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Self-Actualization as Creative Synthesis

As a junior in high school I ran (unsuccessfully) for a seat on the Student Council. Before the election, some of us candidates were horsing around, trying to come up with absurd names for political parties we claimed to represent. My contribution was “Pragmatic Idealist,” which sounded to me and everyone else like an oxymoron.

Later it seemed that pragmatic idealism was not such an absurd idea and that I really believed in it. It makes sense because one meaning of “pragmatic” is having a realistic set of *strategies* for attaining one’s goals, whereas “idealistic” means having *goals* which conform to values that promote a better society.* So the two words aren’t always opposites. Instead they may refer to different levels of a problem and so be compatible. In fact, the late Olof Palme, former Socialist Prime Minister of Sweden (one of the most politically innovative Western nations), once said that his party members were all pragmatic idealists.

Pragmatism and idealism are among the pairs of concepts that common nonsense regards as incompatible opposites (*dichotomies*) but are really just paradoxes. Other examples include “reason versus emotion” (see Chapter 4), “religion versus science,” “playfulness versus seriousness” and “selfishness versus altruism.” Let’s look at some common sense ideas for bridging these paradoxes. My discussion will partly be based on Abraham Maslow’s¹ but also incorporate more recent results on neuroscience and on neural network modeling.

How are abstract concepts like “emotion,” “reason,” “religion,” “science,” and so forth represented in the brain? We don’t yet know. Modern brain imaging techniques such as PET and MRI (see Chapter 2) have uncovered a great deal of information about which brain areas “light up” during performance of

* I am not using *idealism* in the sense that is typically used in philosophy, as exemplified particularly by Berkeley — that is, the doctrine that mental states are primary, and events only exist if there is an observer perceiving them.

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different mental tasks. But so far, there haven't been results on which specific brain areas are active while one is thinking about particular abstract concepts. This is one of the next frontiers of experimental neuroscience. But by extension from more specific tasks, we think it's likely that such concepts, and beliefs about them, are represented as firing patterns in some of the high-level cognitive areas in the brain's cerebral cortex and limbic system.*

Looking at pairs of concepts that seem to be in conflict (emotion-reason, et cetera), the neural representations of different concept pairs are likely to involve different combinations of brain cells and regions. But let me speculate that all of them may be related to each other at a still more abstract level of processing. My intuition is based on observing that cognitive processes involved in resolving or failing to resolve paradoxes (see the last chapter) seem to be fairly universal. That is, the process of being “stuck in the mud” feels about the same regardless of context — whether it involves habitual patterns of a government agency, an intimate relationship, or a morning routine, for example. Likewise, the process of being ecstatically creative feels about the same regardless of where and in what sphere it happens. That intuition makes me conjecture that the neural representations of different concept pairs are likely to have some, though not all, structural elements in common. If this were to turn out to be correct, it would be an example of nature's parsimony: similar connection structures, obeying similar mathematical principles, would occur in many parts of the brain.

I will arrive at many syntheses that appeal to me. Some readers will undoubtedly view some of these syntheses as “impractical” and only attainable under “ideal” circumstances. But the difference between “ideal” and “practical” is itself one of the dichotomies to be bridged! If constructive solutions to problems are regarded as “impractical,” that could be a symptom of a particular type of common nonsense. It is an example of the mentality that the maverick sociologist C. Wright Mills called *crackpot realism*.²

* There does seem to be an area of the amygdala which, when damaged in humans, leads to selective loss of the distinction between living versus nonliving things.

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This means holding on to a narrow and pig-headed conception of what courses of action are realistic. In many cases it means equating “realism” with harming other people.

Innovative solutions that bridge traditional dichotomies may be quite sensible responses to situations, but appear impractical only because they go against the conventional wisdom of entrenched social customs or bureaucratic structures. In fact, the opposite is true. *Continuation* of entrenched customs and structures, after events change so these customs are no longer appropriate, is what’s really impractical, because it is likely to have disastrous consequences for people or for society. One current example of crackpot realism relates to the global environment. As Albert Gore discussed, continuation of current business practices regarding product use and waste management are likely to lead to enough emissions of greenhouse gases (e.g., carbon dioxide and methane) to cause climate changes that will make our planet hard to live on within a few generations.³ An entire special issue of a multidisciplinary journal (*Social Issues*, Winter, 1995) is devoted to the psychological changes necessary to support environmentally sound policies. These include developing more optimistic beliefs about human nature and letting go of our worship of “progress”: more on this will appear at the end of the book.

Another example of crackpot realism relates to war and peace. C. Wright Mills himself wrote in the 1950s and 1960s about the common assumption that war between the capitalist and communist systems was inevitable and that challenging the war psychology was impractical.⁴ This assumption was made by many public policy planners, and believed by many average people. (Of course, since then the end of the Cold War has changed the world political landscape. But Mills’ point about people’s bad thought habits is still timely.) He described the type of dialogue that typically occurred then about war and peace, and people’s unwillingness to change its boundaries:

... many, perhaps in fear of being thought Unpatriotic, become nationalist propagandists; others, perhaps in fear of being thought Unscientific, become nationalist technicians. Neither type seems able to transcend the official terms in which the world encounter is now defined.⁵

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The policy planners Mills described were “practical” in the sense of talking in politically safe ways. They weren’t practical, however, in the sense of finding the most effective long-term solutions to their problems. The war example, like the environmental one, suggests that short-term practicality and long-term practicality often aren’t the same, and at times can be diametrically opposed.

Avoiding false practicality in social policy depends on avoiding some of the stereotypical “either-or” common nonsense beliefs discussed throughout this book. This is a difficult task for most of us since it requires changing comfortable, and often cherished, patterns of thought. Some of these thought patterns are not universal but specific to Western culture. As the Jungian psychoanalyst June Singer said:

The tradition in Western thought is primarily linear and analytical. When faced with opposites, we tend to see them as irreconcilable or, at the very least, as problematical. It is difficult to accept holistic thinking, in which... opposing forces are only aspects of the same things as seen from different points of view.⁶

Let’s start at a fundamental level, with the supposed dichotomy between reason and emotion (see Chapter 4).

Reason and Emotion

The triumph of reason over emotion in Western thought and science has been laid at the feet of post-Renaissance philosophers such as René Descartes and Francis Bacon.⁷ It was closely connected with the idea of “enlightenment.” That is, Westerners took a lot of pride in believing they had abandoned superstitious explanations for natural events and replaced them with explanations that make rational sense. Descartes lived at a time when the Catholic Church was supremely powerful in his country and hostile to scientific efforts. It has been suggested that he “made a deal” with the church authorities by ceding to them

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everything emotional and spiritual if the church would leave alone his efforts and those of other scientists at understanding the physical world.⁸

Reason by itself, however, leads to some philosophical errors. Reason establishes how to deduce conclusions from first principles. But it doesn't tell how to decide *which* first principles to use. The decision about principles has to come from somewhere else. In natural science, the first principles are based on belief in empirical observation of the physical world through the traditional five senses. In some religions, the first principles are based on belief in the teachings of a god as interpreted through some holy writing. In mathematics, the first principles are simply whatever *axioms* (primary assumptions) are used by the system, often set by the convenience of the mathematicians devising them, and the *theorems* are rational deductions from those axioms. In life, our first principles are usually derived from values we hold that are based on our *feelings* about what is desirable and what is undesirable. So we can say metaphorically that in daily life, *emotion provides axioms and reason provides theorems*.

Perhaps the Western thinker who has dealt best with the inadequacy of pure reason was the philosopher Immanuel Kant.⁹ As a recent review by Michael Friedman¹⁰ pointed out, Kant believed that it was impossible to get rid of human subjective judgment in scientific observation (a position influenced by his metaphysics that was grounded in mathematics). Friedman noted that Kant's emphasis on subjectivity was congenial to Eighteenth Century science. But in the Twentieth Century, he went on to say, scientists prided themselves on objective evaluation and so found Kant's view less congenial.

Some progressive modern writers about science, such as the quantitative biologist and philosopher Evelyn Fox Keller,¹¹ argue that the psychic cost to our civilization of eliminating the subjective has been too high. It has spawned a "value free" approach that lacks *any* underlying principles when it comes to moral and ethical decision making. Technological expertise has become an end in itself, and all applications of sufficiently clever technology are considered equal in value. In this mindset it doesn't matter whether the technology is applied to providing adequate food for the Third World, curing AIDS, building better bombs, throwing people out of work, or destroying the Amazon rain forest.¹²

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The value free mindset has spread from science and technology to other pursuits. An example is political reporting, as described by the radical journalist Jay Rosen.¹³ It has become fashionable in major New York and Washington newspapers to concentrate on who is politically “savvy” and who “won the week,” and abandon serious discussion of the values politicians claim to stand for. The journalist John Saul related this kind of political cynicism to the excessive worship of reason in the West.¹⁴ He discussed how policymakers abandon values in the name of “practical” politics, and this provokes a reaction from average people against this cynicism. Many people who want to preserve moral values, Saul went on to say, turn against both politics and reason and toward untamed emotion. So paradoxically, while reason is in control of society, large segments of the population don’t participate in any reasoned analysis of social and political issues.

Value free science is common nonsense. Our native common sense, bolstered by current neuroscience, holds the key to healing the split between reason and emotion. Neural network theories of learning processes, even simple ones like conditioning, require strong roles for both reason and emotion (see Chapter 4). The emotional and rational are two of Paul MacLean’s three brains,¹⁵ and the frontal lobes function as the chief communicator between the emotional and rational parts of our brains. Of all parts of our “thinking cap” (cerebral cortex), the frontal lobes *both* encode the most complex cognitive associations and have the most direct connections with the “old mammalian” emotional brain (limbic system and hypothalamus). Fancifully, I like to think of that fact as part of a benevolent divine plan.*

Accepting roles for both emotion and reason opens the way to innovative approaches in many areas of life. One of these areas is organizational management. Studies by the management theorist Chris Argyris hint that business firms where people are free to air their feelings are the most efficient.¹⁶ If discussion of feelings is accepted, this tends to open lines of communication between employees at different levels of the organization. If lines are open, it’s more likely that management will take care of organizational problems that first come to the attention of people at other levels. Also, if employees face no reprisals for

* I must, however, heed my own warnings about teleology from Chapter 4!

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airing their complaints, these complaints are more likely to come out in the open, be dealt with, and at best ultimately disappear. The same general rules apply to other types of organizations besides businesses, such as families, places of worship, political organizations, and interest clubs.

In the absence of a belief that emotion and reason are compatible, the detachment between “head” and “heart” (even though both are in fact represented in the brain!) leads to pathologies on both sides. On the one hand, people who are highly emotional, sensual, or aesthetic often develop phobias against, or contempt for, “rational” pursuits like science, mathematics,* and technology. In the United States, this is one cause of widespread scientific illiteracy, even among educated people, and so indirectly of America falling behind other nations in some aspects of technology. These aesthetic people are unaware of the tremendous pleasure creative scientists often have in their work, a pleasure akin to that of the creative artist. Such joy in work is conveyed by a range of well-known scientists: theoretical physicists like Richard Feynman, experimental physicists like Leon Lederman, biologists like Stephen Gould, et cetera.¹⁷ (Indeed, the narrowly “scientific” anti-emotional attitude seems to be more characteristic of pedestrian scientists than of great ones.) Even mathematics, the most “abstract”** of fields, is converted by those who are good at it into powerful visual or kinesthetic imagery, which is idiosyncratic to each mathematician.¹⁸

On the other hand, people who are highly rational, calm, and effective problem solvers are often phobic about expressions of strong feelings. This can lead to barriers toward empathy and understanding of other people who are openly passionate about something. In American culture, for example, where the rational style is associated with masculinity, many “rational” husbands and fathers, even if they care deeply about their wives’ and children’s welfare, have trouble dealing with their wives and children expressing

* The widespread American math phobia has been aggravated by the arrest and confession of an ex-mathematician as the Unabomber!

** The word “abstract” has the unpleasant connotation to many people of being apart from the real world. I see it instead as meaning *generalizing* from the real world, that is, seeing common threads in many diverse examples (see the quote from Fourier in Chapter 4).

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needs emotionally. The same kind of men are also sometimes remiss about attending to their own needs, even sometimes to the point of neglecting their physical health until its deterioration is obvious.

As the historians Allan Janik and Stephen Toulmin described in the case of turn-of-the-century Vienna, the dichotomy between reason and emotion has often translated in Western culture into a dichotomy between male and female values.¹⁹ Bridging the masculine-feminine gap will be dealt with later. Recently, as women have taken on previously male roles in the workplace, women have also adopted, when they needed to, some of the previously male forms of rationality. Some of this change has come naturally because the traditional female roles of homemaker and mother call for a great deal of organizational ability and planning, much like what is required to run a business for profit. This has even led some feminists to argue that women are naturally superior to men at bridging the reason-emotion gap.²⁰ More gradually, however, many men have come to the realization that they too can benefit from some of the traditional female values. Even if not driven by economic needs as women are, these men are driven by the more subtle emotional needs for self-care and connectedness with others — the “love needs” higher up on Abraham Maslow’s hierarchy. “What you get is more than what you see”: both men and women have a large capacity to be *rationaly emotional*, even if they don’t act that way most of the time.

This capacity is at the core of being fully human. To confront the twin dangers of nuclear war and environmental pollution, we need people whose reason and emotion are both developed to their fullest and not in conflict. On a grander scale, that also means we need science *and* mysticism, both of them creative.

Mysticism (or Religion) and Science

The belief of many rational humanists that mysticism is anti-scientific, that it is a relic from past superstitious ages, is an understandable one. The mystic and the scientist seem to be polar opposites. The mystic holds things in awe and believes what he or she experiences, even if events seem to be magical. The scientist doubts things and rejects any phenomena that don’t fit his or her conceptual framework (unless he or she can find a new framework that encompasses the phenomena). But the split between the two is

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really common nonsense. Many great thinkers on both the religious* and the scientific sides have healed the split quite well.

In order to synthesize mysticism with science, we must make a key distinction and clear up some misconceptions about the scientific method. The scientific method sets very stringent standards for acceptance of a theoretical belief. Any hypothesis must be endlessly challenged, and experiments must be designed in an attempt to disprove the belief. But the scientific method doesn't have as stringent standards for *generating* hypotheses. It allows hypotheses to be arbitrarily "wild" as long as they are testable and don't conflict with previously established facts.

Some phenomena regarded as mystical — such as mental healing, reincarnation, a Jungian archetype, and visits to Earth from other planets — are hard for rationalists to accept as possibilities. So far, we don't know enough to accept or reject them with any assurance. But until there's a logical proof that any of these phenomena is incompatible with currently accepted scientific principles, it is *unscientific* to reject the phenomenon out of hand! Our theoretical understanding of the natural world has progressed rapidly in every modern century but is still incomplete. Anyone who has intuitively experienced either healing or being healed by means of thoughts without direct physical contact, for example, shouldn't reject her or his intuition just because science hasn't found an explanation for it *yet*. For an analogy, pretend you live in the Sixteenth Century. Christian Huygens, who would develop a wave theory of light and explain each color as a different wavelength, hasn't been born yet. Should you deny that there is any such thing as color because it can't yet be explained scientifically?

The mystical tradition among great scientists is an old one. It includes the ancient Greek Pythagoras, who believed in transmigration of souls; Johannes Kepler in the Seventeenth Century, who divided the universe according to the Holy Trinity; Isaac Newton, a short time later, who was interested

* Of course, "mysticism" and "religion" aren't identical. In Chapter 12 I will talk about differences between the average person's experience of religion and the dedicated mystic's experience of religion. But I will also argue that in the optimal future society, such differences will decrease and the average person's religion will be a lot like what we now call mystical.

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in ancient Egyptian priestly magic; and Dmitri Mendeleev in the Nineteenth Century and Linus Pauling in the Twentieth, who developed and defended very idiosyncratic diets. The list goes on and on. Scientists, like anyone else, have wide gaps in their knowledge. They rely on their imaginations when their logical understanding is incomplete.

Since the 1960s, a wide range of unproved ideas, from Eastern mysticism to biofeedback to deep ecology, has become part of the consciousness of Western society. As ever harder problems arise in every field of science, from sub-atomic physics on one end to brain and behavior on the other end, some of these mystical ideas will probably prove unfounded, but others may be borne out and influence the course of science. Also, many older ideas from the world's great religions and mythologies may turn out to be, if not literal truths, at least revealing metaphors that anticipated later scientific discoveries (such as the Big Bang).

So we should approach "New Age" ideas neither with "Oh, Wow!" credulity or outright "rational" rejection. Rather, we should subject such ideas to case-by-case examination based on a combination of intuition and reason — in other words, on common sense. A faith in the ordered laws of nature, which I share with most other scientists,²¹ means that we reject the *supernatural*. But we don't reject the ability of *nature* to be much more subtle and devious than we previously thought. A beautiful sunset, or a feeling of spiritual ecstasy about it, isn't a "miracle" but a result of logically understandable laws, even if we don't know all the laws yet. That fact inspires me with a lot *more* awe than would the decrees of a capricious god who obeys no laws!

The origin of the words "mystic" and "mystery" gives us a clue about how to understand them. These words are derived from the Greek verb *myein*, meaning to close one's eyes. Closing the eyes is a metaphor for peak experiences in which logical analysis is temporarily suspended to enhance the experience's intensity. But this isn't the same as metaphorically *blinding* the eyes, that is, losing awareness of the causes of things.

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In physics, supposedly the most “exact” and “ordered” of all natural sciences, the subatomic discoveries of the Twentieth Century have shaken previous anti-mystical (Newtonian*) conceptual foundations. The prevailing public image of “Science” is still based mainly on the earlier conceptual foundations and leaves out modern notions from relativity and quantum mechanics. This image excludes, for example, Albert Einstein’s idea that speeds of objects (other than light) depend on the frame of reference and aren’t absolute; Werner Heisenberg’s idea that the process of measurement itself can change the object being measured; and Louis de Broglie’s idea that the same object, such as an electron, can be both a wave and a particle.²² All these ideas, even though they are scientific, actually conflict with many people’s image of “Science.”

Quantum physics in particular has spawned a spate of books by non-scientists comparing notions from physics with notions from Eastern and other religions. Their titles include *The Tao of Physics; God and the New Physics*; and *The Dancing Wu Li Masters*.²³ The physicist Leon Lederman found significant scientific errors in *The Tao of Physics* and *The Dancing Wu Li Masters*, but indulged in some mysticism of his own by naming one of his physical constructs “The God Particle.”²⁴ David Bohm, also a physicist, showed that quantum mechanics points to a holistic rather than a separated view of the universe, and to the importance of the unmeasurable in nature.²⁵ Bohm’s view is in line with much Eastern, especially Indian, religious thought.

Where do the brain-related sciences, neuroscience and psychology, fit into this mystical/scientific continuum? A curious reversal took place around the middle of this century. As physics and mathematics became more hospitable to mysticism, at the other end of the spectrum psychology and sociology tried hard to become more “scientific.” Many professional psychologists and social scientists have been driven by

* Isaac Newton’s own outlook was far less mechanistic and more mystical than the outlooks of others who built on his theories. For example, in a letter to one of his colleagues (see H. W. Turnbull et al., Editors, *The Correspondence of Isaac Newton*, Vol. III, p. 240), he said “the divine power is here required in a double respect; namely to turn the descending motion of the falling planets into a side motion, & at the same time to double the attractive power of the Sun.” In another letter to the same person (*ibid.*, p. 253) he added: “the growth of new systems out of old ones without the mediation of a divine power seems to me apparently absurd.”

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“physics envy” in the words of the cognitive psychologist John Anderson.²⁶ Many psychologists have ignored the complexity of possible neural foundations for behavior. These psychologists have been heavily influenced by the behaviorist approach of John Watson and B. F. Skinner, which restricted its interest to easily measurable phenomena such as conditioned reflex responses²⁷.

Neuroscience occupies a middle ground between psychology and the physical sciences, but shares with psychology an insecurity about its precise foundations. Many neuroscientists share the view of J. Z. Young that imprecise concepts about the mind, such as consciousness, will ultimately be replaced by other concepts that are scientifically measurable.²⁸ In a similar vein, the philosopher Patricia Churchland saw neuroscience as the foundation for all mental phenomena and warned against preoccupation with what she called “squishy soul stuff.”²⁹

The late 1980s and early 1990s have seen a retreat from “physics envy.” Neuroscientists, psychologists, and neural network theorists are increasingly working together, driven to do so by the complexity of their problems and encouraged by the availability of powerful computers. These researchers have started to deal, among other problems, with the scientific foundations both of consciousness³⁰ and of human emotion. That is a large step down the road to “soul stuff,” both religious and psychological (especially Jungian). Neural theories of emotion are the main topic of a book Sam Leven and I edited.³¹ To quote from our own preface:

The articles gathered in this volume ... represent a blend of theory and experiment, informed not just by easily measurable laboratory data but also by human introspection. Approach and avoidance, desire and fear, novelty and habit are studied as natural events, which may not exactly correspond to but at least correlate with some (known or unknown) electrical and chemical events in the brain.³²

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Leven and I didn't argue that introspection is equivalent to measurable observation. We argued merely that scientists need to consider introspection along with observation as a guide to forming hypotheses about how natural systems work. Our most imaginative scientists do so already.

Just as organized science has often opposed religious or mystical notions,³³ organized religion has often opposed disseminating modern scientific findings. For example, the Seventeenth Century Catholic Church persecuted Galileo for saying the Earth moves around the Sun, and Twentieth Century fundamentalist Protestant ministers prevented the teaching of evolution in some American states. But at the same time there have always been religious and mystical writers who incorporate scientific results into their theologies. In the Renaissance, for example, many of the Jewish mystics known as Kabbalists were also part of that era's scientific revolution. In modern times, the Jesuit priest and paleontologist Teilhard de Chardin developed a scientific theology.³⁴ Chardin's obscurely but passionately written treatise deals with the divine plan that includes several levels of unfolding in nature. This unfolding moves from physical to chemical to biological, then through the evolution of more complex life forms, culminating in the formation of mind *or noogenesis*. He anticipated a common idea in neural network theory, the idea that consciousness, memory, emotion, et cetera, are *emergent properties* of large systems. That means these phenomena arise from particular structures of connections in complex systems composed of elements that don't have those properties by themselves.*

In this interdisciplinary age, connections are also forming between the two scientific fields discussed in this section — neural network theory and particle physics. Two books edited by Karl Pribram review current efforts, largely speculative so far, to understand structures that generate and transmit nerve impulses in terms that are analogous with quantum physics.³⁵ I believe some of these quantum ideas will prove to be fruitful at a different level of analysis than most of the neural networks discussed in this book. The neural

* There is now a school of physicists that believe consciousness itself appears at the subatomic level (see, e.g., Jahn and Dunne, 1983). Even if that's true, however, it's likely that new properties emerge in the system that aren't present in the elements. So for my arguments it isn't necessary to either accept or reject the idea of subatomic consciousness.

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networks described here involve organizations of appropriate functional units (*nodes*) into architectures that perform cognitive or behavioral functions, without specifying exactly what the nodes consist of. The chapters in Pribram's books, on the other hand, largely involve creation of the nodes or functional collections themselves from nerve cells and subcellular structures (see Figure 8.1 for a schematic of these levels). Future integration of these two levels of work should yield exciting advances in brain science.

The sense of awe and wonder that sunsets and acts of love can be emergent properties from collections of humble quarks, atoms, or neurons is what drives many of the best scientists *and* the

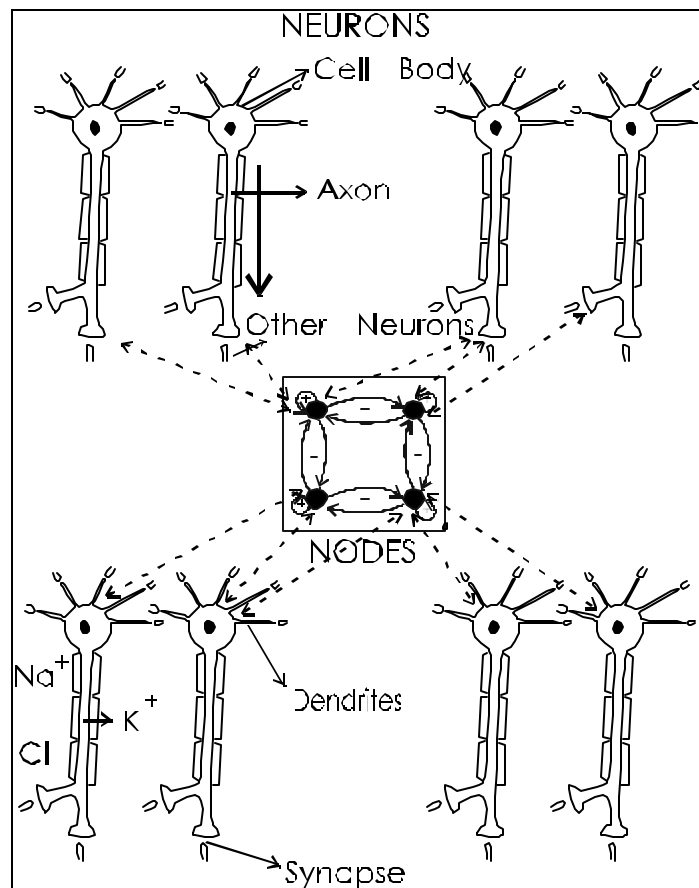


Figure 8.1. Schematic picture of the relationship between neurons and typical neural network nodes. The “needs subnetwork” is taken from Figure 7.2 as an example of an arrangement of nodes. Each node corresponds to many neurons, as shown by dotted lines. In each neuron, the *axon* is the main shaft down which electrical signals travel. The *dendrites* (each cell has thousands) are receiving stations for signals from other neurons. The *cell body* is the area containing the cell's nucleus, where metabolism takes place. A *synaptic gap* is a gap separating the neurons from others with which it has

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contacts (*synapses*). Na^+ , Cl^- , and K^+ are the sodium, chloride, and potassium ions (electrically charged atoms) involved in making up electrical signals.

best mystics. Let's avoid being reductionist, that is, describing nature including mind in "nothing but" terms. Let's instead strive for what Theodore Roszak called a "science of rhapsodic intellect."³⁶ I hope you feel this book is an example!

Pragmatism and Idealism

The distinction between pragmatism and idealism is closely analogous to the distinction drawn earlier between "theorems" and "axioms." Suppose the goals you wish to achieve aren't just your own personal power or wealth but also include, for example, social equality, stronger democracy, or peace. A pragmatic strategy for achieving such goals may at times involve strategic dealing or compromise.* An example is a President of the United States yielding to Congress on one legislative proposal in order to gain passage of another proposal which he or she regards as higher priority. But if you have those goals, then by definition it is never "pragmatic" to abandon your idealism utterly.

A militantly pragmatic outlook (such as "crackpot realism") tends to distrust not only idealism and vision, but theory in general. Such a pragmatic strain is particularly strong in American culture, partly owing to the intellectual influence of the philosopher and psychologist William James.³⁷ James' argument was that theories owe their usefulness to applicability in real world situations. He meant this statement largely as a reaction to some theorizing by European (especially German) philosophers that he saw as overly ponderous and detached from real life. But I don't believe James meant to "throw out the baby with the bath water" and get rid of theory altogether.

* In English, an unfortunate confusion exists between two meanings of the word "compromise." One meaning is to yield part way, in order to make a trade with other people who are part of the structure one wishes to influence. The other meaning is to injure, as in "to compromise one's principles." I am using "compromise" only in the first sense.

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Political leaders are sometimes criticized unfairly for making necessary compromises. Sometimes, compromise simply shows that the person is not a dogmatic, unyielding idealist but an effective, pragmatic idealist. In American politics, Franklin Roosevelt is usually considered an example of such a leader (on domestic policy, that is; on foreign policy, he is marred by not accepting many refugees from Nazi Germany). So we need to redeem the concept of “pragmatic” from the bad connotations it has to some people, of being cynical, devoid of values, Machiavellian — the personal construct³⁸ (see Chapter 5) opposite to “idealistic.”

On the other end we need to redeem the words “idealistic” and “utopian” from the bad connotations of being naively impractical, of working in an “ideal” or “utopian” world but not in the “real” world. The study of utopian societies has unfortunately become an esoteric academic discipline. It should instead be everyone’s concern. This is because in order to implement the doctrine of “what you get is more than what you see” on a societal level, average people need to look beyond the constraints of the here and now and envision what other kinds of societies might be possible (or at least imaginable). As the utopian literature scholar Kenneth Roemer said, “Because many of the recurring issues in the literature are still with us, utopias can be read as hypothetical case studies in the application of specific reforms. On a more abstract plane, past and present utopias are checks on the present.”³⁹ Roemer has brought this notion to life in recent years by teaching a popular course on “Building Your Own Utopia” at the University of Texas at Arlington.

Up to the first half of the Twentieth Century, societies depicted in utopian novels were most often based on a strong central government that controlled the economy and took initiative away from average people. Examples of such centralized utopias include Sir Thomas More’s original *Utopia*, from which the word is derived; Edward Bellamy’s *Looking Backward*; and *B. F. Skinner’s Walden Two*.⁴⁰ Since then, however, the failure of dictatorial Soviet communism has made centrally planned utopias seem less appealing. Also, Aldous Huxley depicted a centrally planned affluent society in *Brave New World* and dramatized its dehumanizing, spiritually dead quality.⁴¹ But a genre of less centralized utopias became more common in the 1970s. These are books depicting societies that possess strong laws and widely accepted

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values but are driven by the initiative of many free, innovative individuals. One example is Ernest Callenbach's pair of novels *Ecotopia* and *Ecotopia Emerging*, in which Northern California, Oregon, and Washington secede from the United States to form a society based on ecological principles and a work-play ethic.⁴² Another is Marge Piercy's novel *Woman on the Edge of Time*, in which society is organized into communal food-raising villages with thriving arts and crafts.⁴³

Both Callenbach's and Piercy's utopias are appealing alternatives to the alienation of a market-driven society. The visions of both novelists are influenced by the feminist movement. This is not surprising because in the United States during the conservative 1980s, the women's movement was almost alone among social movements in forcefully proposing alternatives to the prevailing society. The feminist writer Elizabeth Davis went so far as to argue that women are superior to men because women are practical idealists, whereas men are pragmatic realists.⁴⁴ My view is more egalitarian than Davis', based on personal feelings that I share with many other men.⁴⁵ To me a sense of community, ability to express feelings, and lack of pressure to be constantly "on top" are much more appealing than being an insecure dominator. As one man with common sense, Abraham Lincoln, said: "As I would not be a slave, so I would not be a master. This expresses my idea of democracy."⁴⁶

Selfishness and Altruism

Of all the "common nonsense" dichotomies, the opposition of selfishness and altruism has led to perhaps the greatest number of counter movements and "gated dipole" (see Chapter 5) reactions. Ayn Rand's Objectivism⁴⁷ was a reaction against both the Judaeo-Christian altruistic ethic and political liberalism. On the other hand, the commune movement and "love" focus of 1960s hippies were reactions against the selfish and materialist sides of capitalism. But the hippie movement also included a ruggedly individualistic rebellion against social conventions in personal areas like marriage, sex, and family. Some of that led to the excesses of the 1970s and 1980s "me generation." The tax revolts and militia movements of the 1990s in the United States are political expressions of very similar impulses.

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Political liberals in the Twentieth Century have tended to emphasize people's "natural" altruism, believing that if everyone's social and economic conditions are made adequate, people will treat each other well and create a just society. Political conservatives have tended to emphasize people's "natural" selfishness, believing that economic greed and fear of punishment are the only incentives that can motivate people. But both sides are really oversimplifications. American conservatism includes a strain that emphasizes reducing government programs in order to liberate private citizens to be charitable; witness President George Bush's call for "a thousand points of light." Liberals, on the other hand, have often been the defenders of individualism in the realms of ideas and lifestyles; witness the American Civil Liberties Union and the abortion rights movement.

Can we transcend these distinctions and tap the best of both the liberal and conservative impulses in society? To answer this question, we need to know how to synthesize selfishness and altruism in the individual. People are now discovering that economic prosperity isn't enough. As Abraham Maslow noted, each of us has *biological needs* for friendship, community, trust, and the satisfaction of helping others.⁴⁸ Both for humans and other primates, deprivation of closeness, both physical and emotional, can be just as damaging as deprivation of food or shelter.⁴⁹ So in discussing a large part of human motivations, it is hard to say where "selfishness" ends and where "altruism" begins. This is particularly true in regard to close interpersonal relationships, where each person has a large investment in the other's happiness.

Optimal concern for oneself includes concern for others, and vice versa. Extreme self-sacrifice, except for rare individuals with ascetic temperaments, is not a royal road to compassion. As Bertrand Russell said, "when a man tortures himself he feels it gives him a right to torture others."⁵⁰ People full of joy in life, by contrast, people who follow the dictum of "if it harm none, do what you will," tend to be open-hearted, generous, eager to share their joy with others because they are confident their own won't diminish. In fact, as the system theorist David Loye has pointed out, concern for and connectedness with other members of our species is an integral part of Charles Darwin's theory of our evolution by natural selection.⁵¹

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Politically, this leads to a prescription that combines aspects of traditional liberalism and traditional conservatism. From liberalism it takes the idea of activist government. This, at best, is a government that doesn't impose programs or "political correctness" but uses inputs from people as a whole (perhaps with the aid of computers!) to help promote fairness. From conservatism it takes the idea of shared values and community or national purpose. At best, the shared values are used not to suppress dissent or impose conformity but to help promote social harmony. In society as in music, harmony comes not from uniformity but from disparate parts uniting to produce beauty.

Related to the selfishness-altruism paradox are the paradoxes of freedom and discipline, and individualism and community. The sociologist Robert Bellah and his collaborators chronicled the bad effects in recent American society of individualism gone rampant.⁵² These authors described the ways that economic mobility has threatened our sense of community and connectedness to families as well as friends. On a more hopeful note, these authors described efforts by people all over the United States and in various walks of life to preserve or recreate that sense of community.

A promising political movement in the direction of recreating community, but without excessive conformity, is the *politics of meaning* movement. Politics of meaning was spawned by an innovative wing of Judaism led by the activist and journal editor Michael Lerner and was prominently mentioned in a 1993 speech by First Lady Hillary Rodham Clinton.⁵³ More on this movement will appear when we discuss prescriptions for healing society.

Playfulness and Seriousness

The playful impulse to laugh at life's foibles seems opposite to the serious impulse to set things right. This opposition is reflected in the values promoted by different religions. Our Judaeo-Christian heritage, with many exceptions, has tended to stress the serious values. It has gone so far as to promote a heaven in which, Mark Twain says, there is no humor. Some neo-Pagans have reacted against this focus by

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creating what Margot Adler calls “religions of paradox and play.”⁵⁴ Later I will talk about one of these religions, the Discordian.

Fortunately, in all cultures there are many people who strike a proper balance between playfulness and seriousness. These people can laugh when life is funny and get down to business when serious work is needed. Such people’s laughter, as Maslow⁵⁵ emphasizes, tends not to be a tittering putdown of the defenseless but an ability to enjoy the absurd or incongruous aspects of life. This includes what Carl Jung called *synchronicities*, the unexpected coincidences of life.⁵⁶ Synchronicities can be regarded metaphorically as jokes or puns made by nature. These people’s sense of humor enables them both to deflect the power of those who are genuinely harming them and to put in perspective those who seem to be harming them but aren’t really.

Where does the human or animal need for play arise in the brain? Many scientists with a rational bias give evolutionary explanations that are instrumental. Play, they say, relates to the need to explore one’s environment in order to eventually maximize the possibility of getting food or a mate, and minimize the possibility of being eaten. But my own romantic view makes me doubt this survival-oriented explanation of play. I believe instead that play is part of our need for pleasure in itself, apart from mere survival (see the discussion of homeostasis and heterostasis in Chapter 3).

“Masculinity” and “Femininity”

Masculine versus feminine is the trickiest of all paradoxes, emotionally. Some regard masculine versus feminine as a metaphor for all other paradoxes — as idealized by the religious symbols of Yin and Yang (see Figure 8.2). This is also reminiscent of Joseph Campbell’s recounting of the Hindu myth about the primal pair of male and female, who stand for all future diversity in the universe.⁵⁷

The synthetic, self-actualized approach to gender is to enjoy and promote differences, between genders and within each individual. It is not to regard either female or male as superior to the other. Results of many experimental psychologists suggest significant mental and psychological differences

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between women and men that may or may not be inborn. But even if any of them are inborn, they are *statistical* differences that aren't universal and admit a lot of overlap.

In a sexist culture, like most cultures that have existed so far, the culture's prevailing sex role stereotypes have effects on all men and women, even those who reject the stereotyped roles. This means that within each culture, the differences between the male and female *experience* are universal and influence everyone. With this background, males and females need to understand and learn from

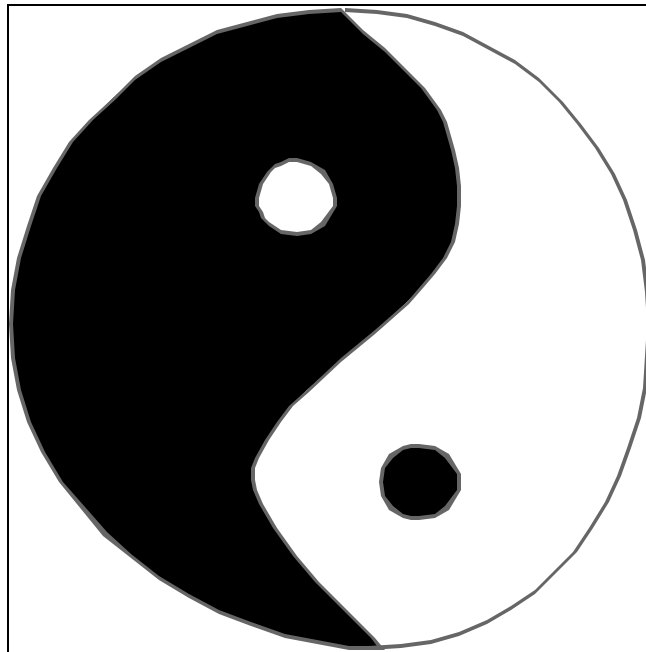


Figure 8.2. Standard Chinese representation of *yin* (dark with a light circle inside) and *yang* (light with a dark circle inside).

each other's different experiences. And even if sexism and gender-based double standards go away completely, there are biological differences, and we need to understand and enjoy those.

The ideal of androgyny⁵⁸ is frequently misunderstood to be a “unisex” blurring of biological differences (as epitomized by entertainers like Michael Jackson). Androgyny in fact means celebrating

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diversity within each gender, without losing the gender distinction itself. It means encouraging women to develop positive traits that tradition has labeled “masculine,” such as strength of convictions and problem solving ability, and men to develop positive traits that have been labeled “feminine,” such as nurturance and sensitivity.

Because Western culture has for so long promoted the idea of male superiority, men have on the average been slower to adopt women’s traditional strengths than vice versa. As Betty and Theodore Roszak said: “the woman most desperately in need of liberation is the ‘woman’ every man has locked up inside the dungeons of his own psyche.”⁵⁹ Since those authors wrote there has been a men’s liberation movement,⁶⁰ smaller than the women’s but already having an impact. For instance, this movement has partly broken barriers to expressions of warm feelings between men (homosexual or heterosexual). It has also allowed men to feel more positively toward children (including their own) and get closer to them.

Many recent results by experimental psychologists hint that a capacity to synthesize “masculinity” and “femininity” exists in all of us from birth, and that benefits come from child-rearing that encourages this capacity. Sandra Bem showed that college students of both sexes who score toward the middle on tests of traditional gender traits tend to be more adaptable to varying situations than those who are more sex-stereotyped.⁶¹ Such androgynous subjects, as she describes them, “display ‘masculine’ independence when under pressure to conform, and ‘feminine’ playfulness when given the opportunity to interact with a tiny kitten.”⁶² The more sex-stereotyped females of Bem’s subjects, by contrast, were inhibited in showing the independent behaviors, and sex-stereotyped males had trouble showing the playful behavior, because they felt those behaviors were inappropriate for their gender. Inability to adapt may also explain the results of Eleanor Maccoby, who studied the abilities of young children of both sexes.⁶³ Maccoby showed that intelligence, spatial ability, and creativity are lowest in boys and girls who are the most sex typed. Finally, William Ickes⁶⁴ reviewed studies indicating that male-female couples that closely followed the idealized “masculine man/feminine woman” pattern talked less to and looked less at each other than couples where both partners were more androgynous. Moreover, the partners in the gender-stereotyped couples expressed less liking for each other than those in the androgynous couples. Ickes attributed that result

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partly to the needs of modern Western culture where typically both partners work outside the home and so their experiences have become more similar.

A Duty for Our Neural Networks

What is the lesson of all the synthesizing discussed in this chapter for the neural networks in our own brains? Our neural network analysis (Chapter 7) suggests that it's usually harder to achieve the healthier, integrated, self-actualized, synthetic type of cognition than the either-or, dichotomized, Kelly construct, gated dipole type of cognition. Mathematically, the greater difficulty can probably be formalized in terms of some kind of cognitive "energy expenditure," or "effort,"⁶⁵ as in Figure 7.2. But difficult doesn't mean impossible. In the poetic words of Edna St. Vincent Millay:⁶⁶

The heart can push the sea and land
Farther away on either hand.
The soul can split the sky in two
And let the face of God shine through.

What the "soul" corresponds to scientifically is beyond the scope of the discussion in this chapter: there may possibly be answers in quantum physics.⁶⁷ The "heart" is a metaphor from medieval times, before it was known that emotions as well as reason have representations in the brain. But since the parts of the brain that code emotions (the limbic system and hypothalamus) have extensive feedback connections with the internal organs, including the heart and digestive system, the heart metaphor is still a good one.

In fact, the global transitional times we live in demand from all us the kind of difficult effort that Millay celebrated. This is an effort that requires the best of both our emotions and our reason. Bridging the destructive, common nonsense dichotomies that divide us demands hard work that is not purely individual or purely social. There has to be positive feedback between individuals who are becoming more

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aware and social structures which are becoming more responsive to human needs. The next chapter will project some visions and begin to suggest “how to get there from here.”

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