IS GENERAL SEMANTICS COMPATIBLE WITH UTOPIANISM?*

by

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I was originally drawn to the topic of utopianism by the problems of the usage of a group of words involved in the discussion of it, such as visionary, millenarian, apocalyptic, messianic, etc. Some of the words have Biblical echoes, as in the "New Jerusalem." Generations of Englishmen have been inspired by Blake's challenge:

Till we have built Jerusalem
In England's green and pleasant land.

Other such terms are "A City Set on a Hill," or "Zion." In my boyhood in Iowa, in Baptist Sunday Schools, we sang the hymn lustily:

We're marching to Zion,
Beautiful, beautiful Zion.
We're marching onward to Zion, Zion,
That beautiful city of God.

The words reflect attitudes that are progressive and benign, put forward by men and women of good will.

However, it is well-known that having good will is not a dependable safeguard. The word utopian has thus developed also a set of pejorative meanings. When some scheme seems ill-thought-out or silly or immature, it is commonly referred to as "utopian." A typical passage is to be found in the remarks at a conference in London recently, on planning for the future, when a commentator asked: "Who but the naive, waiting to be fooled, would believe in a utopia of benevolent commissars?" Our Secretary of Education, William J. Bennett, has declared: "The grim results of this venture in educational utopianism have become all too evident in declining test scores and the demoralization of both teachers and students."2

That type of usage led me to ask myself, where do the formulations of general semantics stand with regard to the planning of utopias? We are definitely involved, I think, because we do look forward to an 'improvement' in the human condition, and yet we do not want to mislead ourselves or others.

Is it desirable to attempt to salvage the word utopia? Though some people

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have expended much idealism in planning utopias, their idealism has been wasted in fruitless and misguided activities. Might we not be well advised to discard the word? It would be difficult to try to rehabilitate the word hedonism, for instance. We may agree that "pleasure" is one laudable goal in life, but "hedonism" in well-established usage implies short-sighted pleasure, without concern for the future.

And yet the notion of utopianism, for all its shortcomings, raises questions that are interesting to wrestle with. Let us take up some of them, and in the course of our considering them we may clarify what's wrong with utopianism and find ways of making it compatible and harmonious with a general semantics orientation.

The most fundamental question raised by utopianism is the attitude or 'frame of mind' in which it is approached. It requires optimism, but where does optimism come from? A genuine optimism cannot be artificially cranked up. Is it just a natural vitality that comes with health and youth? My answer is yes.

I have watched some of my contemporaries grow old along with me, and in some cases the lowering of vitality leads to a pessimistic outlook. They try to be honest about what they see, and for them it is a world that is running down. But when their vitality is high, they are more in harmony with evolutionary development. Human effort seems to be worth while because we are constituted that way as a product of evolution. This is fortunate, because pessimism leads naturally to apathy.

Sometimes crises arise that will shake the faith even of the most thoughtful people. I remember one of those times in the 1960s when the war in Viet Nam was at its height. Our government seemed inexorably bent on a destructive policy, and those of us who disagreed felt powerless to effect a change of direction.

Nevertheless I did not give way to pessimism, but expressed my belief that under a democratic system human beings can still bring about a change, even despite a powerful military-industrial complex. I stated my view in Et Cetera of March, 1969, and was attacked for it a few months later by such a fine thinker as the late Gregory Bateson. He said of me, "I cannot buy his professed optimism."  

Bateson was especially incensed at my statement, "Human beings are still in charge." I should have acknowledged that there are severe constraints within which human beings can wield their power, such as it is. Bateson argued as follows:

Consider what "in charge" is commonly supposed to mean. We say that the steersman is in charge of the ship, and by this we mean that he controls the beginning of a chain of causes and effects from the steering wheel to the pressure of the rudder upon the water through which the ship is (it is hoped) moving. This, however, is not quite true. The steersman himself is controlled by the movements of the ship relative to a (stationary) compass needle. The ship, in part, controls the steersman through the information provided by the compass. The steersman is only a part of a circular interactive system. He will do well to handle his ship with a certain humility. His control is not so complete as to justify arrogance.
Gregory Bateson has there made a valid point. As individuals we are part of a complex social system, and anything we get done depends on how it perturbs the system. Cause-and-effect is not a simple matter, but there is a remarkable interconnectedness of all phenomena, often in unexpected ways. No one person is ever in charge, and even the powers of a dictator in the long run are limited. Any arrogance is wholly misplaced.

It is a melodramatic overstatement to cry out with W. E. Henley, "I am the master of my fate; I am the captain of my soul." But I would still assert, despite Bateson, that, in the plural, "Human beings are still in charge." We can learn to manipulate the constraints, to evaluate fresh courses of action, so that the processes of evolution that have brought us where we are can continue their development.

If we are to attempt to salvage the notion of utopianism, we will have to show that it is in harmony with the processes of evolution. The great stumbling block is that utopianism seems to be indelibly associated with an orientation of absolutism. The goal is said to be perfection, without tolerance for the tremendous variation that we find in humankind. I wish we could drop the word perfection from our vocabulary; then we could concentrate on the ongoing process of betterment without the impediment of illusory goals.

Such an approach is more in keeping with a consideration of human progress, but even that has its problems. The "doctrine of progress" has been widely held since the eighteenth century, but has been clouded by the question as to whether progress is inevitable. Might it not be possible to detect an appreciable improvement in the status of human beings without claiming that it is inevitable? Most of us would probably agree with Sir Karl Popper, when he said: "I disbelieve especially in anything like a law of progress. In fact, I believe that it is much easier for us to regress than to progress."5

If we look about us in an objective spirit, can we find some improvement in the status of human beings? Yes, we can, but the improvement is not uniform over the world. Some regions are deep in a heart-rending poverty and famine. Natural disasters like earthquakes, drouths, tidal waves, strike in unexpected ways. Man-made ecological disasters, such as deforestation, have their effect.

Sometimes manifest progress is counter-balanced by new problems brought in its wake. The luxuries of affluence sometimes bring with them a grossness of taste and a decrease in more delicate feelings. Government attention to social welfare brings with it a burdensome and intrusive bureaucracy. Improved medical care can bring problems of over-population.

Yet in a longer perspective, say of three centuries, there has been definite progress. Epidemics of disease are sooner brought under control. Improved medical practice has alleviated much sickness and pain. Human slavery has largely been abolished. Literacy and a higher educational level have extended to a wider populace. We are less cruel to the mentally afflicted. Racial discrimination is still with us but is less overt than it used to be. The rigid class distinctions inherited from older cultures have diminished considerably. From the point of view of a few centuries ago, it could be maintained that a near-utopia is with us already.

Sadly enough, we don't commonly feel that way about it. It gives us pause that the Holocaust of the Nazi period could occur during the lifetimes of many of us. Karl Popper, who is basically optimistic, has referred to what he
called "the widespread depravity and perversion of everything human which Central Europe has had to witness."6

Furthermore, we are deeply conscious of looming threats to our very survival. We can hardly be complacent when the possibility of nuclear destruction is very real. That hangs like a pall over the attitudes of any concerned person. In some outlooks, fostered by certain religious sects, the millennium is about to descend on us, and millenarian thinking makes progress irrelevant. If the president of a country, on doctrinaire grounds, thinks that armageddon is just ahead of us, his decisions may be skewed away from avoiding that armageddon.

To cap all other fears that we might have, there is a likelihood of cosmic catastrophe, at least in the very distant future. The fossil records show that there have been a number of "extinctions" in the past, of a sort that the human species could not withstand. And our very sun may burn itself out one of these times. It is pointless to worry about that now, but the prospect of our ultimate annihilation might well bestir us to work against the premature annihilation by nuclear war.

If we view the doctrine of "progress" as a form of "creeping utopianism," what should be our attitude towards it? We can bring to bear much evidence showing that it is not illusory. Progress is possible but not inevitable.

The dynamism that has powered evolution in the past may still be with us. The joy in activity, the urge to explore and invent and find out, may still be able to carry us along. The optimism of the healthy self, an attitude that transcends rationalism, may come to our rescue.

Concurrent with utopianism, even in its creeping form, is an attitude of a contrary nature — one that finds a "golden age" in the past. The utopia was in the past, and we have now departed from it. The sacred story of the Garden of Eden is an example of it. The Greeks had their story of the vanished "Atlantis." In the eighteenth century in France, Rousseau championed the doctrine of the "noble savage," that our earlier state has been despoiled by civilization. That interpretation of human development is now generally discredited, and it lies as a myth that causes confusion in some people's thinking.

I have encountered that attitude sometimes in my studies of the English language. Some people have looked back to a "well of English undefiled," but where that is to be found is not clear. It serves as a basis to proclaim that present-day English is going to the dogs. My own point of view is that every era of culture both gets and begets the language that it deserves. Statements about the status of language are merely revealing of our attitudes within our culture.

Nor can we be certain how far back our ancestors deserve to be called human. What, for instance, should be our attitude toward "Neanderthal man"? Recently the anthropologist Ashley Montagu, who was an early lecturer in the Korzybski Memorial series, has come to his defense. As Montagu has said:

The pejorative use of "Neanderthal," as referring to a knock-kneed, stooping, brutal-looking and brutal-behaving creature is wholly unjustified. Anthropologists have for many years known that this travesty of the
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facts libels our ancestor.

Montagu goes on to say:

We know that he walked perfectly erect, that he had a much larger brain than we have, that he wasn't knock-kneed, and that he was characterized by a highly developed spiritual life. We know further that he was the first representative of our species to bury his dead with care and compassion — frequently on a bed of flowers?

It is not clear to me how Montagu knows about the "spiritual life" of Neanderthal man, but apparently our ancestor was ready to develop a utopia.

The point was made early in this paper that utopianism requires an attitude of optimism; and optimism springs simply from the nature of humankind as they have been produced by the processes of evolution. It is in this area that general semantics makes its most fundamental contribution. You will recall that the very first sentence of Science and Sanity reads as follows: "The present enquiry originated in my attempt to build a science of man." It is in this scientific quest that we find our most beneficial guidance.

There is an important difference in our usage between science as an abstract word and science as the name of a particular discipline. Most of us have a suspicion of the rather naive phrase, "Science tells us -- ." There may be a basis for calling "general semantics" a science, but for the most part Korzybski did not do so, but spoke of using "scientific methods" and the "scientific orientation."

We are likely to get bogged down in verbalism if we put too much emphasis on the question of how to define the word science, but genuine problems of content and scope remain with us. Most students of Korzybski would hold, I believe, that there is an important sense in which general semantics 'transcends' science. Korzybski's system gives a central place to evaluation — a ground for the judgment of human behavior. Is such a consideration properly included in the field of science? The usual answer is no, that science is neutral, without regard for right or wrong. It is obvious that science can be used for human destruction as well as human betterment.

This is the age-old question that has plagued philosophers from the earliest times — where does the "ought" come from? My own belief is that this "ought" can come from a single basic assumption, namely, that it is a good thing to survive. Once this is granted, then scientific method can take over, and a full ethical system can be developed and exfoliated from it. We can learn from scientific method how we can best survive — the relation of the individual to society and the most reasonable compromises that have to be made. The interdependence and interconnectedness of all individuals becomes apparent, and thus altruism and cooperation and love follow by necessity.

We are not forced to make the basic assumption that it is a good thing to survive; but without it we are faced with sheer nihilism. We can be nihilistic if we choose, but it would be the way of defeat and death. Once that hurdle and that hurdle alone is passed, we can construct a scientific morality, based on the teachings of proper evaluation that are woven into the very fabric of
The postulating of "survival" as a goal seems like a thin and ignoble ideal, unworthy of our human potentialities. Indeed, the question must be faced; whose survival? -- that of each individual or that of the human species? To form an answer, we can examine the course of evolution that has produced us, even as individuals. From that perspective, clearly the survival of the species is paramount, and in extreme cases the individual may well sacrifice life itself. Though I have lauded "survival" as the one necessary assumption as an ultimate goal, I would still agree with the ringing statement of Sydney Hook, regarding individuals. As he has said:

Survival is not the be-all and end-all of a life worthy of man. Sometimes the worst thing we can know about a man is that he has survived. Those who say life is worth living at any cost have already written for themselves an epitaph of infamy, for there is no cause and no person they will not betray to stay alive. Man's vocation should be the use of the arts of intelligence in behalf of human freedom.

Thus we are talking about the survival of the species, as known to us in the individual. When we begin to implement the best ways of survival, we find that we are continuing the building of a vast edifice such as humankind has achieved by time-binding. It will include our physical welfare in maintaining health, the pursuit of the arts such as music, the dance, painting, and all the others, regard for the ecology of the environment, the working out of symbol systems so that communication among human beings will be smooth: -- all these flow from that one necessary assumption.

Especially important is our development of an ethical system, on the basis of evaluation of our actions as we go along in daily life, balancing short-range considerations against long-range considerations, closing the gap between means and ends as far as we can. We will be wary of noble-sounding abstractions, such as "good" and "evil." Questions of "right" and "wrong" will be minimized, in favor of evaluations as we go along in day-to-day choices. The matter is not simple at all, for we will often be faced with what Sydney Hook has called "our agony of choice." To quote Hook again, he has pointed out:

We want both security and adventure and can't have both. We want to be just but discover we cannot be just without being cruel. We want to be loyal, but if we are we can't be truthful, and vice versa. We want to be free to live our life but find that we cannot do so except on the ruins of another's life. ... To the extent that we resolve moral conflicts, one right or good is sacrificed to another.

A few moments ago I used the phrase, "closing the gap between means and ends as far as we can." This dichotomy between goals and means is at the root of one of the most startling discussions of utopianism that I am aware of. In June of 1947, before a conference in Belgium, Karl Popper, the justly famed philosopher of science, gave an address entitled "Utopia and Violence." Popper is noted for making reversals of long-accepted notions, for standing such beliefs on their heads. This he did with utopianism. Instead of its having the nobility of idealism, he argued that it is the source of violence and the
basis of terrorism and fanaticism. As he said of it: "I consider what I call Utopianism an attractive and, indeed, an all too attractive theory; for I also consider it dangerous and pernicious. It is, I believe, self-defeating, and it leads to violence."10

How did he defend such a contention? He pointed out that it is impossible to determine ultimate goals scientifically. Any quarrel about ends, he said, "cannot be decided by science." All of us, I'm sure, are bound to agree with the following statement:

No amount of physics will tell a scientist that it is the right thing for him to construct a plough, or an aeroplane, or an atomic bomb. Ends must be adopted by him, or given to him; and what he does qua scientist is only to construct means by which these ends can be realized.11

Thus he believes that utopianism is bound to have an irrational basis. If an ideal state of society is chosen, which all political actions should serve, any differences of opinion cannot be smoothed out by the method of argument. They take on the character of religious differences. The utopianist, he says, must either win over or else crush his competitors who do not share his own aims. Even beyond that, the utopianist "has to be very thorough in eliminating and stamping out all heretical competing views."

We can easily see that this is the very blueprint for fanaticism, for the utopianist in power is obliged to use violence to stay in power, to suppress criticism, and to annihilate all opposition. As Popper says: "With it goes the affirmation of the wisdom and foresight of the Utopian planners, of the Utopian engineers who design and execute the Utopian blueprint. The Utopian engineers must in this way become omniscient as well as omnipotent. They become gods. Thou shalt have no other gods before them."

If this is rationalism, it is a self-defeating rationalism. As Popper concludes: "However benevolent its ends, it does not bring happiness, but only the familiar misery of being condemned to live under a tyrannical government."12

Popper's indictment is a reasonable one if you accept his explanation of the irrational basis of the alleged goals. The flaw, it seems to me, really lies in making a sharp dichotomy between goals and means, and Popper himself recommends "the elimination of concrete evils rather than the realization of abstract goals." The one basic postulation of "survival value," from which other values can be derived, will cover the problem adequately.

Let us turn our attention for a few moments to the history of projected utopias, to see what we can learn from them. The word Utopia was coined in 1516 by Sir Thomas More, from the Greek ou, 'not', plus topos, 'place', thus meaning 'no place'. Other writers have punned on this, using eu, 'good', to make it a 'good place'. The word soon caught on and was adopted in Italian, French, and other languages. More's Latin work of 1516 was translated into English thirty-six years later, in 1551, under the title:

A fruteful and pleaasunt Worke of the beste state of a publyque weale, and of the newe yle called utopia; written in Latine by Syr Thomas More knyght
Thomas More set the pattern of portraying an ideal society according to his own personal tastes. He admired the disciplined, celibate monastic life, and used the late medieval monastery as his model. Some scholars are still debating whether he was being ironical, for to modern secular tastes his utopia would be repressive and boring. The theocratic ideal no longer appeals to many people.

Many other works of a utopian nature followed, such as Rabelais's Gargantua of 1532 and Francis Bacon's New Atlantis of 1627. The French enlightenment was rich in its production of utopian planners, such as Condorcet, Saint-Simon, Comte, Fourier, et al. In England Richard Owen, a cotton mill owner and manager, made great improvements in the well-being of his employees and set forth his utopian views in his work of 1813, A New View of Society. He was unabashedly paternalistic and believed that an appropriate environment would shape human character in any direction desired. His dictum was: "Train any population rationally, and they will be rational."

Owen used his personal savings to travel to America in 1824 to found the model utopian community on the Wabash River in Indiana, called New Harmony. For many reasons it failed utterly.

Some historians would class Karl Marx and Friedrich Engels among the utopians, for they visualized the freeing of the proletariat in a society much improved over that of capitalism. Some of the best minds of the century made contributions: Samuel Butler in Erewhon (1872), William Morris in News from Nowhere (1891) and in a long series of now-forgotten novels, and H. G. Wells in A Modern Utopia (1905).

Utopias have been the subject of satire, as well, as parts of Gulliver's Travels (1726) show. Some writers have gone so far as to provide "dystopias," such as Aldous Huxley's Brave New World of 1932, or George Orwell's Nineteen Eighty-four (1949). Our recent passing of the year 1984 brought with it a spate of discussions of the direction our culture is taking.

Let us move on to America. Americans, I think, have been unusually receptive to the attraction of utopianism. The early settlers felt themselves to be a highly selected group. Typical was a Puritan minister of Boston, William Stoughton, who declared in a sermon preached on April 29, 1668: "God sifted a whole Nation that he might send choice Grain over in o this Wilderness." Such a belief would naturally lead to high-minded plans.

The challenge of a near-empty continent led to an emphasis on new technologies; and "technological utopianism" has been the subject of many studies in recent years. The best of them appeared in 1985, by Howard P. Segal, Technological Utopianism in American Culture. Segal defends the usefulness of the study of utopias. As he says: "Utopianism is a legitimate -- and vital -- means of offering constructive criticism of existing society in order to improve that society."

Some people may regard such theorizing as "escapist," but spinning fantasies may have an important place in our intellectual life. Edward Bellamy's Looking Backward of 1888 became a bestseller and the widespread discussion brought important problems to public attention: Are people interchangeable
counters in a well-planned society? How much leisure is good for people? Should eugenics be incorporated into the program?

The emphasis on technology fit very well into Korzybski's early interests. We sometimes forget that he prided himself on his training as an engineer. You may remember that his first book of 1921, Manhood of Humanity, had the subtitle, The Science and Art of Human Engineering. In the introduction he stated:

For engineering, rightly understood, is the coordinated sum-total of human knowledge through the ages, with mathematics as its chief instrument and guide.

We can now be grateful that he gave up using the phrase "human engineering," with its implication of manipulation. When he first came to this country he moved in a circle of friends who developed the "Technocracy" movement. Walter Polakov helped to organize a "Time-binding Club," where such problems were discussed.

The Technocracy movement was first powered by the brilliant but eccentric Thorstein Veblen and gained momentum in the 1920s, but factional disputes and competing organizations sealed its doom. The two leaders, Howard Scott and Harold Loeb, parted company, but a valuable document was left in Loeb's book, Life in a Technocracy, which appeared in the same year as Science and Sanity. Loeb had broad interests and anticipated that the arts would be the most important field of human activity. He even realized that provision should be made for what in other cultures is known as magic, ecstasy, and transcendence. Personal fulfillment was stressed. As he said: "In a technocracy, the pressure to conform to every passing mode now exerted by advertising would be definitely lifted. As a result the citizens may find it easier to be themselves."16

Utopian speculation has been strong in the area of science fiction, sometimes its motivating power. Many people were drawn to general semantics by the novel of A. E. van Vogt (1948), World of Null-A. Its story was set in the future of 2500 A.D., assuming "the framework of the laws laid down long ago by the Institute of General Semantics" (p. 122). We learn that human beings had accepted general semantics teachings; as the author tells us:

Behind ... thousands of hours of personal training ... was the non-Aristotelian technique of automatic extensional thinking, the unique development of the twentieth century, which, after four hundred years, had become the dynamic philosophy of the human race.17

In the same year, 1948, B. F. Skinner, the behavioral psychologist, brought out his work of fiction, Walden Two. His technique of "positive reinforcement" was the basis for constructing a Utopian enclave of society. What was its greatest achievement? His answer, set down in italics, was: "Why, to make possible a genuine science of human behavior!" But even beyond that, his spokesman declared:

"What remains to be done?" he said, his eyes flashing. "Well, what do you
say to the design of personalities? Would that interest you? The control of temperament? Give me the specifications, and I'll give you the man! What do you say to the control of motivation, building the interests which will make men most productive and most successful? Does that seem to you fantastic? Yet some of the techniques are available, and more can be worked out experimentally. Think of the possibilities! A society in which there is no failure, no boredom, no duplication of effort!" 18

In 1962 appeared another utopian novel that had been inspired by general semantics. Aldous Huxley first read Science and Sanity in 1938, as his printed Letters reveal, and was deeply impressed by it. He contemplated a long novel dealing with language problems, what he called "a philosophical Summa," an antidote to his Brave New World of the preceding decade; but he did not proceed with it. Some of its thought then appeared in his last novel, with the succinct title Island. He called it "a Utopian phantasy about a society whose purpose was to get its members to realize their highest potentialities." 19

An interesting development has taken place recently, in which a teacher has used the device of having his students write out their own utopias. In this way they not only clarify their views on social problems, but help to solve their personal problems as well. Kenneth M. Roemer proposed this in a Bulletin of the World Future Society for 1980, in "Using Utopia to Teach the 80's: A Case for Guided Design." Then in the next year his text came out, entitled, Build Your Own Utopia: An Inter-disciplinary Course in Utopian speculation, published in Washington, D.C., by the University Press of America.

Such a course would certainly be interdisciplinary, and could be dangerous in the hands of a dogmatic teacher. The gap between idle dreaming and responsible planning could be narrowed. As my colleague at Columbia University, Robert B. Nisbet, a historian of ideas, has stated: "At first thought, utopianism and a genuine social science may seem to be incompatible. But they are not. Utopianism is compatible with every thing but determinism, and it can easily be the over-all context of social science as can any other creative vision." 20

Utopianism can be interpreted in a number of ways, and I would include "amelioration" or improvement by incremental steps, as one of them. We can learn not to formulate in terms of "perfection." An orientation of probabilities is in harmony with general semantics.

The Korzybskian recommendation for the guidance of our lives is to recognize that we should make full use of the "organism-as-a-whole." The scientific method primarily involves the cortex, but that is only part of our human equipment. From the course of evolution we inherit useful tropisms. These come to the fore in the cultivation of our awareness of sensory perceptions. Korzybski's name for his approach was "cortico-thalamic integration." That term is not much heard these days, because it is a gross over-simplification, now when neurology in recent decades has made great advances. But the formulation still represents an important point of view. A full use of the scientific method will be achieved if we are careful to retain the "cortico-" part of "cortico-thalamic integration."

It is of profound importance to the general public that the place of science in human life should be made clear, for there have been repeated
resurgences of an anti-scientific outlook. In 1978 the Department of Education of the State of California issued guidelines for the policies of its public schools. One of the statements was this:

Philosophic and religious considerations pertaining to the origin, meaning and value of life are not within the realm of science, because they cannot be analyzed or measured by present methods of science.21

In this Tenth International Conference we have much to say about the "meaning and value of life," and in spite of the California Department of Education, my own belief is that the "realm of science" does offer the ground where enlightenment is most likely to be found.

If we as general semanticists were to act in response to a reasonable utopian impulse, what are some of the things we should not do? In the first place, we should not attempt to establish a communitarian society. We must take part in society as a whole, and not withdraw into an eddy. (The communes of the 1950s ran into practical difficulties that made them more trouble than they were worth.) In my own life-time, in my home state of Iowa, one of the most firmly established, the Amana colony, was at one time thriving with austere standards; but the younger generation would not put up with the restrictions, so now only a ghost colony is left.

In the second place, it is undesirable to throw our weight in a particular political direction. We would not make a successful political party, I'm sure. Such is the variety of general semanticists as people (how fortunate that is!) that they will give a different weight to different issues. This was borne in upon me as long ago as the presidential election of 1948. A carload of us had left the summer seminar in Connecticut and stopped for a visit at a friend's house in Westchester County. In the course of a desultory conversation, someone made the remark: "It's very clear that the principles of general semantics would lead us to vote for just one particular candidate." We all nodded our heads sagely in agreement, without mentioning the candidate's name. As we were about to let the matter slide, a wisp of worry crossed my mind. Was one particular member of the group, whose politics I knew, deserting the Republican party? Hesitantly I asked him, was he dissatisfied with Governor Dewey? Oh no, he said, he was voting for Dewey. Others of us were voting for Harry Truman, and it turned out that a young instructor from Columbia University was voting for Henry Wallace. Thus we were divided among the three candidates. All of us were intelligent and had had some training in general semantics, but our discernment and weighting of particular issues differed. We had to be satisfied with the workings of the democratic process.

In the third place, we should not retreat into a coterie of devout "true believers." I have heard that many years ago a group of cultists did announce that they were forming a general semantics church, but before they could do so they lost interest by moving over into Scientology, where they found a home. Growing with advancing scientific knowledge, we must try to have maximum impact on the culture of our time.

There are two areas in particular where general semantics can reach its fulfillment. One of them is in modifying the educational system, from its earliest stages to the latest in what is often called "continuing education."
No one is too young to be introduced to the non-Aristotelian orientation, especially when the child is beginning to learn language and the other symbol systems. In fact, it would be desirable if the child never got indoctrinated with the absolutistic system that most of us grew up with, for most of us have to spend lots of time changing our orientation. If only children could start at a more sophisticated stage of time-binding!

The second area of fulfillment is where the richest promise of general semantics is to be found. This is the reaching of individuals, for a change in their personal orientation, over as wide a spectrum of society as possible. More and more, we hope, people will be willing to leave their worn-out dogmas behind and come to an awareness of the Heraclitean process of change from minute to minute. They will disdain the frozen ideologies and will be open to fresh experience. Their joy in living, grounded in their sense of wonder and their optimism that is part of the natural heritage of humankind, will carry them forward to heightened achievings. They will not be interested in any finished utopia, but will get fulfillment in the unfolding process.

REFERENCES

1. Encounter, June 1985, p. 77, in an address by Melvin J. Lasky.
8. Statement at the end of his entry in Who's Who is America, several recent editions.
13. Whether Marx was "utopian" has been much discussed by many writers. The issue is well summed up by Gorman Beauchamp in America as Utopia, ed. Kenneth M. Roemer (New York, 1981), p. 105: "While for Marx and Engels 'utopian' was a term of opprobrium when applied to other brands of
socialism, their own was certainly utopian in the sense of positing a new Golden Age at the end of dialectical history." Compare the statement by Sydney Hook in an interview in Free Inquiry, Summer, 1985, p. 32: "Marx, despite himself, was a utopian because of his expectation that science would produce more than enough of everything to enable all human beings to find a fulfilling, creative life. He was also a utopian in accepting the anarchist illusion that the state would necessarily wither away."


19. See Yuzuru Katagiri, "Notes on Aldous Huxley and 'Semantics'," in Kyoto Review, No. 16 (Spring, 1983) pp. 25-32. This was kindly called to my attention by Martha Santer.


BIOGRAPHY

For Allen Walker Read's biography, see General Semantics Bulletins No.'s 47, 49, and 50. Professor Read celebrated his eightieth birthday in June 1986 amid many loving friends, and plans no diminution of his busy schedule of writing, lecturing and traveling.
I really am very pleased to have the opportunity to be here and to speak, as general semantics is an old love of mine, and it has had a strong influence on my scientific career. However, I'm afraid I've not kept up with the literature in your field, and would appreciate your comments if I fail to give proper credit. I should begin by explaining my use of the word 'time' in the title of my presentation. With respect to this talk, 'one point in time' will refer to a biochemical process as we understand it today, and 'all time' will refer to the evolution of such a process.**

I will discuss the role of genes and colloids in metabolism at 'one point in time', and the evolution of differentiating and living systems in 'all time'. Finally, I would like to make a few comments about our use of the words 'cause' and 'is'.

The Role of Genes in Heredity and Differentiation

In their book, Developmental Genetics, published in 1971, Markert and Ursprung reported that "there is a widespread conviction among biologists that the DNA of the cell...is the sole source of information in the life of the cell, and therefore also in differentiation." (1) In 1978 Rich and Kim stated in an article in Scientific American that, "It is now widely known that the instructions for the assembly and organization of a living system are embodied in the DNA molecules contained within the living cell." (2) These two pronouncements are typical of a host of such declarations over the past two decades.

I believe that the importance attributed to genes in heredity is an unrealistic simplification, and therefore detrimental to our thinking and experimental approaches to certain biological problems. You might well ask, what is heredity if it's not genetic? I shall answer that question, but first it would be helpful to discuss what DNA does in the cell.

The first figure is a sketch describing protein synthesis. DNA serves as a template on which different kinds of RNA can be made -- transfer RNA (tRNA), messenger RNA (mRNA) and ribosomal RNA (rRNA). Nucleotide substrates and an enzyme protein, RNA polymerase, are also necessary. These in turn must be made independently, as indicated by

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**Single quotes will be used to tag these special uses of 'time' to indicate their non-elementalistic character (not split off from 'space'). To avoid excessive quote-sprinkling, this extensional device will appear just enough to serve as a reminder. Ed.