people who can't pay them off, turn up your boom box in your backyard in the middle of the night, etc. Rights thinking can barely avoid finding solutions that involve laws, regulations, and sanctions regarding behaviors.

But effective critical thinking focuses on healing the underlying biases and willfulness that are the primary drivers of worsening situations. It aims at the more difficult, but far more effective, task of eliminating the source of the problem—people's wounded creativity.

## Criteria for Critical Thinking

What *criteria* does critical thinking use to expose the workings of bias and willfulness?

**Bias.** In general terms, we can tell that bias is present when people do not allow themselves to face certain kinds of questions. Here, again, are the questions that each bias typically shuts out:

- Neurotic obsession shuts out the question of whether my fixation is controlling my behavior in ways I cannot stop. I am obsessed with, or addicted to, certain behaviors or foods or drinks or sexual activities

without admitting to myself that I am addicted.

- Egotism shuts out questions about the benefit of other individuals. Unlike neurosis, which unconsciously shuts out questions about the obsession, egotism shuts out its questions consciously and deliberately.
- Groupism is group self-centeredness. It shuts out questions about the benefit of other groups and questions that might challenge the priorities of one's own group. It does so quite deliberately and is emotionally supported by other members of the group.
- Commonsensism shuts out questions that require in-depth analysis of present situations and historical study of how the present situation—and situations like it—came about.
- Secularism does not consider that there may be a divine point of view that is more important than views held by people who believe humanity is self-sufficient. In particular, it shuts out questions about the equality and deservedness in God's eyes of the socially marginalized.

**Willfulness.** What *criteria* does critical thinking use to identify the workings of willfulness? Again, in general terms, we can suspect the presence of willfulness when neither peoples' actions nor people's justifications of these actions make sense.

We easily see specific instances of it in the phenomena of malice. We see it clearly when, say, a man deliberately spreads a lie about his boss. Less easily can we detect malice when, say, an angry woman police officer knowingly *refrains* from warning her partner about a knife she saw in a suspect's belt.

But there are even less obvious instances when it comes to behaviors deeply embedded in the complexities of modern life.

Hacking into confidential databases

Spreading computer viruses "for the fun of it."

Marketing a drug while knowingly withholding full disclosure of harmful side effects.

Dumping waste. This can occur in small industries polluting local streams or in households disposing their trash in dumpsters being paid for by local businesses.

Promoting cigarettes to teenagers.

Knowingly trashing natural settings.

People who know these acts worsen the lives of others and do them anyway *are acting against their better judgment*. For many, the justification is “I can get away with it” or “Everybody does it.”

For others, there may well be extenuating circumstances. A woman whose male boss tells her to hire his son Rick, even though she knows Rick’s unfit for the job, will think twice about her job security before saying no. But even there, if she makes no efforts whatsoever to change her boss’s mind or revise company policies, and knows she has the right and opportunity to do so, she is still acting against her better judgment. Her justification is, simply, “I get paid to do what I’m told.”

## **Shortsighted Solutions**

This sort of “critical thinking” reveals why so many proposed solutions to problems fail to work. We can see this in most proposals that involve the judiciary, education, and religion.

### Judicial Shortsightedness

Citizens can press lawmakers to set up regulations that prevent excesses. This is often necessary to stop behaviors that worsen the human condition. But regulations do little to heal the underlying factors that result in excesses. The Federal Reserve Board can limit how much banks can loan, but they have no power to heal greed. A state can require its industries to filter all pollutants from its discharges, but it can’t make industry owners feel concerned about the air people breathe.

### Educational Shortsightedness

Education can occur in schools, in company training programs, in TV specials, and in the many forms of literature given out by hospitals to patients and by producers to consumers. It is essential that all forms of education provide the information people need to make reasonable decisions. But having information available does nothing to minds biased against learning it. To be effective, any educational solution should include learning *that* bias and willfulness are factors in most absurd situations, learning *how* to identify them and heal them.



## Religious Shortsightedness

Religions can promote doing good, but where egotism prevails, “good” means just “good for me” and where groupism prevails, it means just “good for us.” Religions can condemn sin, but unless they clarify that the core meaning of sin is *any* act against one’s better judgment, their sermons come across as scolding only those behaviors deemed “bad.” To be effective in healing people’s bias and willfulness, religions should help people admit how deeply wounded human creativity really is. Before preaching how God, because of love, desires to give them genuine freedom by healing their minds and hearts, religions need to ensure that people are open to the question whether humanity is self-sufficient or is dependent on a divine lover.

Notice, finally, that today it is quite rare for anyone to mention bias or willfulness as the source of a problem. Panelists on TV discussing social issues easily point out *that* there are problems and *what* solutions are needed. But when they overlook the *sources* of problems in bias and/or willfulness, their solutions almost always focus on making laws, or on providing information, or on sermons on morality while the real sources of problems remain quite undisturbed.

To sum up, anytime someone suggests doing some “critical thinking,” if they aren’t aware of the dysfunctions of bias and willfulness (by whatever name), they have yet to learn why situations go bad. And if they propose solutions based on their thinking, more often than not they will make things worse.

Does this seem a bit too complicated? Do you feel you could just memorize some of these terms to avoid a bad grade? Might you assume that you know very well how to handle problems? Do you feel confident that you could prepare any report or paper on any topic without dragging in all this business about critical thinking? Please, then, for your own best sake and the sake of those you love, remember at least these two questions—the first about bias and the second about willfulness:

Are there certain questions I spontaneously avoid?

Do I often act against my better judgment?

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## 8. Critical Healing – Individual View

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We saw that to meet the challenges of bias and willfulness, we need to be critical thinkers. This is true of any human situation, of course, technology included. But thinking is not acting.

So we also need a “healing” that can put critical thinking into action. Typically, we hear all sorts of ideas about more effective policies, or better enforcement of laws, or jailing criminals. To say, “There oughta be a law!” focuses on behaviors; it does nothing about opening minds and hearts. To say, “I have a better idea” does nothing to people who are already biased against any ideas that might undermine their biases. None of these initiatives “heals” either the bad situation or the persons whose bias and/or willfulness made things worse. The more thoroughly effective actions include not only improving bad situations but also healing the *real source* of problems, the more likely will the wounds in our nature of biases and willfulness be healed.

A critical healing will be:

- A habit of mind and heart
- Suspicious of bias and willfulness
- Dedicated to recovery and healing

Notice that critical healing includes the critical thinking that habitually is suspicious of bias and willfulness. What it adds is actual conduct that moves toward improving situations and healing any bias and willfulness that may be involved. How does critical healing do this?

### **Healing Bias**

Last week we saw that to address problems associated with biases, we need critical thinking to understand the particular ways that obsession, egotism, groupism, and commonsensism play out in practice. So a critical healing will aim to reverse priorities.

A critical healing can reverse or heal obsession leads neurotics to understand the dynamics of compulsion that distort their priorities. This is particularly effective in an atmosphere of “unconditional positive regard”—whether by paid therapists or by friends and family.

Here, what counts is first extending to them your genuine care. (If you find this difficult, then you need to assess your own priorities first. Or, if they consistently reject your outreach, there is little you can do.) Once a sense of trust is established, the goal should be simply to help them see that they are obsessed. They need to take to heart the fact

that they are hooked—on computer games, shopping, sex, etc. This is because neurotic obsession works precisely by denial of the question, “Am I obsessed?” The next question might be something like, “Do you need to get unhooked?” If they say yes, then the door of their prison is unlocked.

A critical healing can undo egotism by befriending the egotist. This is because, when a genuine friendship is established, egotists usually open their hearts to the good of others—beginning with their new friend.

Here too, genuine care goes a long way. Egotism shows in people for whom “better” means “better for me.” They put their own reputation and benefits above anyone else’s. They may mask it by being outwardly cooperative, but for them, cooperation is not an instrument for the common good but for personal advancement. An excellent healing of this bias is to draw them into collaborating on something they genuinely enjoy. Get them to taste the “better” sort of joy that comes with working together. Experiences of collaboration like this can open their hearts to a “better” that is beyond “better for me.”

Of course, befriending the egotist is often very difficult because egotists push people away by belittling, insulting, or mocking them. It takes a strong mind to recognize these efforts as the egotist’s defensive mechanism, and a strong heart to find a way around and behind these defenses.

A critical healing can dissolve groupism when it engages members of isolated groups in the activities of other groups. As individuals become members of overlapping groups, they typically widen their questions about what is better for the common good.

In groupism we have people for whom “better” means “better for us.” We see it in an unquestioning loyalty to their political party, or religion, or country, or union, or company. Loyalty is good, but *unquestioning* loyalty is functionally stupid about what is “better for all concerned.” The normal way this bias is healed is when group members join several different kinds of groups. A militant UAW woman who joins a food co-op, participates in a reading group, and volunteers at a soup kitchen will hear from others questions about work and life and money that upset any comfortable myths she has about labor and management.

Critical healing can overcome commonsensist pragmatism when a person sees the positive effects that result from in-depth analysis of social systems and from accounts of their histories.

This bias is particularly difficult to “heal” because we never fully heal. Study is hard. It is often unhelpful. A man who gets all A’s in college,

soon finds his immediate concerns for his family and job persistently more important than reading a book on economics or theology or global warming. This is why we stress “ongoing learning” more than “finishing school.” The main healing you or I can do is to keep up the habit of study ourselves and aim to engage others in discussing the big issues.

Critical healing can overcome secularism when, after considering how the lives of many people are unnecessarily wretched, a person sees the poor and marginalized as God does—as created to live in safety, health, dignity, empowerment, and mutual care. He or she will regard technology as an instrument whose purpose should not depend on who pays, but on who counts.

### **Healing Willfulness**

To address problems that result from someone’s pure willfulness, we should not expect to understand their underlying reasons. There are none. Willfulness is an act *against* reason. So critical thinking cannot *explain* why someone acted against his or her better judgment. All critical thinking can do is *identify* the willful acts that made situations worse. But critical *healing* can do plenty.

First, critical healing can expose the willfulness to the eyes of many. This is what prophets do. Willful men and women typically justify their unreasonable conduct by appealing to outcomes—usually outcomes that benefit only certain classes of people (groupism) or outcomes that are immediately guaranteed (commonsensism). Prophets proclaim to the public who it is that really benefits from the hidden decisions of the willful. They lay bare what the longer-term outcomes really are. Religious prophets condemn the willful acts as also “sins”—acts of hatred against God and essentially against their own better selves whom God loves.

Second, critical healing can forgive in love. Forgiveness is what real lovers do. They do not condemn the offenders. Condemnations serve to separate the offenders from the community but do nothing to recover what was lost or to heal the offender. Nor do real lovers name the offenders “evil”—a familiar tactic used by the self-righteous to justify wars and capital punishment and to promote their presumptively moral superiority. The positive conduct of lovers is to invite the offender back into an engagement with the community. Lovers genuinely desire friendship, and the best of lovers exclude no one from this desire.

At a minimum, to return good for evil halts the cycle of decline. It refuses to “get even” because no one ever stops at “even.” When the cycle of decline halts, when people in bad situations at least stop resenting their situation.

They stop bad-mouthing one another. This allows time for understanding the many factors in “bad” situations and for coming up with solutions. This is how it liberates an otherwise imprisoned creativity.

At a maximum, to genuinely desire friendship gives a vision that goes beyond the mere end of hostilities. To want to be a friend, whether between persons or between nations, liberates us to think about what benefits others and to drive out thoughts of dominating or eliminating them. To want to be a friend is not to be dedicated to a peace that is simply the absence of war; it is to be dedicated to engaging others with our hearts and minds. It challenges our creativity to seek win-win solutions together. Indeed, for critical healing to actually restore absurd situations requires persistence and hope because it usually takes a long time.

Here’s a good example of critical healing at work. In 2002, a Jewish woman named Dalia was living in a house that was built two generations earlier by Palestinians. As she grew up, she came to realize that the Palestinians did not abandon this house, as her parents were told; they were forcibly driven out by the Israeli military. Eventually she met a Palestinian man named Bashir, whose parents formerly lived in the house she now owns. Together they faced the problem. True, they could have simply hated each other or make threatening demands. Dalia could have insisted that the home of the Jewish people is in Palestine; Bashir could have insisted on a “right of return” to lands that belonged to his parents. But rather than fall into this groupism bias, they each continued to talk, to share concerns, and discuss solutions. Here is what Dalia said about the problem when someone urged her to emigrate to the United States:

“I will not be able to look myself in the face if I leave when it gets difficult. I am going to stay present for the pain, and for the hope. I am an integral part of it all. I am part and parcel of this complexity.

I am part of the problem because I came from Europe, because I lived in an Arab house.

I am part of the solution, because I love.”<sup>11</sup>

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<sup>11</sup> Dalia Eshkenazi Landau, spoken in 2002. She was born in 1947 in Sofia, Bulgaria. She emigrated to Israel in 1948. See *The Lemon Tree: An Arab, a Jew, and the Heart of the Middle East* (New York: Bloomsbury, 2006) p. 247.

## 9. Critical Healing – Historical View

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### *The Healing Vector in History*

In Chapter 6 (Issues & Questions) we noted a certain hierarchy, or scale, of human values:

- The personal values of integrity and honesty
- The cultural values of moral standards and high human ideals
- The social values of organization and cooperation
- The vital values of food, health, and safety

Obviously, these are different types of values. But we also noted that what connects them is a well-ordered, functioning hierarchy, beginning from vital upward: To ensure we obtain our vital values, we value social cooperation. To ensure that our cooperation heads toward genuinely improving our human condition, we follow the cultural values of morality and high ideals. To ensure that cultural values are in place, we promote the personal values of integrity and honesty.

Now, in Dalia's story (Chapter 8), and in similar stories we all carry in our hearts, we can see that the order of love is a higher order yet. Being in love takes us even beyond our personal values of integrity and honesty and makes us part of a larger whole. Being in love makes us a friend, a spouse, a parent, a citizen, a child of the universe. Being in love liberates us from our isolated selves to be enriched by sharing life with others. Being in love is the only justification for the many forms of self-sacrifice we see everywhere in history: a parent's love of children, a soldier's and a patriot's love of country, a believer's love of God.

Each of these loves makes our perspectives ever wider and our commitments ever deeper. From friendship to patriotism to religion we can see how love naturally heads toward being less and less restricted to certain persons and with fewer and fewer conditions on how far we will let love lead us.

### *Transcendent Value of Love*

So, to our above scale of four values, we add a fifth:

- The transcendent value of love.

By this I mean not just the value of being a person who loves. More essentially, I mean the values toward which love draws me. I feel attracted to friends; I feel a desire to serve my country; I discover a quiet, relentless,

and frightening effort in myself to overcome my secularism bias and welcome the sacred into my life. It comes clear to me that the underlying restlessness in every human being is a desire to be totally and lovingly engaged with what the real universe is all about. Being in love reveals to us the right, and sometimes the duty, to criticize any ideas about happiness that fail to embrace the full scale of values—from vital to social, to cultural, to personal, to transcendent.

## ***Technology and Healing the Human Condition***

We defined our human condition as being aesthetic, creative, and moral, but unfortunately we are also ugly, stupid, and immoral. Love has the power to heal all three of these dysfunctions. Here, we could easily praise and encourage living in love. But we also need to understand as clearly as we can just how love actually functions to heal our wounded nature. So let us look at how this typically happens regarding issues in technology.

Technology can violate our *aesthetic* nature when it produces music that is merely exciting, or replaces natural wilderness with ugly buildings, or offers beauty products and surgical procedures that substitute being attractive with being beautiful in spirit. A critical healing promotes a love of humanity that recognizes the nobility of the person, that seeks the sacredness of certain spaces, and that welcomes the transcendent dimensions of good music.

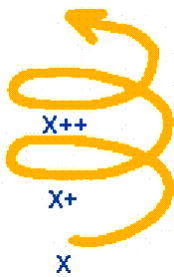
Technology is involved with our wounded *creativity* when, through bias, we ignore certain kinds of questions. Some psychiatrists are neurotically obsessed with curing mental problems with drugs. Some technology workers will egotistically refuse to share creative insights for fear that someone else will take the credit. Many technology firms infected with groupism aim more at demolishing competition or making windfall profits than at producing goods and services that enhance living. Most technology firms are preoccupied with a commonsense bias for short-term gains rather than the long-term research and development that are the sole source of major technological advances. A critical healing promotes a creativity that is liberated by love considers *all* relevant questions—particularly about issues that regard the benefit of people whom we love.

Technology is also involved with the ways we deal with *moral* challenges. It shows in the “structural” challenges inherent in large systems, be they electricity grids, the Internet, international banking, outsourcing labor, or a large military. It shows also in the internal challenges from people’s consciences, particularly the challenge to always act according to our better judgment even when our egotism or groupism cry out in protest. A critical healing works as the prophet



who, being in love, is determined to uncover the deep causes of large-scale systems and to propose equally deep solutions. It works as the forgiving lover when it seeks friendship with those egotists who offended them and with those groupism-infected loyalists who shut out anyone who doesn't belong to their group. It works in every person who accepts the human condition of being drawn to fall in love with God. These persons welcome the divine power to love anyone and everyone. A critical healing that reveals the deep solutions and heals the sources of the deep problems goes a long way toward redirecting technology to what is truly better for the human condition.

From the point of view of the march of history, this critical healing plays a major role in how we actually improve the human condition over the course of time. From Chapter 4 on Wounded Creativity, recall the two helices representing the historical progress or decline in any community (a family, a neighborhood, a business, a city, a nation, or a religion). We can now add a third helix that represents the critical power of love that heals the sources of decline and restores what is finest in our human condition:



When beauty, creativity, and morality thrive, our situations improve steadily — from X to X+ to X++ and so on.



When bias and willfulness allow ugliness, stupidity, and willfulness to thrive, our situations decline steadily— from X to X- to X-- and so on.



When critical thinking and the critical healing of love thrive, our natural capacities for beauty, creativity, and morality are restored, and situations can be restored to a path of improving the human condition.

Keep in mind, of course, that every human community has all three helixes going at once. We looked at how each one functions separately, but in reality, every situation, in any community of any size, each of these helixes has more or less power driving every change.

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## 10. Sacred Truths

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### *Summary So Far*

**Our nature is good.** We defined the human condition as our natural instincts to be aesthetic, creative and moral. By our aesthetic imaginations we seek to beautify our human condition. By our creative intelligence we explore what technology *can do* to improve the human condition. (Here, we noted how technology relates to five other areas concerned with practical solutions: science, economics, marketing, law and politics.) By our moral concerns we also explore what we *should* do to ensure that our technological achievements are actually improvements of the human condition. (Chief among these cultural systems are a judiciary, humanities education, the arts, and religion.)

Taken together these are the major individual, social, and cultural dimensions of our human condition to be *naturally self-transcending*.

**Our nature is wounded.** Next, we examined how these three self-transcending instincts are wounded. We easily are distracted from genuine experiences of beauty by our desires to be in control and to have exciting sensations. We often distort our creativity (by misusing technology or allowing technology to misuse us) through any of five kinds of bias—neurotic obsession, egotism, groupism, commonsensism, and secularism. And we can violate our moral nature by being willful, knowing the better but choosing the worse. We noted that bad situations tend to get worse as long as these wounds of our nature are not healed. Throughout our discussion, we saw examples of these dysfunctions in technology, and we identified specific ethical problems related to technology today.

In other words, despite our natural urges to be self-transcending, *we easily get self-absorbed*.

**Critical Thinking & Critical Healing.** Then we identified the sort of “critical thinking” that is needed in situations that have become worse, less intelligible, or “absurd.” We noted that two dimensions to these absurdities: (a) the outer social relationships are not working as well as they might; (b) the inner biases and willfulness in participants brought about, maintain, and often worsen already dysfunctional social relationships. Our next step was to realize that critical thinking is only half the solution. We also need a “critical healing” that actually reverses the decline of absurd situations. Through being in love, a critical healing heals the inner sources of bias and willfulness at their roots so that our sense of beauty, our creativity, and our morality may be liberated. These liberations, in turn, set the outer social relationships on a path to genuine improvement.

Being in love heals obsession by leading the neurotic to understand how his or her obsession works and does so in an atmosphere of “unconditional positive regard.”

Being in love heals the egotist through friendship and heals unquestioning group loyalists by engaging them in sincere friendships with other groups.

Being in love heals commonsensism by the hard work of understanding not only how we are misusing technology but also how we inadvertently are letting technology to misuse ourselves and those we care for.

Being in love heals secularism by welcoming one's love as a gift from above. It allows divine love to shape, empower, and direct one's priorities.

Finally, being in love heals willfulness by a combination of prophetic exposure of the malice involved and a loving forgiveness that leads the willful to a moral conversion.

The essence of this “healing” is a reduction—sometimes even an elimination—of biases against certain types of questions. In other words, love-based healing is a liberation of our minds. Breaking out from narrow-mindedness, we tackle questions we used to avoid. The wider the range of questions we are capable of tackling, the more likely we will discover the sources of problems, and the more creatively we will come up with solutions. The “bad situation” now includes the very minds liberated to turn it around.

**The Role of Cultural Institutions.** It is the job of our four main cultural institutions to go beyond what we *can* do with technology in order to propose what we *should* and *should not* do. The arts help us imagine possibilities that actually make life better. The judiciary establishes laws against acts that undermine our well-being. But both religion and the humanities take their stand on what our human condition really is and what a “better life” really means. In the popular mind, religion and the humanities are all about morality, as if we devise these are institutions for the sole purpose of making people behave. But the reality is more profound. Both religion and the humanities take their stand on what our human condition actually is. It is first a claim to truth, and only subsequently the promotion of moral living. It also regards truths about what takes us beyond ourselves, what instills hope, what we stake our lives on. In this sense we may call these truths “sacred”—some rooted in religion and some in humanitarian care.

## Sacred Truths of Religions

Religion is based on the belief that beyond our “natural” human order there is a “super-natural” order. Although individual religions have disagreements about what exists in this higher order and what humans should do to live their best, there is a remarkable agreement among the major religions. They agree on the following eight sacred truths about our human condition:<sup>12</sup>

1. As cats live in a human order that is beyond their comprehension yet is vital to their lives, so we live in a divine order beyond our comprehension yet vital to our lives.
2. Yet while cats and everything else we know act according to their natures, we are the only things in creation that act against its nature. We do so when we act against our better judgment.
3. The entire universe is created by God, who is supreme beauty, truth, and goodness.
4. God shares the divine nature with us by moving us always toward complete beauty, truth and goodness.
5. To act against our nature is also a “sin” because we act against God, who made our nature.
6. The way toward God is through repentance of our sin, self-denial and prayer.
7. The way of living in God is to love our neighbors, even our enemies.
8. Bliss is loving, knowing, and merging with God.



We should note right away that belonging to a religion does not necessarily mean that you take the above beliefs seriously. You may not have given it much thought. You might have assumed that religion is mainly a culture of common practices and rituals, not also a revelation of how the world really is and a heartfelt engagement with God whose life is actually the life of our world. In this case, these are not your sacred truths.

Or perhaps you have often wondered about the truth of our human condition, especially whether some preachers are just making things up or promoting some social cause without even wondering whether their

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<sup>12</sup> This list largely depends on Frederich Heiler, "The History of Religions as a Preparations for the Cooperation of Religions," *The History of Religions*, ed. M. Eliade and J. Kitagawa (Chicago: University of Chicago Press, 1959), pp 142-153. The religions in question are Christianity, Judaism, Islam, Zoroastrian Mazdaism, Hinduism, Buddhism, and Taoism.

assumptions about life are true. In this case you are conscious of your need for sacred truth and are probing what might such truths be.

Or perhaps you regard the above statements as true and are committed to live by these truths. These are among truths you regard as sacred.

## ***Sacred Truths of Humanities***

The humanities too take their stand on truth. By *humanities*, I do not mean courses in schools; I mean any disciplines that aim to reveal our human condition in any of its infinite varieties. Some are taught in schools. More are conveyed through movies, dramas, fiction, history, and poetry. Many of have no immediate connection to religion. For example:

Suppose you believe that *honesty* is the most important virtue of all. Your “sacred truth” about our human condition might be expressed as, “Humans cannot find fulfillment outside of honesty.” The same goes for *fairness, integrity, compassion, self-sacrifice, contemplation, gratitude*, and so on.

Or suppose you regard Dorothy Day as an exemplary human being. Your “sacred truth” might be expressed as “The way Dorothy Day cared for others is an excellent example for anyone who wants to know how to be a completely fulfilled human being.”

These expressions are truths about humanity. No doubt, you have values and ideals of your own that others may not share. You may have beliefs you are strongly willing to stand by. But since our focus in this course is “the human condition,” we’re looking for truths that you believe apply to everyone. (Note that this is different than truths you regard as mainly applying only to yourself.) They express a belief you have about what everyone’s life is all about, regardless of whether some would disagree with you. For example:

Everyone is made for friendship.

In everyone’s life there are issues they really don’t want to face.

The path to human fulfillment includes being as concerned about the troubles of others as about our own.

It is our nature to appreciate beauty, to be creative, and to always seek the better.

People lie, cheat, and steal.

*Statements* about our shared human condition can be very helpful in teaching morality to the young. Imagine a father telling his 8-year-old daughter to make friends with a deaf girl in her class. The daughter asks “Why?” He may be tempted to say, “Because I said so” or “Because it’s the

right thing to do,” but if he says, “Because every person is made for friendship,” she understands why. It’s a sacred truth about our condition.

Notice that I call these “truths.” They are statements about what our human condition actually is—what all of us creatures have in common, what is the true path toward anyone being their best, and what human fulfillment consists in.

These are not “moral standards” or “practical advice on how to live.” These are important, of course, but unless moral standards stand on a view of what actually is our human condition, they are just expressions of the conventions of a group. They can result in moral standards of one group contradicting the moral standards of another. Indeed, all moral opinions about how to use technology are based on underlying beliefs of what our human condition really is and what it means to be fulfilled.

Nor are these “moral concepts” such as *honesty*, *compassion*, and *forgiveness*. These are abstract words that represent ideal moral habits, but are easily dismissed as inapplicable to actual situations.

Your own religion and/or personal beliefs add further truths about our human condition that other major religions may not teach. I will leave it to you to connect these further truths to a more specific explanation of how our wounded human condition is healed.

## ***Sacred Truths re Technology & the Human Condition***

These truths about our human condition directly affect how to deal with technology.

**Choosing Technologies.** Sacred truths certainly affect our individual choices on how to *use* technology. Technology provides new forms of music, of architecture, of cosmetics, of drugs, of cars, of everyday products. People who believe that all humans feel moved to be truly beautiful, creative, and moral will habitually discern among their inspirations to make choices based on these self-transcending desires rather than biased or willful desires. Whether any person regards these desires as just “given” or as “God-given,” to the extent they regard these desires as natural to the human condition shared by everyone, the effect on choosing technologies for self-transcending purposes is the same.

**Allowing Technologies.** These truths also affect how we *allow* technologies to be imposed upon us by our collaborative systems—science, technology, economics, marketing, law, and politics. This happens not through direct choices for using technologies but by the indirect dynamics of unintended consequences—results beyond what the technologies were devised for. (For example, the use of throw-away cell phones by drug dealers to avoid



detection, or the unforeseen global warming caused by many energy sources.) People who see our various collaborative systems from a perspective that regards all humans as made to be self-transcending, whether in religious or humanitarian ways, will let themselves be concerned for the well-being of everyone affected. Some dedicate their entire lives directly to caring for those who are disadvantaged by systems that deliver benefits unequally. Others, realizing how the entire network of science, technology, economics, marketing, law, and politics takes on a life of its own, will think critically about its often hidden effects.

Through critical thinking, they will overcome a commonsensism that thinks common sense is all we need. Instead, they will dedicate themselves to analyzing the deep structures and complex histories of absurd situations.

Through a critical healing, their love will draw them to take courses in religion-based colleges and learn from the humanities (literature, history, philosophy, theology) what humanity is really all about, what our human condition really is.

As a result, they learn to ask disturbing questions from a fully human point of view—such as how science is biased toward high-profit research, how certain technologies may be polluting the environment, how an economy



favors the well-off egotists, how marketing advertises technological products through images that degrade our dignity, how groupism in politics responds to the often self-absorbed demands of constituencies rather than the needs of the common human good.

**Constructive Vision.** Besides giving us these critical questions about technology, sacred truths also give us a constructive vision of how we ought to direct technology. People who believe they are made to love with God's own love believe they love the neighbor with that love. Even people who care not for religion but believe that justice and integrity are inner demands felt by everyone are in such love. They go beyond a hope for World Peace, understood as just the absence of war. Rather, they hope for World Friendship—a friendship based on the natural interdependence of our actual human condition. Among both believers and nonbelievers their criterion for using technology is clear:

Will my choice deepen or at least not damage friendships?

And in their assessment of social systems, their criterion is similar:

Are these systems deepening or at least not damaging friendships?

## **Religion of Symbols and Religions of Truth**

**The Power of Symbols.** Not everyone who belongs to a religion believes these sacred truths about our human condition. Obviously, some religious believers have doubts about their faith. But less obviously, and, I suspect, more commonly, some believers have not yet asked the question of what really is our human condition. Why is this?

The simple answer is that some religions focus far more on symbols than on truth. They focus mainly on sacred places, sacred times, sacred music, sacred architecture, sacred rituals, and sacred laws. Members of such a religion rely on these sacred symbols to evoke a sense of awe, of right order, and of right practices. All primitive religions manifest this focus. Indeed, even among all major institutionalized religions today, this is the only focus available to children.

In a religion dominated *only* by sacred symbols, it is rare to find anyone who questions their images of God, of themselves, and of the universe. It is enough for them to act in accordance with these symbols and rituals. But even in a religion that is rooted in sacred truths, we often find people whose sensibilities are still rooted mainly in the symbols and the actions, and not in the truths. They recite a creed as a symbolic act of devotion, not as an expression of what they hold to be true.

**The Discovery of Truth.** Yet some religions go beyond sacred symbols to focus also on sacred truth. The truths they teach are meant to evoke a realization of our actual condition as humans, and of the actual universe in which we live. Beyond relying on the symbols that shape our imaginations, emotions, and moral standards, they also rely on our judgment about what the universe is really all about.

A friend of mine who taught religion in a Catholic high school passed on to me this question that a senior asked him: "Sir, is our God the real God?" He had reached that point in his intellectual development where truth and reality are vital questions. This is the sort of question that can lift a religious person from complete immersion in the sacred symbols and sacred actions to the illuminating air of truth.

**A False Liberalism.** People concerned about the truth of the human condition do not regard their own religion or their own humanistic ideals as just one culture among many, equally legitimate cultures. They do not just "respect" other people's beliefs and leave it at that.

This live-and-let-live attitude seems to prevail in English-speaking cultures—that what you believe is OK as long as nobody gets hurt. It's the view that many people name *liberalism*: "Think whatever you want. Truth is too hard to find, especially truths that apply to everyone. Each one can find only his or her own truth."

**Truth as Liberating.** But liberalism in this sense has only tenuous connections to liberation. People concerned about truth are also concerned about untruth. Because they are in love, they are concerned for anyone whose lives are based on untruth. They both challenge others and invite challenges back. Their aim is to help liberate others from untruth by uncovering their underlying assumptions about our human condition. It will be these men and women who are rooted in sacred truths that will be most effective in liberating people to direct technology toward improving our actual human condition.

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# 11. Human Conditions

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## *What Are the Human Conditions We Live In?*

### Human Nature

Most of the “human conditions” we studied so far are conditions that affect everyone who ever lived:

We are made to be open to beauty, creativity, and the morally better. But we often act in ways that are ugly, destructive, and immoral.

Beauty can be faked in its magical and sensate forms.

Creativity can be blocked by the biases of neurotic obsession, egotism, groupism, commonsensism, and secularism.

Morality can be frustrated by a willfulness by which we act against our better judgment.

Love has the power to heal all these wounds in our nature.

In short, our nature is wounded, but not beyond healing.

### Human Historicity

But besides our common nature, there are the diverse ways that history itself has shaped the human condition. Each culture has its own unique history.

Emerging technologies changed the ways people actually live—not everyone all at once, nor all in the same way.

Economies and politics differ across the globe and throughout history.

Greek philosophy and Jewish monotheism affected different cultures.

Different religions respond to the woundedness of our nature in different ways.

Modern science and historical studies revolutionized how we think about most anything.

The historical growth of technology was matched by a decline in an awareness of transcendence among many cultures.

### Global Human Conditions

Overall, there are huge differences in human conditions across the globe. And technology plays a role in all of them. Consider, for example, the following issues:

Poverty and Hunger	Corruption & Crime
Global Economy & Consumerism	Status of women
Substance Abuse	Civil Wars & Nuclear Proliferation
Terrorism	Hatred, Racism
Human Rights Violations	Global Ecology
Disease & Health Care	

### ***Discussion Assignment***

At [www.globalissues.org](http://www.globalissues.org), you will find dozens of articles on each of these conditions in which people actually live. And no doubt you can find other sites with good information on these issues.

For our discussion, please select one such global issue. Read up on it until you find information that:

- surprised you,
- is relevant to technology,
- the entire class would benefit from knowing.

Then post that information. Our discussion will be an exercise in critical thinking and critical healing as we talk about the woundedness that underlies these problems and possible ways to heal them.

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## 12. Our Example

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### *Doug & Lucy*

In our first chapter, we considered how Doug Deepwell set up a flourishing fishing business in Pshawbestown. His practical intelligence told him to work with the entire social system that all technology is involved in—the

interconnected institutions of science, technology, economics, marketing, politics and law.



Then we considered how Lucy Goosefeather ensured that the fishing business and all its associated enterprises in the system actually improved life for the Ojibwa people in the area. Her conscience told her to explore, among all the things that the social system says can be done, what really should be done. For this she worked with the cultural system of a judiciary, the humanities, the arts and religion.



### *What improved?*

Now suppose Doug and Lucy spend the next 20 years improving the human condition of their people through their Ojibwa Fish Company. What actually improved?

#### Outcomes

We can see the obvious improvements in outcomes: People enjoy higher incomes, better homes, improved roads, and wider internet connectivity. There are new ways of working together because more people are employed in the technical, financial, marketing, political, and legal dimensions of the Ojibwa Fish Company. Their living environments are more attractive, owing to the work of artists, city planners, and architects. Their community adheres to the high moral standards protected by law and promoted by those who teach the humanities and by their religious leaders.

#### Persons

The less obvious improvement is actually the more important. This is because Doug and Lucy improved as persons who are open. Even had their fishing business collapsed, their “healing” as persons would still have found other ways to improve the well-being of their community. Remember that by

“healing” we mean the habit of mind and heart that is suspicious of bias and willfulness and is dedicated to recovery and healing.

We may imagine how this healing works in the minds and hearts of Doug and Lucy. First, they actually love one another. And because they do, they feel a part of one another. They work in harmony. They are more interested in their friendship than in themselves. They value their friendship higher than the success of their fishing business.

Higher yet, they are each more interested in being fully open persons, even if it puts stress on their friendship. For they have come to realize that being an open person is necessary to prevent the erosions of friendships that come with obsession and egotism. Moreover, they have come to understand that to be fully open, they need to be open to the inspirations that come as gifts from the Great Spirit who befriends them.

This spirit of openness is what moved them, over 20 years, to explore all the dimensions related to their fishing business. We portrayed Doug as specializing in social systems: He reads up on the science of plastics. He experiments with different technologies for catching and processing fish. He keeps track of the finances of running the business. He targets new markets and tests new ways of marketing. He holds positions on boards in other institutions; he lobbies politicians for their support; he keeps up with state and federal regulations. And we portrayed Lucy as specializing in cultural systems: She manages a silkscreen shop whose products beautify everything from T-shirts, to store signs, to banners in the Dennis Museum in Traverse City. She serves as a minister in the worship center, where she promotes the value of friendship over egotism and groupism, and of holiness over mere ethics. With Doug, she wants to ensure that their enterprise shuts no one out. At Northwest Michigan College, she teaches “The Art Spirit” where her students learn how to express their experiences of the pull to ever more openness in web-based digital “paintings.” She is often called upon to resolve disputes between management and labor, and between feuding neighbors.

Their “openness” rose up through the full scale of values:

They expanded their horizons from the *vital* value of eating fish, to the *social* value of collaborating, to the *cultural* value of preferring what is objectively better over what would benefit themselves, to the *personal* values of openness and integrity, to the *transcendent* value of being in love in an unrestricted manner.

Notice how at each level the next higher makes the previous value more achievable. The social value of collaboration delivers the vital values of food, clothing, shelter, etc., more efficiently. The cultural value of aiming toward the objectively better rather than what benefits only certain privileged



individuals or groups focuses social collaboration on goals that maximize the benefits to all. The personal values of openness and integrity ensure that the culture is formed more by the character of its members than by laws and sanctions. The transcendent value of being in love without restriction opens people to religious sources of healing a world that cannot heal by itself.

Along the way, Doug and Lucy learned to be critical thinkers. They were suspicious of anything that blocks this openness. They recognized when obsession was narrowing creativity—both in themselves and in others. They could smell an egotist a mile away. They patiently and carefully worked around owner-centered businesses bent on eliminating competition. They took with a grain of salt any ideas that couldn't be supported by data analysis and historical study. They prayed and sang about the Great Spirit from whom all good things come, and sought to treat all persons as equally dear to that Spirit.

They also became increasingly adept at critical healing. Gradually, by trial and error, they learned how to bring the biases they discovered into the light of day, and to help various parties to become more open persons. And where wrongs were done to them, they did not blame. They took no revenge. Familiar with their own struggles with willfulness, they knew that forgiveness is the only cure. They always tried to leave their doors open to renewing friendships with those who wronged them—including, on occasion, with one another.

## Conclusions

Our concern has been how technology can improve the human condition. But, looking more closely at both, we found a number of different dimensions. We found that *technology* is only one element in a network of social and cultural systems that affect our everyday lives. We found that our *human condition* is naturally open to beauty, creativity, and morality, but commonly violates human nature by being ugly, stupid, and immoral.

Then we clarified how critical thinking and critical healing are needed to restore our human condition to what enhances life and to what heals the biases and willfulness that cause decline in the first place.

In the introductory page for this course, I posed three questions. We can now give short summaries of responses to these questions:

- *What factors of technology make for genuine progress?*

Genuine progress results when human choices to develop, sell, use, or abandon specific technologies are not distorted by bias or willfulness.

- *What factors make for decline in our human condition?*  
When these choices are distorted by bias or willfulness.
- *What factors are available to reverse a declining culture?*
  - Make every effort to identify and overcome any biases or willfulness in your own life.
  - Lead the obsessed to recognize the fact and the depth of their problem.
  - Befriend the egotist.
  - Invite people with unquestioning loyalty to one group to participate in several other groups.
  - Invite and encourage people to learn about the history and the underlying dynamics of specific problems.
  - Keep always in mind that we are not self-sufficient, but that each one is invited to a holiness that welcomes the gifts of faith, hope, and love.
  - Expose willfulness while expressing a loving forgiveness.

I imagine that many of you took this course because you were interested in technology. I had to count on your own natural openness to the many further questions that lead to an entire philosophy of life. I am quite conscious that I put demands on both your minds and your hearts. I hope you found that engaging the deeper questions can really pay off for you and your loved ones.

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## 13. A History

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### Introduction

From the dawn of history, according to Jared Diamond, a menacing shadow of hatred has always darkened our human condition. In “Vengeance is Ours” he notes that it is normal for tradition-based societies living outside the controls of state governments to demonize neighboring groups and regularly to engage in war and murder. Ethnographical studies have shown that hatred and war are historically “normal” between tribal societies. In the long view of history, he says, our modern state-governed societies are the exception “because we instead grow up learning a universal code of morality ... promulgated every week in our churches and codified in our laws.”<sup>13</sup>

Yet today, despite religious teachings and moral codes, national governments still portray other nations as evil, sometimes because of past oppression and sometimes because of a perceived threat of attack. Technology has always played a role in wars by giving the victorious army an advantage through things like steel armor, gunpowder, the airplane, poisonous gas, spy equipment, decoding machines, and nuclear weapons. But it is nuclear technology that presents the human condition with an unprecedented threat—both as a source of energy and as a weapon of war—of poisoning by radioactivity millions of civilians and millions of acres of productive lands.

This is not to say that technology has not benefitted our human condition. Quite the contrary. Technology is improving life and improving it fast. For example, if you were alive when my grandmother was born, you’d have no light bulbs, cars, or planes; no telephones, radios, or recorded music; no steel or plastic or dynamite; no pasteurized milk, sterilized surgical instruments, psychotherapies, rabies vaccination, or vitamins.

At the same time, while nuclear disasters have so far been localized, technologies have already played a key role in damaging our human condition all over the globe. We live with polluted air and water. Suburbs and parking lots are taking over landscapes that provided drainage, shade, and oxygen-producing plants. Industries rely on standardization and specialization, but this also standardizes persons, narrows their skills, and raises their economic value far above the values of their companionship and depth of character.<sup>14</sup>

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<sup>13</sup> Diamond, Jared. “Vengeance is Ours,” *The New Yorker*, April 21, 2008, pp. 74-87, at 77.

<sup>14</sup> “...the production of standardized things by persons also demands the production of standardized persons.” Van den Haage, Ernest, “Of Happiness and of Despair We Have No Measure,” *Man Alone: Alienation in Modern Society*, eds. Eric and Mary Josephson (Dell Laurel Paperback, 1971), p. 184.

Technology has also damaged our sense of the beautiful. The simple beauties of nature are more difficult to find. Good art and music—the kinds that touch our desires for order and harmony—are hugely overshadowed by technologies designed just to excite our nervous systems or trick us into buying something we don't need.

What is the lesson here?

*Clearly, there are things we have forgotten and things we need to learn.*

To see what we have forgotten, we need to understand the history of how our human condition came to be so tightly tied to technology. The essential insight here is that, beginning from the Stone Age, there have been revolutionary developments in both our human condition and our technologies. So in what follows, I will lay out four developments in our human condition and two in technology. This will bring us up to the present and give us some answers to our second question, namely, What do we need to learn?

#### Four Developments in the Human Condition

The four revolutionary developments in the human condition that I have in mind are the emergence of new ways of *thinking*.<sup>15</sup>

##### 1. Image & Symbols

The pre-historic emergence of language, art, literature, and religion. Thinking was mainly through *image and symbols*.

##### 2. Universal Order & Theory

The emergence of philosophy and monotheistic religions in 800-200 BC. Thinking now asks about the order of the entire universe, created and divine, and it develops beliefs and theories that focus on *truth*.

##### 3. Experiment & Plausibility

The emergence of modern science in the 1600s.<sup>16</sup> Thinking now includes views that focus on *the most plausible explanations of data*.

##### 4. Praxis & Human Studies

The emergence in the late 1900s of a "praxis" that take a critical standpoint toward any developments and corresponding changes in

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<sup>15</sup> See Lonergan, Bernard, "Sacralization and Secularization," *Philosophical and Theological Papers: 1965-1980*, v. 17 of the *Collected Works of Bernard Lonergan*, eds. R. Doran and R. Croken (Toronto: University of Toronto Press, 2004), 259-281, at 278. Originally delivered at Trinity College, Toronto, November 1973. I have abbreviated the terminology for the developments in modes of thought.

<sup>16</sup> In the late 1800s, a similar revolution occurred in the scholarly disciplines of history, literature, and biography, namely, accounts that represent best available opinions based on evidence.

human studies. Thinking now includes views that focus on *the best available critiques of error and standards for better living*.

I want to stress that later developments do not replace earlier ones. Today, we can find all four ways of thinking, although not equally prevalent. Everyone is familiar with the first mode—thinking in images and symbols. Most know the second mode—through philosophy and/or religion. Many know the third—especially those who specialize in any of our modern sciences. A few know the fourth—those who see the need for a method of “praxis” in all human studies that not only discriminates between progress and decline in the past but also promotes what can improve people’s well being everywhere in the future.

### Two Developments in Technology

Besides these developments in how we think, there are two revolutionary developments in technology:

Finding a base in modern science.

Becoming fully integrated with the political-economic order.

In what follows, I will weave these two developments in technology in with the four developments in our human condition.

## 1. Images and Symbols

In the fog of prehistoric times, the main developments were in language, art, literature and religion. From these developments, the thought processes of our ancestors were mainly a combination of *technique, myth, and magic*. Technique includes any practical know-how. Myth includes narratives about group origins and the cosmos. Magic includes all the practices by which incantations and rituals were done to produce physical changes (especially weather, health, fertility, and military victory).<sup>17</sup>

Our earliest “technological” achievements were not “technology” in the modern sense. They were not based on any scientific theories on statics and dynamics of physical matter, let electromagnetism and chemistry. Rather, the achievements were a matter of *techniques* for building and for doing work more efficiently:<sup>18</sup> 🏠

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<sup>17</sup> See Malinowski, B., *Magic, Science and Religion* (New York: Doubleday, Anchor, 1954), pp. 17 ff. For early developments of meaning, see, Lonergan, B., *Method in Theology* (New York: Herder and Herder, 1972), pp. 85-93. For early views on religion, see Dawson, Christopher, *Age of the Gods* (New York: Sheed & Ward, 1933).

<sup>18</sup> These and later dates of technological developments are taken from "technology, history of." *Encyclopædia Britannica*. Standard Edition (Chicago: Encyclopædia Britannica, 2008).

Our ancestors' world-views were mythical narratives about the origins of their own tribes, often involving the sun and stars, tigers and bears, ocean deeps and storms. These world-views included divine beings, but, prior to about 1000 BC, most involved magical, superstitious beliefs about practical matters—how to be successful in hunting, farming, warring, and conceiving children.

Loom (4500)  
Wheel (3500)  
Bronze (3100)  
Pyramids (2700)  
Silk (2500)  
Irrigation (1750)  
Paved roads (1200)  
Iron (600)  
Catapult (400)  
Great Wall of China (210)

As far as we can tell, their thinking was mainly through images and stories of how ordinary life should be lived and through symbols of beings and forces that affect daily lives. Any distinctions they made about the world were based, not on the much later distinction between a natural and a supernatural order, but on *visible images* and *invisible forces*, where the invisible included the forces of wind, deep water, storms, gods and angels without distinction. Also, different groups each had its own unique images and symbols about the world. What mattered was “what we believe;” the question of what *everyone* should believe had yet to be raised.

Technology, then, was essentially technique, or practical know-how. But this know-how included not only techniques in crafts and engineering but also techniques in magic for causing rain and fertility.

## 2. A Universal Order & Theory

### A Universal Human Condition

The philosopher of history, Karl Jaspers (d. 1969), published a highly influential account of the origins of how we worship and how we think about the world up to the present time. In his *Origin and Goal of History*,<sup>19</sup> he proposed that over what he calls an “axial period” from about 800 to 200 BC, the leading cultures of the world underwent a revolutionary awakening regarding what may be *universal* about both the physical world and the individual person.<sup>20</sup>

He found that a number of different cultures, with no evidence of mutual influences, became aware that humans everywhere have both a deeper inner self and a loftier human destiny than had ever been imagined. In his words,

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<sup>19</sup> Jaspers, Karl; Bullock, Michael (Tr.) (1953). *The Origin and Goal of History* (1st English ed.). London: Routledge and Keegan Paul. LCCN 53001441. Originally published as Jaspers, Karl (1949). *Vom Ursprung und Ziel der Geschichte* (1st ed.). München: Piper Verlag. LCCN 49057321.

<sup>20</sup> For an overview of Jasper's theory of an Axial Period, see <http://www.bartleby.com/67/68.html>

"The new element of this age is that man everywhere became aware of being as a whole, of himself and his limits... He experienced the Absolute in the depth of selfhood and in the clarity of transcendence."<sup>21</sup>

By "transcendence" is meant not some other-worldly fantasy but rather a very familiar experience: Each person can make the personal discovery of a persistent desire to transcend his or her self by learning more, doing better, and loving widely.

For evidence, he points to such diverse cultures as Chinese, Hindu, Buddhist, Greek, Hebrew, and Persian. As it happens, each of these cultures included many small states or groups regularly engaged in civil and inter-state warfare. The question of how to rise above wars and vengeance found answers in the idea that the entire world is one place, and every person in it has a self-transcending core in common with every other.

This idea of a single universe and a single core to each person's calling was expressed in two quite different forms—one in religion and one in philosophy.

The Hebrews represent a prominent example in religion. Around 1000-800 BC, they moved from believing that their god was simply the one who is highest of all the gods (henotheism) to believing that there really is only one God who created everything and whose will about right and wrong falls equally on humans everywhere (monotheism). The belief that one God reigns over all creation implies that there is a universal standard of behaviors to be found in the transcendent wisdom and will of God.

Socrates (d. 399 BC) represents a prominent example in philosophy. As recorded for us by Plato (d. 347), Socrates raised the question whether right and wrong depended exclusively on the customs of local groups or might there be a right and wrong that belong to all humans "by nature." To put this another way, is morality a matter of social convention or are there notions of "right" that are universal? If morality is something universal—something that transcends group customs—then one culture can and should criticize other cultures where they see behaviors that violate these "natural rights."

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<sup>21</sup>. *Way to Wisdom: Introduction to Philosophy*, 2nd ed. (New Haven : Yale University Press, 2003). p. 100. Cited by Peter von Sivers, "All and Nothing: Reflections on Experience and Transcendence in the Eurasian Axial Age, c. 800-200 BCE." Retrieved on April 24, 2008 from [www.artsci.lsu.edu/voegelin/EVS/2006%20Papers/Peter%20Sivers.htm](http://www.artsci.lsu.edu/voegelin/EVS/2006%20Papers/Peter%20Sivers.htm)



## Deductive Thinking

If Socrates mastered the art of raising questions, Aristotle (d. 322 BC), a student of Plato, provided answers by developing philosophical systems that laid out this inner “nature” of things. He covered a wide range of human phenomena—phenomena that today fall under the auspices of physics, chemistry, biology, and botany, as well as human psychology, logic, rhetoric, political theory, and ethics.

Today, we refer to these disciplines as “sciences,” but Aristotle’s notion of science was quite unlike our own. To him, scientific method is based on making logical deductions from self-evident principles. This type of thinking is referred to as “deductive.” The goal is to reach certainty. And certain knowledge occurs when we know the causes of things.<sup>22</sup> To get a flavor of how deeply logical Aristotle’s science is, consider this passage from his *Physics*:

When the objects of an inquiry, in any department, have principles, conditions, or elements, it is through acquaintance with these that scientific knowledge is attained....

The principles in question must be either (a) one or (b) more than one. If (a) one, it must be either (i) motionless, ... or (ii) in motion, .... If (b) more than one, then either (i) a finite or (ii) an infinite plurality. If (i) finite (but more than one), then either two or three or four or some other number. If (ii) infinite, then either ... one in kind, but differing in shape or form; or different in kind and even contrary.<sup>23</sup>

This view of science as aiming for certain knowledge through logical deductions from principles dominated Western and Islamic “science” until the 1600s.

## Technology

Aristotle’s science has had no direct effects on technology. It was still practical know-how that produced these more prominent technological developments: 🏹

As you can see, technological inventions like these are not “deduced” from principles. It is true that some early principles of math and mechanics may have played a role,<sup>24</sup> but these inventions were mainly “induced” from

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<sup>22</sup> Aristotle identified four kinds of causes—material, efficient, formal and final. For example of Aristotle’s four causes, consider a hammer. The material cause is wood and stone; the efficient cause is the person who made the hammer. The formal cause is the idea of an instrument for pounding. The final cause is the purpose—to pound nails or smash wood.

<sup>23</sup> This quotation from Aristotle was retrieved from <http://classics.mit.edu/Aristotle/physics.1.i.html>.

<sup>24</sup> In particular, Euclid’s (d. 320 BC) principles of mathematics, and Archimedes’ (d. 270 BC) principles of mathematics, hydraulics, and mechanics.

experimenting with materials. Still, it does seem likely that these inventions gradually shifted people's confidence toward technology and away from magical incantations and rites.

### 3. Experiment & Plausibility

#### Inductive Thinking

We jump now to the scientific revolution that began in the 1600s. Herbert Butterfield (d. 1979), in his *The Origins of Modern Science*, asserts that from the perspective of world history, the scientific revolution, "outshines everything since the rise of Christianity and reduces the Renaissance and Reformation to the rank of mere episodes, mere internal displacements, within the system of medieval Christendom."<sup>25</sup>

This revolution was carried out by thinkers who sought knowledge more in experimentation and in a reaction against an unquestioning acceptance of authorities like Aristotle and the Church. Francis Bacon (d. 1626) led the charge. Compare, for example, Aristotle's "deductive" thinking that we cited above to Bacon's proposal about "inductive" thinking:

... all true and fruitful natural philosophy hath a double scale or ladder, ascendant and descendent; ascending from experiments to the invention of causes, and descending from causes to the invention of new experiments...<sup>26</sup>;

Those who have handled sciences have been either men of experiment or men of dogmas. The men of experiment are like the ant, they only collect and use. The reasoners resemble spiders, who make cobwebs out of their own substance. But the bee takes a middle course: it gathers its material from the flowers of the garden and of the field, but transforms and digests it by a power of its own.

**Energy:** waterwheel (85 BC), windmill (1120).

**Manufacturing:** iron ore smelting (1350), cotton manufacturing (1620).

**Communications:** paper (105), block printing (510), printing press (1450), lead pencil (1550).

**Navigation:** compass (1190), Navigational charts and astrolabe (1270), telescope (1608).

**War:** the stirrup (700), gunpowder (800), cannon (1362).

<sup>25</sup> Butterfield, Herbert, *The Origins of Modern Science 1300-1800*, Revised edition (New York, 1966) p. 7. Cited by Bernard Lonergan in "The Absence of God in Modern Culture," *A Second Collection*, eds. W.F.J Ryan and B.J. Tyrrell, (London: Darton, Longman & Todd, 1974) p. 103

<sup>26</sup> From Bacon's *The Advancement of Learning*. Book 2, Section 7, #1. See <http://darkwing.uoregon.edu/~rbear/adv2.htm>.

Not unlike this is the true business of philosophy; for it neither relies solely or chiefly on the powers of the mind, nor does it take the matter which it gathers from natural history and mechanical experiments and lay it up in the memory whole, as it finds it, but lays it up in the understanding altered and digested. Therefore from a closer and purer league between these two faculties, the *experimental* and the *rational* (such as has never yet been made), much may be hoped.<sup>27</sup>

The experimental ideal of thinking was taking over, an ideal that represents what we now call “modern science.” Where Aristotle’s views aimed at *truth and certitude*, modern science aims at the *most plausible explanations of experimental data*. Currently, for example, we have theories about gravitation and evolution that are widely accepted, not as “true” but as “best available explanations” of data. As “best available,” they remain open to more comprehensive explanations that may arise.<sup>28</sup>

## Technology

Over the next 300 years, a spirit of experimentation released a torrent of inventions flowing into every dimension of society: →

This spirit of experimentation was greatly promoted by the work of the Royal Society in London, which was established by a group of natural philosophers in 1660, after 20 years of discussing Bacon’s ideas of an empirical science. One of its principles was to exclude from discussion any question that could not be settled by observation or experiment. Its agenda included

**Energy:** steam engine (1720), electric battery (1800), Light bulb (1879)

**Materials:** cement (1824), steel (1864), cellophane (1912)

**Transportation:** accurate clocks for determining longitude at sea (1763), iron bridge (1779), balloon flight (1783), steam locomotive (1803), automobile (1885), airplane (1903)

**Communications:** telegraph (1883), photography (1839), typewriter (1868), telephone (1876), phonograph (1877), wireless radio (1896)

**War:** machine gun (1862), dynamite (1867), automatic and chemical weapons (1914)

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<sup>27</sup> *Ibid.* Aphorism XCV.

<sup>28</sup> Newton’s laws of gravity do not explain subatomic movements, so there are efforts to propose theories that explain everything, from subatomic to astronomic levels. Darwin’s theory of evolution explains why less fit species become extinct, but not how highly complex neural systems arise in apparent defiance of statistical odds.

ways to improve navigation and mapmaking, the promotion of new industries based on scientific discoveries, and a search for the mineral resources needed by these new industries.<sup>29</sup>

### Technology Relies on Science

But the more fundamental change in technology—indeed, the most fundamental so far, and the first truly revolutionary development— came about by connecting practical know-how and technique to newly emerging scientific theories. We might say that mere “technique” evolved into three interrelated disciplines—scientific research, applied science, and technology as we know it today.

### *Scientific Discoveries*

How did science affect technology? Here, we can mention only the major scientific discoveries that spawned countless applications in technology:

**Math:** Newton and Leibnitz develop the Calculus (1665-1675), which measures infinitesimal changes and gross accumulations. Laplace (1812) develops the Theory of Probability,<sup>1</sup> which measures aggregates of events that fall outside of physical laws.

**Physics:** Newton (1687) proposes that motion everywhere in the universe follows the same laws we now refer to as “gravity.” This arouses expectations in scientists everywhere that there are “scientific laws” that govern all of nature. Planck (1900) develops Quantum Theory, which explains how subatomic particles are neither particles nor waves. Watson and Crick (1953) discover DNA.

**Chemistry:** Mendeleev (1869) proposes that all elements can be classified by atomic weight of their protons and the energy level of their electrons. His “Periodic Table of Elements” still dominates chemistry today.

**Biology:** Darwin (1839 and 1847) proposes his theory of Evolution, which explains the origins of biological species and has been extended to explain the origins of everything from viruses to galaxies.

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<sup>29</sup> “Historically, then, modern science grew out of an opposition to Aristotle. Further, its development and its success are to a great extent due to the ground rule of the Royal Society that excluded from consideration questions that could not be settled by an appeal to observation or experiment.” See Bernard Lonergan, “Absence of God in Modern Culture,” *A Second Collection*, eds. W.F.J. Ryan and B.J. Tyrrell (London: Darton, Longman & Todd, 1974), pp. 101-118, at p. 106. Also, see historical materials on the website of the Royal Society at <http://royalsociety.org/page.asp?id=1058>

### *Enchantment with Science*

The flood of discoveries in science and inventions in technology that followed on Bacon's views led many to think that history itself might be automatically progressive. That is, wars and disease may be only temporary setbacks in what will eventually prove to be continuous progress in the human condition.<sup>30</sup>

A symbol of society's enchantment with progress through science and technology appeared in London's *Great Exhibition* in 1851, where new inventions were housed on the magnificent "Crystal Palace."

### *Disenchantment with Science*

But by the 1920s, disenchantment with science and disillusionment about progress set in. It began with World War I, continued through World War II and the atom bomb.

Today we are much more skeptical about what science and technology can do for the human condition. We now must live with The Bomb, which is becoming available to more nations throughout the world. And we have yet to solve the technological problem of de-radiating the waste from nuclear power plants. On more everyday levels, we are bombarded with economic pressures to buy whatever technology has produced—despite higher risks to our health and to the environment.

### Political Economy Governs Technology

A second fundamental development in technology followed quickly. As modern scientific methods greatly accelerate the flow of new technologies, what these technologies can actually provide for society is almost completely determined by the political economy. The term "political economy" refers to the fact that decisions about the flows of money are highly affected by the political order. Political economies govern technology because they open and close the gates of money that technology depends on for both research and sales.

For example: We have the technology to reduce pollution to livable levels everywhere. But reversing global warming and controlling pollution is not a technological problem. It is an economic and political problem. Economically, pollution-reversing technologies are extremely expensive—expenses that would bring a steep rise in costs of living.

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<sup>30</sup> The idea of automatic progress met with strong resistance. See "Quarrel between the Ancients and the Moderns," about the debate, beginning in the late 1600s, whether we should look to past giants for knowledge (such as Aristotle and Homer) or to scientific experiments leading to future knowledge. See [www.phil.unt.edu/resources/syllabi/fall05/ErinDaly.pdf](http://www.phil.unt.edu/resources/syllabi/fall05/ErinDaly.pdf). See also, Morris Ginsbert, "Progress in the Modern Era," *Dictionary of the History of Ideas, III*, (1973), 638-40.

Politically, the problem is global, because there is simply no economic return on such an investment by any single nation.

Notice, by the way, that the word *economy* today unfortunately focuses mainly on money and jobs, without bringing political orders into the picture.

### *Enchantment with the Political Economy*

Of course, political leaders promoting communism, or socialism, or capitalism sell their ideas in enchanting economic terms. It takes history itself to test these ideas, and the guinea pigs are people. Currently, capitalism is the dominant enchanting political-economic idea in the West. It began with Adam Smith's (1776) theory of an "invisible hand" of automatic market corrections that will occur as long as governments keep their visible hands off.<sup>31</sup> It is evident today in the dominant *laissez-faire* ("let them be") economics that resists any sort of governmental control.

The political economy in developed countries also enchants people into believing that material comforts will provide happiness. This job of enchantment, like an extension of ancient reliance on magical rites and incantations, falls to advertising firms.

### *Disenchantment with the Political Economy*

Today, the test of history shows that benefits of technology come to the few while the risks are borne by the many. The sad fact of our human condition is that the well-being of a minority is paid for by the poverty and drudgery of the majority. Purely *laissez-faire* economic theories are welcomed by large corporations because it frees them from governmental regulations. In fact, the David of economics often knocks down the Goliath of governments: when these corporations have a global economic reach,<sup>32</sup> it is they who force national governments to pass laws favoring profits for foreign owners at the expense of indigenous workers.

In the meantime, even among those who do benefit from technology, the material goods promoted by advertisers seldom bring anything like a happiness that is deeply satisfying to the human spirit. Advertisers certainly distract from and often suppress the ordinary person's attention to ways to live more deeply.

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<sup>31</sup> For an overview of Adam Smith's economic theory, see <http://plus.maths.org/issue14/features/smith/>.

<sup>32</sup> The expression, "global reach" was brought to public awareness by Richard J. Barnet and Ronald E. Miller, in their book, *Global Reach: The Power of the Multinational Corporations* (New York: Simon and Schuster, 1974).

## Summary

So what has the development of modern science done to the role of technology within our human condition? We can summarize these changes in three points.

1. Modern science gives technology fundamental theories for unprecedented developments across many dimensions of our lives—especially in the areas of energy, food production, transportation, and communications.
2. Modern political economies determine who will benefit from these developments.
3. History attests to the inability of science, technology, and political economies to provide global improvements in people’s well-being.

## 4. Praxis & Human Studies

We saw that the emergence of inductive thinking had revolutionary effects on science, technology, the economy, and politics. We might label these our “social” institutions, because they gather people into collaborative groups for these ends.<sup>33</sup> What these institutions have in common is a single goal:

*To produce goods and services more efficiently and effectively.*

We also saw that these social institutions are worsening the human condition for millions of people, and, left without any regulatory controls, will continue to make life worse for most people across the globe.

But we have another set of institutions that are often labeled “cultural.” Some of the main ones are the arts, a judiciary, religion, and humanities. (“Humanities” includes education in literature, history, political science, economics, philosophy, and theology.) These cultural institutions share a single goal of their own:

*To improve the human condition.*

So where science and technology tell us what we *can* do, and political economies tell us what we *will* do, our cultural institutions tell us what we *should* do.

The role of our cultural institutions regarding technology and its associated social institutions is obvious: *Align their goals toward improving the human condition.* What we *can* do regarding industry, chemistry, space exploration, medicine, war, and so on, is not always what we *ought* to do. Besides producing goods and services *efficiently* and *effectively*, we need to produce

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<sup>33</sup> These effects of modern science effected similar transformations on the social institutions of laws, financing, and marketing, but these are beyond the scope of this paper.



them *ethically*. So we look to our cultural institutions to give guidance to our social institutions.

### Secularism vs. Transcendence

A major way to find the guidance we need is to first see there is anything we may have forgotten. One oversight stands out above all others: We forgot what our ancestors in the axial period discovered, namely, that our human condition is about transcendence. That is, to be human is to experience, in the depths of our hearts, a persistent desire for the ultimate meaning of everything and the goodness of humanity itself. Philosophers who look to Socrates, Plato, and Aristotle find our transcendent condition in our common nature to want to learn, to practice virtue, to deepen friendships. Religious faithful who look to the Hebrews find our transcendence in a God who created everything as a gift of unconditional love and who gave humans commands for living virtuously.

To forget our transcendent human condition is to become “worldly” or “secular.” Over the 600 years beginning in the 1300s, four great historical movements represent the phases of a gradual secularization of our views about the human condition: the Renaissance, the Reformation, the Enlightenment, and Marxism. Proponents regarded their respective movements as a victory of human reason over religious superstition and a liberation of cultures from authoritarianism in kings and popes.

Today, forgetfulness of transcendence shows largely in *relativism* and *agnosticism*.<sup>34</sup> It shows in relativism as the belief that whatever moral ideals you hold is your business, as long as no one else gets hurt. It shows in agnosticism as the belief that God is just an idea, and we have no way of knowing whether God really exists. Notice how relativism reverses the ancient Greek belief that there are universal moral principles. Likewise, notice how agnosticism reverses the ancient Hebrew belief that God is not only real but deeply engaged in history.

### Praxis Thinking

Still, the blade of truth, sharpened in the axial period, cannot excise the tumors of relativism and agnosticism. This is because relativism denies the validity of any universal truth, and agnosticism denies the validity of any truth based on religious belief. Nor is it enough to remember the discoveries of Greek philosophers and Hebrew worshippers. In their day, truth was needed to replace falsehood regarding our human condition, just as in the Middle Ages, Christianity promoted dogma to replace heresy. But since the

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<sup>34</sup> By stressing agnosticism, I don't mean to rule out an atheism that explicitly denies God's existence. I just see more hope in leading agnostics to discover the question of God in their personal experience than in any debate about truth and falsehood regarding God's existence.

rise of the empirical-mindedness of modern science, the question that bothers people is not whether anyone's views about life are true or false; it is whether or not they make sense of their actual life experiences.

In the last 50 years, various philosophers looked to what we may call "praxis" as this new way of thinking.<sup>35</sup> Briefly, praxis is a method that attends to what happens in our minds that makes us seek beauty, creativity, and love, while we often behave in ways that are ugly, stupid, and hateful. The "method" has three phases:

It highlights the fact that human wonder and the search for meaning, harmony, and companionship is exactly what it means to be transcendent.

At the same time, it expects to find that our wonder is wounded by bias, hatred, and willfulness.

Finally, it proposes ways to heal these wounds and to recover what represents genuine transcendence.

Praxis today also meets inductive thinking on its own ground by relying, not only on observable data, but also on the data of our consciousness—data that validates the self-transcending nature of humans everywhere.

We can cite three recent philosophers who pioneered this work somewhat independently of one another: Paul Ricoeur (d. 2005), in his studies of Freud, aimed to expose unquestioned assumptions and agenda while preserving what is authentic and reliable.<sup>36</sup> Eric Voegelin (d. 1985), in his five-volume work, *Order in History*, outlined all historical developments as evidence of a transcendent search for order.<sup>37</sup> Bernard Lonergan (d. 1984) proposed that all human studies begin from examining what we do when we learn, make decisions, and love.<sup>38</sup> He also proposed a theory of a political economy that is based on acknowledgement of our common dignity in a transcendent nature.<sup>39</sup>

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<sup>35</sup> See Bernard Lonergan, "Theology and Praxis" in *A Third Collection*, ed. F.E. Crowe (New York: Paulist Press, 1984), pp. 184-201.

<sup>36</sup> Ricoeur's approach is often referred to as a "hermeneutics of suspicion and recovery." See Paul Ricoeur, *Freud and Philosophy: An Essay on Interpretation*, tr. Denis Savage (New Haven: Yale University Press, 1970).

<sup>37</sup> Eric Voegelin, *Order and History*, vv 1-5 (Louisiana State University Press, 1956-1985). A more compendious view of his philosophy can be found in his *The New Science of Politics* (Chicago: University of Chicago Press, 1952).

<sup>38</sup> For a brief synopsis of Lonergan's work, see my article, "Bernard Lonergan (1904-1984)" in *The Internet Encyclopedia of Philosophy*: [www.iep.utm.edu/l/lonergan.htm](http://www.iep.utm.edu/l/lonergan.htm).

<sup>39</sup> See Bernard Lonergan, *For a New Political Economy*, and *Macroeconomic Dynamics: An Essay in Circulation Analysis*, vols. 21 and 15, respectively, of *The Collected Works of Bernard Lonergan* (Toronto: University of Toronto Press, 1998 and 1999).

## Praxis and Human Studies

As a new way of thinking, praxis today is in position to improve all human studies. Just as the natural sciences take their stand on the data of sense, human studies take their stand also on the data of human consciousness. There it finds that some sort of bias, hatred and willfulness are never far from any situation. But it also finds a persistent desire to be fully open to learning, doing better, and loving widely. So praxis thinking promotes positive programs for recovering our natural openness to live in self-transcending ways. Here, we can give a few examples of how praxis thinking can improve human studies:

**Psychology:** Therapists will still use *analytical* techniques for identifying causes of neuroses but will also use *healing* techniques for reversing neuroses, egotism, groupism, hatred, and naiveté.

**Economics:** Policy experts and global financial institutions (e.g., the World Bank and the International Monetary Fund) will not only report on how money is flowing but also propose moral principles that specify where money *should* flow. Using ongoing analyses of current conditions, they will continually recommend rebalancing the flow—now toward capital investments, now toward higher wages—to ensure equitable distribution of the benefits of technology across the globe.

**History:** Historians will not only describe the emerging trends of a particular group but also assess which trends are better and which are worse.

**The Arts:** (Painting, music, sculpture, dance, architecture, landscaping, poetry, fiction, etc.) Creativity will highlight and evoke transcendent desires in audiences/viewers. Critics will not only spell out the effects of art works on people; they will also assess how deeply artists are wonder-struck by the mystery in human affairs and how well they elicit that wonder in their publics.

**Education:** A humanities education will teach students how to think in a praxis mode in their homes and at work. Students will regard themselves not only as critical thinkers but also as critical healers.

**Theology:** Theologians will not only state religious doctrines; they will also point to the experience of self-transcendence to explain what they mean. By recognizing the transcendent dignity of each individual, they will counteract hatred of foreigners and desertion of the unborn and the dying.

## Technology and Praxis

In the meantime, as praxis thinking transforms human studies, we can expect technology to continue its rapid growth: 🏠

We have no reason to expect things to slow down, as is indicated in “Current Research” here. Nor have we any reason to expect that our current political economies will relinquish their control over who benefits from technology. There is simply no backing away from the two transformative developments in technology—its foundation in modern science and its implementation through a political economy.

**Navigation:** airplane (1903), liquid fuel rocket (1926), space shuttle (1981)

**War:** automatic and chemical weapons (1914), nuclear bomb (1945)

**Communications:** transistor (1947), satellite (1957), computer (1959), personal computer (1977), cell phone (2002), nanotechnology (2004)

**Medicine/Genetics:** penicillin (1928), *in-vitro* fertilization (1976), DNA “fingerprinting” (1984), human genome project (1990),

**Current Research:** zero electronic resistance, lightweight batteries, genetic medicine, nuclear waste disposal, high-resolution satellite pictures everywhere on the globe, high-fidelity remote listening devices.

Currently, the greatest danger that technology presents to our human condition lies in the combination of unregulated economies and political groupism. That is, the current state of multinational corporations and political hatreds is a lethal affair. Unregulated economies secure profits from technologies that benefit owners at the expense of workers. They escape oversight of our cultural institutions that would put a higher priority on global improvements to the human condition over the material well-being of the wealthy.

At the same time, political groupisms thrive on fear and hatred. Specifically, as rich economies grow richer at the expense of poorer economies, the spirit of group groupism renders the rich economies fearful and the poor economies hateful. Add nuclear weapons to the mix, and the extreme danger to both sides becomes obvious. One political economy hates, the other fears, and both have The Bomb.

At the same time, there are all sorts of everyday misuses of technology: 🏠

We can write laws to regulate these misuses. And we can offer courses in the humanities about our true dignity. But who will write these laws and teach these courses? Indeed, who will *obey* these laws and *take* these

courses? Ultimately it comes down to individuals who live in a praxis mode. These are people who are naturally open, naturally suspicious about how easy it is for anyone to become self-enclosed, yet naturally loving enough to reach out with a healing word and touch.

Well, ultimately, it comes down to just one individual, correct?

## Conclusion

**The arts:** Uses of technology merely to excite our nerves or sell things we don't need. Reducing physical beauty to sexual attraction.

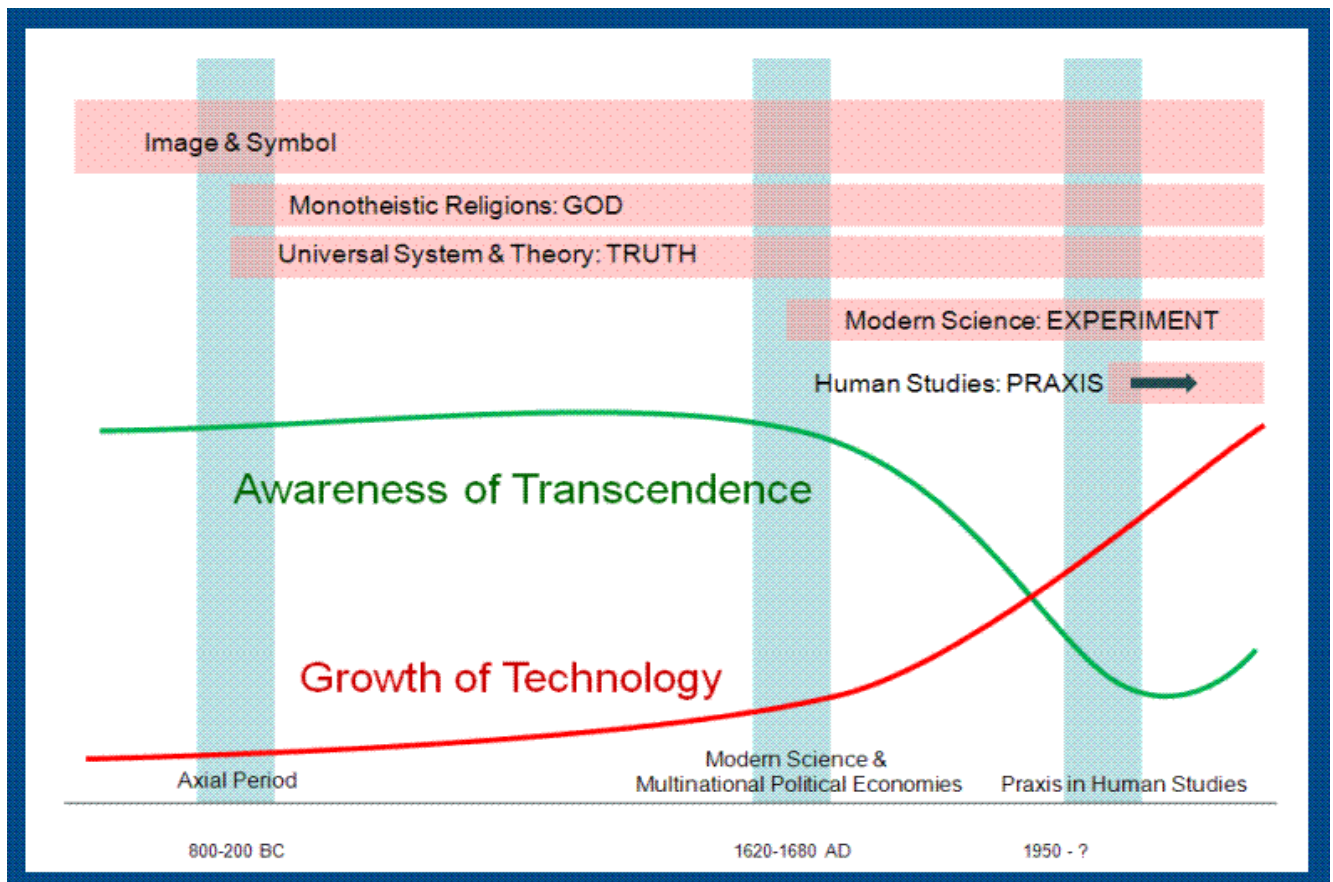
**Communications:** Technologies used for spying, identity theft, plagiarism, unregulated publication of pornography, nonsense, and hate.

**Medicine/Genetics:** Medical technologies that facilitate abortion, sexual activity among youngsters, and withdrawal of food and water from the terminally ill, all in the absence of moral standards.

**Environment:** Pollution of air, water, light (night sky). Loss of "nature" and wilderness.

## A Graphical Overview

Below is a graph that gives an overview of this history of technology and our human condition: ↘



- The pink horizontal bars represent four major developments in our “human condition”—developments mainly in how we *think*.
- The blue vertical bars represent the three revolutions that launched the latter three new ways of thinking.
- The green curve represents a general global awareness of a transcendent dimension to our human condition—where the drop in this awareness represents a “secularism” in thinking.
- The red curve represents the growth in technology.

### Concluding Summary

We began by asking, What have we forgotten and what do we need to learn? Here is a summary of what we found:

1. We forgot that the nobility of our human condition lies in our self-transcendent nature. This means that the best parts of our nature involve learning more, doing better, and loving widely.
2. We need to learn how to recover our sense of transcendence in an age of modern science and political economies.

Never before in history has technology been so promising and yet so threatening for our human condition. But it is not technology that is the source of either the promise or the threat. The source is, as always, the human heart, for which technology is merely an instrument. The glowing promises of technology can be realized and its dire threats reduced only by a realization that the full dignity of our human condition lies in being self-transcending rather than being self-absorbed. Today, we aim to realize that self-transcendence in three ways:

By learning more about science, technology, and political economies

By doing better in distributing the benefits of technology fairly

By widening our love to include every individual on the globe, to dissolve all types of groupism and hatred, and to engage at least the question of a loving God if not the reality

## ***Appendix: Complete Study Guide***

### Introduction

What are the four main developments in how we think?

What are the two main developments in the evolution of technology?

### 1. Images and Symbols

What is the main difference between technique and technology?

If early humans did not distinguish between "natural" and "supernatural," how did they divide up the world?

In what sense did early humans believe in "magic"?

### 2. Universal Order & Theory

When was the "axial period" and what happened during it?

What is the "experience of transcendence"?

Where did Socrates find universal moral norms?

Where did the Hebrews find universal moral norms?

What is the goal of "deductive" science?

How long did thinkers rely mainly on deductive science to understand the world?

### 3. Experiment & Plausibility

What is the goal of inductive thinking?

What did modern science lead some people to believe about history itself?

What disenchanted people about modern science?

How does technology relate to modern science?

How did Adam Smith see the relationship between an economy and government?

How do political economies in developed countries continue to "enchant" people?

What disenchanted people about political economies?

How does technology relate to political economies?



#### 4. Praxis & Human Studies

How do the goals of our social institutions differ from those of our cultural institutions?

What "axial period" discovery did we forget?

In what two forms does this forgetfulness show today?

What are the three phases of "praxis" thinking?

Is praxis thinking more inductive or more deductive?

Give one example of how praxis thinking affects human studies.

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