Spring 2003

Something From Nothing: Seeking a Sense of Self

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is an interdisciplinary quarterly published by the International Society for General Semantics.

**Formulated by Alfred Korzybski, general semantics continues its development through the Institute of General Semantics and the International Society for General Semantics.**

ETC was founded in 1943 by S. I. Hayakawa.

**Submissions:** Send manuscripts in duplicate, double-spaced (include disk version, if available), accompanied by self-addressed, stamped envelope (SASE), to the Editor of ETC, P.O. Box 728, Concord, CA 94522. For writer’s guidelines, send SASE.
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The move from oral society to literate society had its upsets as we changed from collective thinking to the belief that we are individuals. Profound challenges continue to haunt us. “Now that we have moved into a postliterate, electronic culture, what has happened to our sense of self?” Serious problems accompany too much sense of self, as well as too little. In *Something From Nothing: Seeking a Sense of Self*, Lance Strate offers an insightful exploration of the interaction between the self, society, and our symbolic environment. He also shares his own story, one of courage and compassion in the face of heartbreaking difficulties.

Wendell Johnson’s pioneering work with “stuttering” helped many patients to break the cycle of fear and “failure.” While Johnson may not always get credit for it, we can still see his techniques employed in some methods used today, notes Gardner Gateley in his *Refereed Paper, Johnson’s Diagnosogenic Theory of Stuttering: An Update*.

When communicating by computer, must we give up those non-verbal nuances that can say so much more than words? In *Type Me How You Feel: Quasi-Nonverbal Cues in Computer-Mediated Communication*, Kimberly A. Carter asserts that, “Face-to-face bonds, born in a handshake, the wink of an eye, a hug, or a simple bow, are no longer the prime prerequisites for creating friendships.”
You know that it is your interpretation of events that makes you angry, but does that make certain frustrations any less infuriating? For effective anger management, Communication Professor Joseph A. DeVito says *Scream Before You Scream*. ... *S* is for Self, *C* is for Context, *R* is for...

In a society that worships youth, we tend to regard older individuals as no longer able to contribute. Think again! More and more people are refusing to accept the idea that to be “old” is to be useless. They want to keep on learning and doing; they have a wealth of experience and they want to share it, says Risha W. Levinson in *Aging and Time-Binding in the Twenty-First Century*.

Do our senses deceive us, or do they reveal the truth? Are *The Senses — Windows or Snares*? According to Raymond Gozzi, Jr., that may well depend on which particular culture shaped your world view.

The structural differential diagram offers one of the keys to understanding the process of abstracting, and therefore to understanding general semantics. Gregory Sawin wrote his original monograph on the diagram between 1983 and 1985. After many revisions, with critiques by various GS scholars, he continues here with his finely honed short version, *The Structural Differential Diagram, Part II*.

Educators: Those examples of either-or thinking that you’re looking for are close at hand. Our Education Editor, David F. Maas, tells us where to find them when *Using Literature to Neutralize Pernicious Dichotomous Thinking*.

What is the difference between an abstract and an executive summary? While an abstract may simply provide information, the purpose of the executive summary is to get a response. To elicit action, the writer should provide only the information the reader needs, says Philip Vassallo in writing about *Executive Summaries: Where Less Really is More*. 
"The self is a product of metamorphosis, not a static entity."

SOMETHING FROM NOTHING:
Seeking a Sense of Self

LANCE STRATE*

The topic I wish to take up here is the relationship between communication and the sense of self. In doing so, I intend to communicate to you a little bit about myself, and will thereby run the risk of narcissism. At the same time, I will run the risk of echolalia, as most of what I have to say is merely a repetition of what has been said before. And I want to begin by echoing a story taken from a children’s book by Phoebe Gilman entitled Something From Nothing (1992), a book that my son Benjamin and I enjoy reading together. The text is itself an echo, as it is adapted from a Jewish folk tale, and I in turn will adapt and paraphrase Gilman’s story.

It is about a tailor who made his newborn grandson a wonderful blanket out of some rare and beautiful material. Joseph, his grandson, loved that blanket, but as time passed and the blanket got worn and frizzled, his mother wanted to throw it out. But Joseph took it to his grandfather, who said, “There’s just enough material here to make a wonderful jacket.” When, in time, Joseph outgrew the jacket and his mother wanted to throw it out, he took it to his

* Lance Strate is Associate Professor of Communication and Media Studies, Fordham University, Bronx, New York, and President of the Media Ecology Association. Earlier versions of this lecture were presented as the John F. Wilson Fellow Address at the 57th Annual Convention of the New York State Communication Association, Monticello, NY, Oct. 8-10, 1999, and at the 45th Media Ecology Conference, Rosendale, NY, Nov. 3-5, 2000, and an expanded version was published in the Speech Communication Annual (Vol. 14, 2000, pp.14-62), all under the title “Narcissism and Echolalia: Sense and the Struggle for the Self.”
grandfather, who said, “There’s just enough material here to make a wonderful vest.” When the vest grew old, and his mother wanted to throw it out, he took it to his grandfather, who said, “There’s just enough material here to make a wonderful tie.” The tie in turn became worn and stained, and Joseph’s mother wanted to throw it out, but he again took it to his grandfather, who said, “There’s just enough material here to make a wonderful handkerchief.” But over time the handkerchief grew dirty and tattered, and his mother said, now, finally, it’s time to throw it out. But Joseph believed in his grandpa, and brought it to him, and his grandfather said, “There’s just enough material here to make a wonderful button.” But one day Joseph lost the button. Distraught, he ran to his grandfather’s house. His mother, running after him said, “Joseph! Even your grandfather can’t make something from nothing,” and his grandfather sadly agreed. The next day Joseph went to school, where he put pen to paper, and said, “There’s just enough material here to make a wonderful story.”

The theme of material is a natural one for a writer and artist like Gilman, who used a folk tale as source material for a wonderful children’s book. For my part, I am using *Something for Nothing* (1992) as material for this essay. Material is a concern for anyone engaged in acts of creation and communication: public speakers need material for their speeches, stand-up comics need material to get their laughs, teachers need material for their classes.

The humor of Gilman’s story revolves around the double meaning of the word *material*. On the one hand, it refers to physical substance, on the other to communication content. This pun is part of a larger metaphor through which communication is compared to cloth, tale-tellers are linked to tailors, and text is turned into textile. Across various cultures, stories are woven like fabric, yarns are spun, accounts embroidered, and falsehoods are manufactured out of whole cloth. The thrust of this ancient motif, in Gilman’s folk tale and elsewhere, is to ground the abstract concept of communication in the concreteness of the human life-world. It reminds us that both form and information are rooted in physical matter.

We therefore should not forget that even the social construction of reality requires raw materials, and that common sense and scientific knowledge alike are rooted in our physical existence; they are not simply a result of political decision-making. Spiritual approaches to communication need to take this into account as well. After all, the theologians tell us that only God creates ex nihlo, out of absolutely nothing. All the rest of us have to make do with the materials at hand.
I believe that an understanding of the materiality of communication leads naturally to the study of media, and to Marshall McLuhan’s (1964) famous maxim, “the medium is the message” (p.7). For what is the common denominator that links medium and message, but material? The material is the message; it is the material that communicators draw upon for their content. And the material is the medium; it is the substance through which we exchange messages, and it is the environment within which we communicate. We draw upon our material environment, including the technological, the biological, and the purely physical, to construct our messages and meanings.

Returning to Gilman’s (1992) book, I think it crucial to note that her title, Something From Nothing, is not entirely accurate. Joseph does not fabricate something out of absolutely nothing. His material is pen and paper, and it is language and experience. He makes this material into something new, and this I would argue is the significance of human communication. Through the magic of sounds and scribbles we alter our environment, and create things that never were. Alfred Korzybski (1958), Kenneth Burke (1945, 1950), Susanne K. Langer (1951), Paul Watzlawick (in Watzlawick, Weakland, & Fisch, 1974), and Marshall McLuhan (1964; see also McLuhan & Zingrone, 1995), all have discussed the link between communication and change. I want to echo these seminal scholars in suggesting that communication is not so much about creation as it is about mutation, and that the process of representation, signification, symbolization, and yes, mediation, is in fact a process of transformation.

The phrase “something from nothing” is a wonderful way to express the power of symbolic communication as the most radical form of change we know. But Joseph’s act of written communication is only the last in a series of transformations, as the original piece of cloth goes through periodic alterations at the hands of his grandfather. The story begins with the making of a blanket, but the blanket’s cloth was made from raw material, which was the product of living organisms, which arose out of a particular physical environment. The universe is a material environment that is characterized by continuous transformation. And somehow, despite the tendency of change to move in the direction of disorder and entropy, some of those changes result in increased organization, complexity, and life. Organisms not only modify themselves to meet the demands of the environment, they also transform their environment to make it more favorable to their own survival and prosperity. This process is called ecology. Sometimes organisms alter their environments through the use of technologies and symbolic forms, and this process is called media ecology (Nystrom, 1973; Postman, 1970).
Through communication as information, physical systems defy entropy, organize themselves, and become increasingly more complex. Through communication as social action, social systems maintain themselves in space and modify themselves over time. Through communication as a system of meanings, cultures are established and evolve. Through communication as a system of thought, minds are born and grow. Through communication as a system of symbols, we construct worlds, and we transcend them, just as Joseph transcended the limitations of needle and thread. We may not escape material reality, but we are able to change and to improve upon our environment, and ourselves. The media ecology approach to communication focuses on the means and methods, the techniques and technologies that bring about change. It therefore is concerned with the pragmatics of change, in addition to the substance of transformation. In a human context, change may occur as a result of conscious choice and planning, rather than as a product of automatic processes. But our modifications and manipulations often lead to unanticipated and undesirable changes — this is one of media ecology’s primary lessons.

It is worth emphasizing at this point that the primary medium of human communication is language, and the field of media ecology is an outgrowth in many ways of general semantics, with its analysis of the social and psychological effects of symbols, and its links with the linguistic relativism of Edward Sapir (1921) and Benjamin Lee Whorf (1956) and the theory of symbolic forms put forth by Susanne K. Langer (1951). Christine Nystrom (2000) has examined the relationship between media ecology and both Langer and Whorf, while Louis Forsdale (1981) identified the connection between the Sapir-Whorf hypothesis and McLuhan’s perspective on media. Neil Postman, who coined the term “media ecology” (Nystrom 1973), has written some of the fundamental works in this field (e.g., Postman, 1979, 1982, 1985, 1992; Postman & Weingartner, 1969), while at the same time making substantial contributions to general semantics (e.g., Postman, 1976; Postman & Weingartner, 1966; Postman, Weingartner, & Moran, 1969). More recently, Raymond Gozzi, Jr. (1999) has brought media ecology together with general semantics and the study of the metaphor. These are associations that I share, as well.

Having now provided you with some sense of myself as a communication scholar, I would like to turn to a second folk tale, one whose theme is also transformation. What I am referring to is the myth of Echo and Narcissus, as related by the Roman poet Ovid, in his masterpiece, Metamorphoses (1955). The myth is no doubt familiar, and therefore I will only touch on the high-
lights. Echo was a talkative nymph who had been punished by Juno, so that she could only repeat back whatever she heard. Narcissus was a youth so beautiful that everyone he met fell in love with him, including Echo. He was callous, however, and coldly rejected Echo as he did all of his admirers. Brokenhearted, the poor nymph faded away until nothing was left of her but her voice. Narcissus was eventually punished when he saw his own image in a pool of water. Not recognizing himself, he was mesmerized by his own beauty. Even after he realized it was only his own reflection, Narcissus could not leave, and slowly wasted away until he finally turned into the flower that bears his name.

Sigmund Freud (e.g., 1966) saw in Narcissus an ego that thinks itself super, and named a character disorder after him, narcissism. Narcissists exhibit self-love and a sense of superiority entirely out of line with reality; they devalue others or exhibit disinterest in them, while clinging to a “grandiose conception of the self” (Lasch, 1979, p.84). My treatment of narcissism here is necessarily superficial; in essence, I wish to follow the lead of Christopher Lasch (1979) and use narcissism to refer to the problem of too much self.

Narcissism and echolalia represent two extremes in the development of a sense of self, against which we struggle to find a balance.

Perhaps in his own way reflecting the myth, Freud acted as if Echo were invisible, and only had eyes for Narcissus in his writings. Still, Echo’s name managed to make its way into the psychology literature as echolalia, which refers to a type of language use in which speakers repeat back what they have heard without understanding its meaning. Echolalia is a normal facet of early language development, and also a symptom of various types of brain disorders and disabilities. Here too, I will not take up all of the specifics of this type of behavior, but rather use it as a metaphor for the problem of too little self. Thus narcissism and echolalia represent two extremes in the development of a sense of self, against which we struggle to find a balance.

It is, by the same token, a struggle to find a balance between self and other, a point that is essential in Freud’s psychoanalytic tradition, as well as the symbolic interactionist approach of George Herbert Mead (1934), Erving Goffman (1959), and others. Underlying these perspectives is the notion that we are not born with a sense of self, but rather construct one with the raw material of body and brain, and by means of human communication. As we learn
to use our senses and make sense out of our surroundings, we begin to separate ourselves from our environment. We develop a concept of self as we develop a concept of other, a process that is intimately tied to language acquisition. Language gives us a name, and therefore a singular identity. The pronoun "me" provides us with a self that is situated within an environment. And the pronoun "I" is the perfect expression of the ego acting upon its surroundings (see, for example, Becker, 1971). Symbolic communication gives us the ability to become our own material, allowing us to construct a sense of self. It follows, I would argue, that changes in our mode of symbolic communication would, in turn, change our sense of self.

Echo and Narcissus represent two different extremes in the construction of the self, but they also represent two different modes of sense perception and symbolic communication (and, as Eric McLuhan, 1998, notes, the two different brain hemispheres). As media ecology theorists such as Marshall McLuhan (1962, 1964), Harold Innis (1951, 1972), Eric Havelock (1963, 1986), and Walter Ong (1967, 1982, 1986) have noted, one of the major divisions in perception and culture is that of the ear and the eye. Echo represents hearing and sound, and therefore the sort of media environment marked by the absence of literacy, by reliance on speech and song, and by emphasis on oral tradition. Such oral cultures lack a storage medium outside of human memory, and therefore rely upon repetition to keep knowledge alive. Just as individual memory acts as a neural echo chamber, the collective memory of an oral society functions as an echo-system. In contrast to Echo, Narcissus represents sight and visual imagery, and therefore stands for the type of media environment characterized by writing systems and literate habits of mind. Like Narcissus, readers become engrossed in the object of their attention, lured into a life of solitary study, trapped by the process of reflection. Writing freezes language, freeing people from the necessity of memorization, thereby rendering the oral tradition obsolescent. Oral cultures have difficulty surviving when they are thrust into competition with literate cultures, just as Echo fades from view after encountering Narcissus.

The interpretations of this myth as being about sense perception and about senses of self fit together quite nicely. In the same way as Echo represents the extreme of too little self, members of oral cultures have a weak sense of self in comparison to literates (Ong, 1967, 1982, 1986). Collective, tribal identity dominates, as the preservation of knowledge requires a group effort. Likewise, conformity and tradition are required for cultural survival. The very mode of aural communication is biased towards the group, as audiences listen as a whole, bound together by the simultaneity of sound; this is in con-
trast to readers who must read as isolated individuals (Ong, 1967, 1982). Of course, from an oral perspective, members of literate cultures, like Narcissus, develop too much self. They are freed from the pressures of conformity and tradition, and encouraged by this mode of visual communication to view themselves as individuals.

This crisis of the self has led to a struggle over what kind of self will prevail in the electronic media environment, and educational institutions are one of the principal battlegrounds for this conflict.

Now that we have moved into a postliterate, electronic culture, what has happened to our sense of self? There is at once the fear of a return to echolalia in the form of a “technological society” (Ellul, 1964) in which the individual seeks to “escape from freedom” (Fromm, 1965), gives “obedience to authority” (Milgram, 1974), becomes “the organization man” (Whyte, 1956), is manipulated by “the mind managers” (Schiller, 1973), who use the media for the purpose of “manufacturing consent” (Herman & Chomsky, 1988). At the same time, there is the fear that we live in a “culture of narcissism” (Lasch, 1979) in which we are members of “the lonely crowd” (Riesman, Denney, & Glazer, 1950), isolated by our “habits of the heart” (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985), and reduced to either “bowling alone” (Putnam, 2000) or finding some other way of “amusing ourselves to death” (Postman, 1985). And the truth is that both extremes of narcissism and echolalia seem to coexist today, at the expense of a balanced sense of self. This crisis of the self has gone by many names: we have been told about the divided self (Laing, 1965), the need to find oneself, and the need to find self-esteem. We have endured identity crises (Erikson, 1950, 1980), identity politics (Gitlin, 1995), and even identity theft (U. S. Federal Trade Commission, 2000). We have observed the disappearance of childhood, and of adulthood (Meyrowitz, 1985; Postman, 1982). We have been informed of the decentering of the subject (Jameson, 1991, Poster, 1990), the death of the author (Barthes, 1977), and the saturation of the self (Gergen, 1991). We have been told that we are now transhuman (Dewdney, 1998) or posthuman (Hayles, 1999). And we have heard calls for character education rooted in nostalgia for our lost sense of self (Bennett, 1996). This crisis of the self has led to a struggle over what kind of self will prevail in the electronic media environment, and
educational institutions are one of the principal battlegrounds for this conflict.

With this in mind, I now want to turn to an example from my personal life. It is neither a folk tale, nor a myth, nor a story with a happy ending. Rather, it is the story of my daughter Sarah and her disability. In June of 1998, when Sarah was two and a half years old, my wife and I received the diagnosis that Sarah is autistic. We had some concerns about her development during her first year, and began to understand that something was seriously wrong during her second year, as she suffered from a series of seizures when she was twenty-one months old, often appeared withdrawn, and failed to develop language. She did exhibit echolalia, repeating back words and phrases like “thank you” and “big” without any regard for their meaning, and showed a remarkable ability to memorize songs such as Raffi’s “Baby Beluga” and Barney’s “I Love You” song. As it turns out, this echolalia is a symptom of autism, but among autistic children it is a positive indication of their potential for linguistic and cognitive development.

I do not want to dwell on the devastating impact Sarah’s diagnosis had on my family. But, as you no doubt know, reading is one of the coping mechanisms that we literates employ in times of trouble. And so I immediately set out to read as much as I could about autism, as a parent of course, not a scholar. And yet, I could not help but notice the many ways that this disorder intersects with my own intellectual background. As the name of the syndrome implies, autism is a disorder of the self, and it is a disorder profoundly linked to problems in communication and perception. But let me begin with some facts.

Autism is the product of a neurological abnormality, present before birth, which affects the development of the brain. While it is a biological condition, no medical tests have yet been developed to identify it, and diagnosis depends upon behavioral observation. Autism therefore is a fuzzy category; first identified in 1943 by Leo Kanner, it has come to be understood as a spectrum disorder, meaning that there is a continuum between the severest cases, through the mildest which may go undiagnosed, and perhaps extending into nonautistic normalcy. And it is a syndrome, meaning that it encompasses a wide variety of traits, some of which may or may not be present in any given case, and which may appear in any number of combinations. Autism is a pervasive developmental disorder which occurs in males four times as often as it does in females, and affects approximately half a million people in the United States with a rate of occurrence somewhere between 1 in 500 and 1 in 1000 (for
more information see Baron-Cohen & Bolton, 1993; Cohen, 1998; Frith, 1989; Siegel, 1996).

This disorder is diagnosed by three main criteria. The first has to do with impairments in social interaction; Kanner referred to this as "autistic aloneness" (quoted in Frith, 1989, p.10). There are problems developing relationships, reciprocating emotions, and sharing interests with others, as well as a blindness to nonverbal social cues. The autistic may seem lost in his or her own world, and an alien in our own. The second impairment is in communication, both verbal and nonverbal, and often includes delays in language acquisition or a complete lack of speech. Also, there may be a lack of imaginative play, and of interest in narrative, as well as problems with the processing of sensory information. The third criterion is described as "restricted, repetitive, and stereotyped patterns of behavior, interests, or activity" (Siegel, 1996, p.18). Both simple motions like hand flapping and complex behavioral patterns may be enacted repeatedly. There is a tendency to favor ritual and routine, and to behave obsessively and compulsively. Even in mild cases, interests may be pursued with unusual focus and intensity.

The majority of autistics are categorized as mentally retarded, but of course assessing intelligence is highly problematic when dealing with individuals who may be unable or unwilling to speak. Only 20% attain a relatively typical level of intelligence, and are referred to as high functioning. Some autistics have savant skills, highly developed abilities in one specialized area, such as mathematics, computer science, music, art, architecture, mechanics, biology, or simply memorization, visualization, or manual dexterity. These savants are well below normal in other areas, however, and autistics in general are particularly handicapped in regards to social and emotional intelligence. The unevenness of autistic intelligence is in part what inspired Howard Gardner's (1983, 1993, 1997) theory of multiple intelligences.

Many of you are no doubt familiar with Dustin Hoffman's portrayal of an autistic adult in the film Rain Man. Often unacknowledged is the fact that Pete Townsend of The Who drew upon his experiences with autistic children in constructing the title character of the rock opera Tommy. In any discussion of unacknowledged autistics, the name of Albert Einstein inevitably comes up, insofar as he did not speak until the age of five, had a great deal of difficulty with social interaction, and possessed savant skills in mathematics and visualization. Vincent Van Gogh's seizures and psychological difficulties may also have been the result of the syndrome, and others who have been identified as mildly autistic include Thomas Jefferson, Thomas Edison, Ludwig Wittgenstein, Andy Warhol, Béla Bartók, Glenn Gould, and Bill Gates. A
more severe case may have been the 18th century wild boy of Aveyron, the subject of a film by François Truffaut, who was said to have been raised by wolves, but may have been an autistic child who had been abandoned or had run away.

Contemporary high functioning autistics have been able to communicate something about their condition. Donna Williams, for example, has written five books about her experiences (1992, 1994, 1996, 1998, 1999); consider this passage from *Autism and Sensing: The Unlost Instinct* (1998):

Up to the age of four, I sensed according to pattern and shifts in pattern. My ability to interpret what I saw was impaired because I took each fragment in without understanding its meaning in the context of its surroundings. I'd see the nostril but lose the nose, see the nose but lose the face, see the fingernail but lose the finger. My ability to interpret what I heard was equally impaired. I heard the intonation but lost the meaning of the words, got a few of the words but lost the sentences. I couldn't consistently process the meaning of my own body messages if I was focusing in on something with my eyes or ears. I didn't know myself in relation to other people because when I focused on processing information about "other," I lost "self," and when I focused on "self," I lost "other." I could either express something in action or make some meaning of some of the information coming in but not both at once. So crossing the room to do something meant I'd probably lose the experience of walking even though my body did it. Speaking, I'd lose the meaning of my own sounds whilst moving. The deaf-blind may have lost their senses; I had my senses but lost the sense. I was meaning deaf, meaning blind. (p.33)

What Williams describes is a world of fleeting and fragmentary perceptions, an inability to organize sensory data and construct a meaningful reality. It was only with difficulty that she was able to build a world in which she could understand self and other, but not simultaneously. Either she would shut out her environment and turn inward, or give up her sense of self and become lost in her perceptions.

Her world is also concrete to an extreme. Language use for the autistic child may be so concrete that a word learned with a particular individual, in a particular place, and during a particular activity, may not be generalized to other people, places, or situations. Among the most difficult words for autistics to learn to use appropriately are the highly abstract pronouns *I* and *you*, which may also reflect problems in forming a sense of self and other. Even savant skills may be based on autistic concreteness. Many do quite well at jigsaw puzzles, because they pay close attention to shape rather than picture
— in fact, it is just as easy for them to put the pieces together when they are turned picture-side down. Memorization, one of the more common savant abilities, is also a concrete operation, as is visualization. Consider how one such person describes her thought processes:

I think in pictures. Words are like a second language to me. I translate both spoken and written words into full-color movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures. Language-based thinkers often find this phenomenon difficult to understand, but in my job as an equipment designer for the livestock industry, visual thinking is a tremendous advantage. (Grandin, 1995, p.19)

This passage was written by Temple Grandin, who holds a Ph.D. in animal science, and is on the faculty at Colorado State University (see also Grandin & Scariano, 1986). It is no secret that academia is much more forgiving of such autistic traits as absentmindedness, intense and single-minded interests, and social impairment as compared with other sectors of society.

Concreteness, delays in language acquisition, and social impairment are all interrelated. For example, seeing eye to eye is one of the most basic forms of relating to others, but autistics tend not to make eye contact, and have trouble making meaning from such nonverbal cues. The gesture of pointing, normally developed very early in childhood, often needs to be taught to autistic children. It implies an awareness of self and other, a shared gaze, a shared attention, a shared meaning. And it is a key step in language acquisition, as we ultimately replace our fingers with words that "point" to things in our environment. Meaning making is thus linked to empathy, a trait that is also impaired among autistics. A lack of empathy, by the way, in no way leads to immoral conduct, as researcher Uta Frith (1989) explains, "Some of the perceived abnormalities of autistic social behavior can be seen not so much as impairments, but as unusually positive qualities. These qualities can be captured by terms such as innocence, honesty and guilelessness" (p.140).

What Frith (1989) believes to be the ultimate impairment of autism is the failure to form a theory of mind, that is, an understanding that others have a mind like one's own. Rather than thinking in terms of mental states and motivations, autistics tend to view others concretely, as objects and behaviors. They essentially rely on an extensional orientation rather than an intensional one, and while this insulates them from some of the problems brought on by the process of abstracting (see Korzybski, 1958, on extension and intension,
and abstracting), it also means that they suffer from "mind-blindness" (Baron-Cohen, 1995, p.xxiii). Without a theory of mind, it is impossible to see oneself as others do, leading to social impairment; it is also very difficult to understand deception. Julian Jaynes (1976) posited that theory of mind was a fairly recent evolutionary development. No doubt, our ancestors could have survived without it, as have other forms of life. Perhaps the Neanderthals lacked it, depending instead on skills such as memory and visualization. Perhaps they disappeared because their mind-blindness made them vulnerable to our own ancestors. It is possible that the development of theory of mind led to the creative explosion of art and ritual that occurred sometime between twenty and thirty thousand years ago (Pfeiffer, 1982), or it may be that it developed much earlier among our evolutionary ancestors (Dunbar, 1996). Whenever it appeared, theory of mind would have tremendous survival value, as it leads us to make inferences about the mental states of others, and thereby predict their behavior; applied to the natural environment as anthropomorphism, it even is an efficient form of theory-building, and therefore would be favored by natural selection (Baron-Cohen, 1995).

Lacking theory of mind, autistics would be at a decided disadvantage in early human societies, and their social impairment would no doubt collide with oral societies' emphasis on cohesion and conformity. But the autistic would work well with the structure, formality, and emphasis on ritual found in these traditional cultures. No doubt, savant skills, and in particular a strong memory, would be highly valued, and would probably hold enough survival value to overlook individual idiosyncrasies. We do know that autistics can thrive in a literate culture, and that they have a certain affinity for the literate mindset. To note just a few of the parallels: Where autistics may perceive the world in fragments, literacy is biased towards fragmentation and analysis (Carpenter & Heyman, 1970; Goody, 1977; Logan, 1986; McLuhan, 1962, 1964). Where savant skills are isolated islands of ability, literacy favors specialization (Eisenstein, 1980; Innis, 1951; McLuhan, 1962, 1964; Meyrowitz, 1985). Where autistics are socially impaired, literacy favors privacy and individualism (Havelock, 1963, 1986; Logan, 1986; McLuhan, 1962, 1964; Ong, 1967, 1982). Where some autistics excel at visual thinking, reading relies on the sense of vision alone as opposed to the multisensory nature of face-to-face communication (Goody, 1977; Innis, 1951, 1971; McLuhan, 1962, 1964; Ong, 1967, 1982). In fact, some autistic children can draw in perspective without training (e.g., Selfe, 1977), a skill McLuhan (1962, 1964) thought purely a product of reading's fixed point of view (see also Romanynshyn, 1989; Wachtel, 1995). Actually, autistics are naturally capable of a kind of
detachment and objectivity that has for long been an ideal of western literate cultures (McLuhan, 1962, 1964; Ong, 1967, 1982). It therefore makes perfect sense that some autistics are hyperlexic, that is, they learn to read at a much younger age than typical children (although comprehension is difficult to assess).

In our electronic age, high functioning autistics find a niche in the solitary activity of computer programming. But more often than not, what all autistics encounter is a hostile media environment. From the fluorescent lighting which many find painful, to the sensory bombardment and information overload which disrupt the thought processes of us all, our culture offers neither the routine predictability and slow pace of primary orality, nor the quiet concentration of traditional literacy. As one autistic argues, "... the way of life of this age is ever more demanding of a certain way of living that is the WORST case of living, for many autistic people, and there are fewer and fewer places to hide, to be sheltered from the media Storms .... and even the "normal" kid may become mind-fractured into Autism ... under all the sense stress and overloads!" (Wilson, 2000, no pagination).

More and more there is talk of an epidemic of autism, and it is unclear to what degree this is due to the stresses of our environment, or contaminants and pollutants, or diet and allergies, or infections and vaccinations, or genetic predisposition, or simply improved diagnostic procedures. At present, there is no cure for autism, but early intervention can help, and some who are diagnosed with the disability are later mainstreamed, and sometimes declassified. The most effective form of treatment begins with Applied Behavioral Analysis, and the breaking down of activities into their smallest units. Through a process of discrete trials involving drill and rewards, each unit of behavior is taught until mastered, a technique that was pioneered by Anne Sullivan, Helen Keller's teacher. Research indicates that this method is effective if the program is begun during early childhood, and the intervention is intensive — preferably forty hours a week of one-on-one behavioral treatment (Lovaas, 1981; Maurice, 1993; Smith, Groen, & Wynn, 2000). The goal is to jump start neural self-organization by working through the interface of human communication.

Autism cuts across the extremes of narcissism and echolalia, and presents us with a sense of self that is at the same time too little and too much. More than anything else, it is an incomplete sense of self, one cut off from a sense of other. Can autistic individuals develop an integrated sense of self? From what I gather, the raw material is there, but it involves a tremendous struggle to construct a coherent and meaningful sense of the world. Can autistic indi-
individuals develop a theory of mind? There is some indication that the answer is yes, but only for some, and only with great difficulty (Howlin, Baron-Cohen, & Hadwin, 1999).

As for my daughter, we are fighting to provide her with the best possible life chances, and her teachers are the heroes who are out on the front lines. But what she has taught me is that the self we take for granted is in fact the product of a struggle. It is the most important struggle of our lives, despite the fact that we are largely unaware of it. Through our efforts from early childhood on, we take the raw material we are born with, and we build ourselves. And having done so, we continue to transform ourselves. The self is a product of metamorphosis, not a static entity. There are many kinds of selves we can construct with the materials at hand, but they are not all of equal worth. Some may be too easily overwhelmed by others, some too insensitive. Moreover, different media environments tend to favor or discourage different types of selves. As the materials we work with change, our sense of self may also be altered. Thus, for example, we move from oral cultures’ tendency to develop too little self to literate cultures’ tendency to develop too much self.

Donna Williams (1998) writes of how she moved past the stage of “no self, no other,” but could exist either as “all self, no other,” or “all other, no self.” It is only with difficulty that she could develop a “simultaneous sense of self and other.” In a similar way, electronic culture seems to oscillate between the extremes of echolalia and narcissism. And I would suggest that on the cultural level this is just as much a disability as it is on the individual level, and that our current crisis of the self represents a struggle of the greatest import. It is a struggle over the kinds of selves we want to produce and reproduce.

Ovid’s tale of metamorphosis is a tragic one. But the story of Joseph, the tailor’s grandson, is a human comedy of survival, transformation, and transcendence. It shows us that it is possible to work with the material at hand, and make something that never was. We might begin by retrieving oral culture’s selflessness, community-mindedness, and the ability to sacrifice oneself for the sake of others. And we could add to it literate culture’s self-fullness, its emphasis on individual rights and responsibilities, and the idea of integrity and moral character. Both narcissism and echolalia can be positive traits if exhibited in moderation and balance. Changes in our media environment may have destabilized our culture’s established sense of self, but we have the raw materials and the understanding of media and communication necessary to build a new, integrated sense of self. The struggle now falls to us, as parents and as citizens, as scholars and as communicators, and above all, as teachers, to make something from nothing.
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"The tendency to discount Johnson’s work appears widespread. This is a great loss because use of his type of parental counseling to stop parents tinkering with their children’s hesitancies has prevented thousands of children from becoming chronic stutterers."

JOHNSON’S DIAGNOSOGENIC THEORY OF STUTTERING:
An Update

GARDNER GATELEY, PH.D.*

SPEECH THERAPY TODAY has suffered because many speech-language pathologists misunderstand Wendell Johnson’s teachings on “stuttering.” They believe that Johnson taught that assigning the label stuttering to a speaker’s repetitions of sounds and syllables and other hesitancies actually caused the disorder. They could not be more mistaken.

Johnson examined how human responses to an event can reinforce it; he did not specify labeling as a cause. As a general semanticist, Johnson hated such word magic (the belief that we can speak things into existence); for correct evaluation, the event or thing had to precede the word.

Johnson faced a world that believed what many people believe today, that stuttering is a speech disease. Popular wisdom says that everybody can recognize the symptoms, because all repetitions of sounds or syllables that occur frequently in a child’s speech are “stuttering” and these indicate that the child

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has the disease as certainly as the presence of blisters indicate the presence of chicken pox.

What Johnson Believed

In contrast with the popular superstitions of his day, Johnson believed that instrumental conditioning caused problematic "stuttering."

Parental responses to their children's early speech efforts were mediated by their "diagnoses" of this speech as the disorder "stuttering," and this led to chronic "stuttering." (1) It was not the word stuttering that caused "stuttering": it was reactions to the word that created the undesirable reinforcement of stuttering. While Johnson may not have discovered why all children begin to "stutter," he certainly understood how stuttering, whether "organic" or normal, becomes chronic. (2)

One of today's most widely used speech pathology texts (Guitar, 1998) reports that around 80% of all children who begin stuttering overcome it spontaneously. Guitar asserts that only those children who fail to adjust to what he calls "core stuttering" (repetitions of sounds and syllables) go on to become chronic stutterers. This suggests that chronic stutterers were taught (by themselves or others) to become frightened, ashamed, and guilt ridden when they stuttered and as a result attempted to avoid these feelings by avoiding stuttering, creating the vicious cycle called "stuttering." Stuttering, as Johnson maintained, became an "anticipatory, apprehensive, hypertonic avoidance reaction."

When persons behave in this way, they have "maladjusted" to their stuttering. However, if they do not fear their stuttering, if they accept it, do not anticipate it, do not try to avoid it (and therefore create it), they have "adjusted" to it.

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Stutterers cannot always predict the specific words on which they will stutter; however, a generalized feeling of fearful expectancy exists.

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The anticipation of making a series of repeated sounds that stutterers experience as stuttering does not always involve a specific word. It can be a feeling of anxiety associated with certain speaking situations. Stutterers cannot always predict the specific words on which they will stutter; however, a generalized feeling of fearful expectancy exists.
Many experts today attribute chronic stuttering to speakers’ efforts to avoid painful emotions created by their evaluations of stuttering: fear of guilt, fear of shame, fear of fear, etc. Attempts to avoid these feelings result in efforts to avoid stuttering, and these efforts, along with repetitions of sounds and syllables and prolongations of sounds, appear as stuttering. The British call these reactions stammering and evidently regard the repetition of sounds or syllables as just one symptom of the disorder. This seems like a useful approach to me.

The Map is Not the Territory

Some young children who begin to repeat sounds and syllables at the beginning of words will adjust to this by making it a non-issue and disregarding it, or by considering it normal, not shameful, disgusting, or wrong. Most importantly, they never become self-doubters because of it.

Johnson taught that false belief causes irrational conduct. It is our maps that disturb us, not the territory. Parents’ beliefs that their children had a speech disease (“stuttering”) were false and their effort to correct the “disease” led parents to create in their children a fear of stuttering. (3) Johnson did not think that people would jump to the conclusion that he meant using the word caused the disorder. If the results were not so unfortunate, it might be amusing to hear claims that Johnson was wrong because some parents report that their children no longer stutter and that they did call it “stuttering.”

The Effectiveness of Johnson’s Theory

The tendency to discount Johnson’s work appears widespread. This is a great loss because use of his type of parental counseling to stop parents tinkering with their children’s hesitancies has prevented thousands of children from becoming chronic stutterers.

At Baylor University, for years we have called stuttering in children “normal,” and have cautioned parents against punishing it or disturbing themselves over it. We have told parents to reduce their demands on their children about other things as well as speech, to distract them when they “stuttered,” and to keep them talking when they were fluent, etc. So far we have failed with two children in over thirty years of practice, as far as I have been able to tell.

Other clinicians (Rubin, 1986, p.483) have claimed 100% recovery of stuttering children when they or their parents were seen early enough. Dr. Rubin states that “... every pathologist I have talked to reports the same success.”
Johnson's Theory and Lidcombe Therapy

I recently attended the ASHA [American Speech-Language-Hearing Association] convention in Atlanta, and I was fortunate enough to see some sessions of what they called "Lidcombe" therapy for early childhood stuttering. I was quite impressed with the method, and I am certain that Wendell Johnson would have applauded what I saw.

I believe that Johnson's Diagnosogenic theory and resulting therapy, whether he intended it or not, was a roundabout way of treating early childhood stuttering with symptom-removal psychotherapy. He taught parents to ignore the symptom by convincing them it was normal, so this prevented reinforcement of stuttering. No matter how much Junior appeared to stutter, it was normal and he would stop doing it if you ignored it. Like thumb sucking, nail biting, and other attention-getting and controlling behavior, when parents stop feeding the habit, it often dies.

If parents can use the word stuttering without becoming disturbed by its meaning, and thereby misled into punishing or criticizing or otherwise advising their children when they do some "stuttering," the word stuttering (whatever they mean by it) is as harmless as any other word.

What the Lidcombe clinicians use when they work with children who stutter I would call symptom-removal psychotherapy for children that makes stuttering a non-issue (nobody is disturbed by it when it happens, so it is not reinforced; patients get no special attention for stuttering, so they cannot use it to control). When young patients get stuck, clinicians note this and sometimes gently ask patients to speak again without getting stuck. Clinicians increase the children's confidence in their ability to speak normally and exert normal audience control. Clinicians make the children the center of attention and put them in productive control of the sessions, increasing their sense of equality or superiority, a move that often reduces hostility. Moreover, clinicians teach parents to do the therapy and everything is done in the spirit of fun and play. No doubt the treatment is effective, but I think similar results have also come from treating parents without providing direct therapy for the children.

General Semantics and Psychotherapy Today

No doubt most chronic stutterers feel terrible when they stutter. They likely create these bad feelings by their evaluations of what they have done, something that they consider dangerous, disgusting, etc. They believe that they should not have so behaved and that they must not do it again. Where did they get these ideas? Johnson said that others had such ideas first and passed them on through their language-inspired instrumental (operant) conditioning.
The more you study Johnson, and also cognitive behavior therapy, especially Rational Emotive Behavior Therapy, the more valuable the Diagnosogenic theory of stuttering appears. The most popular psychotherapies today often consist of techniques for applying general semantics (Christopher, 1998).

Regardless of why children begin stuttering, how you respond to it has to be mediated by what you say to yourself about it, and what you say will be influenced by what the word stuttering means to you.

Before consigning Johnson to the trash bin, we need to do a lot of reading about what is going on today in the world of psychotherapy, and examine what we do in our therapy sessions. What has happened is this: While our field of speech-language pathology has nearly abandoned the fact that our evaluations, what we believe and say about real or imaginary events, accounts for how we feel and behave, the field of psychology has taken over the idea and has made it the very center of many systems of psychotherapy. Much of what we do in therapy I call “semantic” because we actively change beliefs. Peter Christopher summarized our influence on psychology in an article published in ETC, Summer, 1998, entitled “They’re Stealing Our General Semantics!”

The Anatomy of Emotional Reactions

Emotional reactions involve at least three steps:

1. an event occurs or one imagines that an event might occur.

2. one evaluates this, usually without being aware of doing so, as hostile, neutral, or friendly.

3. this evaluation produces feelings that can lead to responses that fit the feeling.

Therapy involves working with clients at point 2, a position Johnson elaborated in his book People in Quandaries (p.428). We change behavior by changing beliefs about events. Most stutterers I have interviewed believe that all stuttering is the same and that all of it is dangerous. They also tend to believe that stuttering causes how they feel about it, and that listener responses make them feel a certain way about themselves and/or about their listeners. In other words, they jump from step 1 to step 3 without being aware of step 2. Too many speech pathologists agree with this misevaluation, and this makes it difficult or impossible for them to help stutterers become realistic about their problem feelings.
For improvement to occur, clinicians working with stutterers must discover what beliefs their clients need to change to make their beliefs more consistent with the facts. We have to correct these without losing the patient. No doubt, patients will resist, because stuttering therapy does not occur in a vacuum, and the insights gained will spill over into other important areas of their lives.

**Alive But Not Kicking Too High**

There is some evidence that Johnson's theories are still alive. Guitar (1998, p.4) states that some stutterers don't want to be called "stutterers" but instead called "persons who stutter." Guitar also says that "Adults who stutter often say that changing the way they think of themselves — as people that happen to stutter but with many more important attributes — was one of the most significant things they did to break the bondage of stuttering." Johnson would approve, but he would probably change it to "persons who repeat sounds and syllables more frequently than they want to, etc." This change could make a greater difference. For example, I may have once enabled a school-aged "stutterer" to cure himself. He lived in a distant city and I saw him for one session during which I told him that he did not stutter, but he unnecessarily repeated some sounds and syllables now and then. I told him that such repetitions were not needed, and that saying them once would suffice. He never returned. Later, his mother wrote me a letter about how well he was doing.

**Conclusion**

Much that goes on in a typical session of stuttering therapy involves applied general semantics. We cannot always change the territory but we can change the map and patients will feel better, live more productively, and speak more fluently.
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NOTES

1. Johnson did believe that all hesitancies misdiagnosed as stuttering were instead "normal," but he regarded the word "normal" as what is "normal" for a given patient. It would be "normal" for an alcoholic to drink, and "abnormal" if he did not do so. General semanticists use the word "normal" as an engineer would use it and not as a statistician would use the word. If an automobile performs as it should, given a certain car, it is "normal."

2. With reference to the possibility of an organic cause of stuttering, Gregory (2003, p.20) says, “A very simple, meaningful statement that I always made while teaching was to say that whatever the physiological difference in a child who stutters, it has to be very small considering: (1) the minimal nature of the speech disruption-repetition and prolongation; (2) the cyclic nature of these behaviors; and (3) the probability that up to 80 percent of those who stutter at one time do regain normal fluency.”

3. Even if the diagnosis was not a misdiagnosis, it still stimulated irrational treatment of the children because of dangerous emotions attached to the word. Johnson’s theory could have been called the “misdiagnosis” theory of stuttering.

The Editors thank the anonymous referees for their helpful comments and suggestions on earlier drafts of this paper.
Preface

One of the most cherished pieces of wisdom I have gained through cultural study is that each of us, as unique individuals, perceives our self, each other, the world, the universe, and all components thereof somewhat differently as a result of our ever-changing personal attitudes, values, beliefs, expectations and experiences. I’ve grown to rely on the fact that no two people ever actually perceive an “identical” object or situation in exactly the same way. Therefore, as a somewhat altruistic individual who wishes to embrace humanity for all our magnificent diversities, I strive for open-mindedness. Nonetheless, I admit my principles in this regard went somewhat awry as I listened to many candid anecdotes exchanged in a Computer-Mediated Communication (CMC) class I recently attended regarding varied personal perceptions of the nonverbal aspects of communicating online.

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As a traditionalist in thought regarding what constitutes nonverbal behavior, I can't help but explore what at first may seem an absurd notion—that effective and reliable nonverbal communication can actually exist in a technological mode. Hence, my investigation regarding the existence of nonverbal cues during CMC.

Introduction

As both urban and rural societies move toward a global community with technology soaring to the dominant position, the way each of us views the world, the people in it, our cultures, and our ideals, changes too. Such metamorphoses are part of life and as age-old as they are futuristic. Think about it: Language, for example, has evolved from the guttural grunts and growls of our most ancient ancestors to the plethora of tongues spoken worldwide today. Denotative and connotative meanings of words and actions constantly change as people employ them in different ways. Today, the rate at which new words are being developed (as a means to refer to innovations in technology and the human understanding thereof) calls for the continuous development of new dictionaries. From the New Scrabble Dictionary to The Hacker's Dictionary, printing presses glisten, ready-wet with ink for a new run. Semanticists and linguists boast "field day!" while delving into new rhetoric and nomenclature involved with Computer-Mediated Communication (CMC).

More and more people today rely on CMC to "meet" with others for business purposes, information exchange, or simply to form personal relationships. Therefore, as we move toward a new language base linked to online communication channels, we automatically form a new analytical basis upon which we transmit messages and interpret meanings; in doing so, we tend to neglect the fact that most nonverbal cues are missing in the exchange!

Undoubtedly, the relationships and communities formed through CMC enable participants to create important social climates. Still, to what degree participants perceive the online textual and graphic content to signify behavioral truths is a separate matter. In fact, fledgling social and psychological theories abound regarding the changing perceptions of online "behaviors" as more and more people associate typewritten symbols with forms of nonverbal action (which a few years ago would have been considered oxymoronic).

The question demands further exploration: How much can one person really get to know about another merely through CMC? In exploring a variety of responses to that query, I remain surprised at how many individuals actually perceive a strong interconnectedness to certain people without ever mak-
ing their personal acquaintance; the birth of a relationship — closeness —
proliferates upon a computer screen, keyboard, and modem.

In this age saturated with CMC, the norms for personal interaction change
from day to day. With a click of the mouse, the traditional way people once
perceived closeness, personal awareness, and social contact mutates before
our very eyes. Face-to-face bonds, born in a handshake, the wink of an eye, a
hug, or a simple bow, are no longer the prime prerequisites for creating
friendships.

Perhaps, with the infiltration of CMC into homes, schools, and businesses,
some of us simply lose sight of the idea that we should rely more on interper-
sonal interaction before forming judgments about the genuineness (or not!) of
our fellow human. Humans are born with an innate ability to glean personal
truths from facial expressions, eyes, body movements, gestures, vocal intona-
tions, scents, proximity, even auditory and environmental conditions sur-
rounding another human being — elements that do not often transcend band-
width.

No substitutes exist for nonverbal, face-to-face interaction. Many studies of
human touch, for example, point out its requirement for survival. Mutual pu-
pil dilation, as subtle and unnoticeable as it may seem, may provide the basis
for that mysterious and wonderful chemical attraction that brings two people
together. A few moments of simple eye contact, even the length of a gaze,
speaks worlds more about one human’s affinity for another than page after
page of typewritten words ever could.

In the virtual world, however, people tend to rely more and more on such
displays as character enhancement, typewritten “clues,” icons, emoticons and
flaming to transmit and decipher meaning. With this modification comes the
growing conception that we can actually get to “know” a stranger simply
through chatting online, wherein genuine nonverbal behavior does not exist.

With the increase in online activities — virtual environments, chat rooms,
trends toward e-mailing and online conferencing, whether for simple social
mingling, business, education, or devout pleasure — we must adjust our re-
search foci and our thinking. We must now examine the new and constantly
changing attitudes, values, beliefs and expectations surrounding the imple-
mentation of quasi-nonverbal social cues inherent in CMC that some people,
today, actually embrace as a form of interpersonal identity.

Sixty years ago the field of kinesics, the study of body motion, was still a
fledgling science. Researchers such as Ray Birdwhistell, godfather of
kinesics, first became interested in body motion in 1946. Until then commu-
nication research was an esoteric specialty, limited to “maverick researchers”
In referring to nonverbal behavior as the primary messenger, Sigmund Freud once wrote, “He who has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore.” Likewise, George du Maurier, a 19th Century British caricaturist, wrote, “Language is a poor
thing. You fill your lungs with wind and shake a little slit in your throat, and make mouths, and that shakes the air; and the air shakes a pair of little drums in my head ... and my brain seizes your meaning in the rough. What a roundabout way and what a waste of time.” The common gist of these passages remains clear: The impact of nonverbal behavioral signals on interpersonal communication may outweigh any verbal content. How, then, can we rely on the typewritten word, especially from strangers, if we already have sound doubts about vocalized meanings? What weight do we put on the idea that nonverbal behavior exists during CMC?

Nonverbal behavior — powerful stuff — has many semblances. One might even argue that the mere fact an individual has access to a computer presents telling, nonverbal clues. Perhaps the vocabulary or grammar that an individual uses projects a form of nonverbal identity. Nonetheless, the fact that the typewritten word lacks even vocal cues eliminates the presence of spontaneous human emotion, the basis for our instinctual affinities.

We all are familiar with first impressions. The phenomenon can be described as something that emanates from a person which prods us to draw conclusions before word one is exchanged — images we conjure up by way of a quick visual, sound bite, scent. We all do it, automatically and very unconsciously. We look at how a person dresses, how he or she carries his or her self, cleanliness, facial expressions, personal eye contact. In the world of CMC the opportunity for sizing up your partner seems not to exist except, perhaps, through maybe an ambiguous-at-best photograph.

In a book called The Body Reveals: What Your Body Says About You, authors Ron Kurtz and Hector Prestera (1984) quote a colleague as saying, “A man’s movements are as personal as his signature.” The writers make the point that the body “says things about one’s emotional history and deepest feelings, one’s character and personality” (Kurtz, 1984). Even psychiatrists have long recognized that the way an individual moves his body provides clues to his character, his emotions, and his reactions to the people around him.

Interestingly, while body language is integral to communication, according to Ekman (1975) people are held more accountable for their words than for their facial expressions. He notes that more comments are made about words people say than on how they say it. Still, most people regard “expressions of emotions as more trustworthy than words.” During interpersonal communication, facial movements, eye contact, distance, touch, posture, and gestures radiate messages continually between the speaker and listener during communication, and may greatly outweigh in importance the content of any verbal
message. This idea poignantly expresses itself in the phrase, "Words not only fail us, but they cheat us" (Lamb, 1979).

According to some communication researchers, genuine expressions are involuntary, while words are not. Much nonverbal behavior is spontaneous. In verbal and text-based communication, we cognitively form our messages before speaking or writing, whether we are aware of it or not. Therefore, we have time to adjust our responses, which may, or may not be the true, spontaneous human reaction to a message.

The face, the primary site for the display of emotions, together with the voice, may tell the receiver how the speaker feels about what is being said (Ekman, 1985). Still, in CMC more and more people rely on the typewritten word in context with icons and emoticons as nonverbal cues to display emotion. In this way, the perception of the written word changes.

Perception and interpretation play a large role in communication. Interpretation may present complications because it takes time to clarify ambiguity (Katz, 1981). Even during face-to-face communication, the message someone intends to impart is not always perceived as such. So, during CMC lots of assumptions must be made by an individual to actually believe he or she can discern between genuine and fictitious characteristics of the online partner.

Even during face-to-face conversations many considerations surface when deciphering a message, such as time, environment, space, and state of mind. Still, spontaneity often dictates the exchange. In the CMC environment, however, both the sender and receiver have time to stop and interpret the message, and to think about the response message he or she wants to send. Unlike interpersonal interaction, plenty of opportunity exists for communicators to devise or feign specific reactions. No transactional communication comes into play during CMC. Sender and receiver lack the ability to transmit messages simultaneously, which provides the basis for congruent interpersonal communication (Knapp, 1980).

Mauri Collins, creator of a Web site called Flaming: The Relationship Between Social Context Cues and Uninhibited Verbal Behavior in Computer-Mediated Communication, researched the subject of nonverbal clues and perception on the Internet for his Master's degree in Communication. In his writings, he tries to persuade readers that "Face to face communication is the richest in social context cues and any form of mediated communication lessens the cues available."

In arguing that perceptions about nonverbal stimuli continue to change as a result of CMS, Collins notes that as early as 1984 researchers "conceived the computer as a force in language change." He says social scientists have been
speculating whether CMC would engender some way of compensating for the “lack of physical presence or non-linguistic” context. According to Collins, since CMC is “a relatively new form of communication,” lacking the “established norms of face-to-face conversation,” communicators now employ flaming as a way to insure they are “understood.”

Also according to Collins (1992), flaming, an “uninhibited verbal behavior,” is described in The Hacker’s Dictionary as swearing or shouting at the terminal, “speaking incessantly, hurling insults,” and “using profanity” during correspondence. Typing in capital letters, for example, denotes “shouting,” or “anger” by today’s mounting standards for online behavior. In fact, Collins says CMC “appears to foster a distinctive and homogeneous conversational style, distinguished by the great frequency of arguments and flaming.”

Another interesting argument Collins makes is that during CMC most clues of an individual’s uniqueness diminish, since “text-based messages all look more or less the same,” particularly in e-mail transmissions. He points out that currently the “only characters that can be transmitted are those that appear on the traditional typewriter keyboard, and the appearance of text on the screen is unaffected by any physical, social, or emotional characteristics of the sender.” He reiterates, “A note from the CEO of a company looks exactly the same as one from the janitor.”

To help bridge this enormous gap between face-to-face nonverbal displays and textual-based correspondence, a steady stream of new words, ideas, and representations are added to the CMC language base everyday. For example, emoticons, typewritten symbols placed in messages, help writers to express themselves and also assist readers to better interpret the intended emotion. People increasingly use emoticons in e-mail, chat groups, and virtual realms, and convey a growing dependency on their translations.

Since the sender’s actual expressions cannot be seen, despite the aid of emoticons, ambiguity still exists. Still, learning to use emoticons in text-based CMC can be very helpful in getting a point across. I discovered a valuable site called Emoticons that lists the most current emoticons in use today. The site also requests suggestions from the readers for new text-based illustrative icons.

Another CMC utility is the use of an ever-increasing list of acronyms to represent emotional states. Creators of The Worldwide Web Acronym and Abbreviation Server note that acronyms are part of the development of the new language base for CMC. “So far as this database is concerned,” they write, “an acronym is any string of characters formed from the initial letters of
several words (or occasionally from other letters), regardless of whether the result is pronounceable or not.” Visit the site for a thorough education on current acronyms and abbreviations in use in CMC.

John T. Masterson, III, Master’s student at the University of Miami, presents some interesting points about CMC on his Web site entitled Nonverbal Communication In Text Based Virtual Realities (1991). Masterson refers to the new “conventions” of nonverbal behavior that “provide invaluable nonverbal cues that serve to enrich the communication between communicators in CMC.” He explains how “atmospheric feeling commands,” and the “emote command” can provide useful kinds of “disembodied body language.” According to Masterson,

The combination of the various atmospheric “feelings,” as well as the infinity of behaviors representable via the emote command provide MUD users with a rich textual tapestry from which to portray their nonverbal behaviors. I urge readers to explore this chapter on ways in which means are used to create nonverbal behavior in text-based adventures.

The idea that nonverbal behavior exists in CMC is a hot topic. In a study called Function and Impact of Nonverbal Communication in a Computer Mediated Communication Context: An Investigation of Defining Issues, Derek R. Lane, Assistant Professor of Communication at the University of Kentucky, shares his views. Lane argues that it is the responsibility of communication scholars “to study computer-mediated communication.”

Communication science studies the relationship between messages and people. More and more of these messages are being transmitted by computer networks; and more and more people are finding themselves caught up in the global network of networks. Therefore, computer-mediated communication will provide the context by which nonverbal communication behavior will be studied.

As social and communication research expands on the topic, more controversial views will surface. Indeed, in a current essay called Implementing Nonverbal Cues in CMC Environments (1997), Bernd Wiest of Didaktik der Arbeitslehre, Germany, writes:

Many theories about computer-mediated communication suggest to us that nonverbal cues are missing in CMC. Nevertheless, in reality, CMC need not stick to such theories: personal relationships and communities are formed and enable the participants to create a warm and personal social climate on the Net. We should therefore change our research focus, examine this reality, and continue to explore the various conclusions our communication theories provide.
This focus leads to a method that enables us to implement the social cues we are often missing.

Undeniably, e-mail and chat forums are developing pseudo-nonverbal protocols that more and more people accept as true representations of actual nonverbal signals. Although we are not all expert at the skills of communication, if we intend to use chat arenas and virtual worlds, we each have a responsibility to enhance our awareness of the subject. Most of us would like to be better understood. To this end, we must impart a better understanding of ourselves, others, and the changing environment in which we communicate.

As a means to examine the degree to which people perceive nonverbal communication during CMC, and to determine the general existence of a quasi-nonverbal CMC language base, I questioned fellow students attending the CMC course I attended. I asked 40 students to share their personal views on the existence of nonverbal communication during online forums. Also, information gleaned from the content of 200 student essays and online seminar transcripts on the subject indicated that a majority of class participants favor face-to-face nonverbal messages over CMC behavioral cues when meeting someone for the first time. However, many admit that they make new acquaintances regularly during CMC and perceive nonverbal cues to exist in this venue.

The overwhelming response prompted the direct inquiry into how each student conceptualizes the idea of nonverbal cues. Participants offered such responses as:

"Emoticons help."

"The potential is there to get to know someone through sentence content."

"A person can really get to know someone without the burdens associated with physical appearance getting in the way."

"Flaming shows a lot about a person’s personality."

In fact, more than half the students said they often “personally get to know” someone through CMC prior to meeting him or her in person by relying on the written word to help them form a personal judgment.

While a majority of the students agreed that nonverbal behavioral clues exist during CMC, they nonetheless also agreed that a lack of fundamental trust exists when dealing with strangers online, whether through e-mail, chat rooms, or other CMC forums. This opinion changes, however, when communicating in the same internet forum with someone they have met previously, face-to-face, despite the length of time of that first-hand association. These views seem to conflict and should be further explored.
Conclusion

Nonverbal behavior plays a critical role in interpreting interpersonal interactions. Even those ever-so slight hand gestures, subtle facial expressions, almost indiscernible eye movements, minute changes in vocal tones, and quiet environmental cues transcend the mere spoken or written — and in this context, typed — word. Still, the changing social ideals and understanding we have of the meaning of nonverbal cues, however quasi, in a CMC-based society, implores us to further consider this expanding phenomenon. Since perception is the key to an individual’s unique sense of reality, we must explore how and what new attitudes, values and beliefs are forming so as to better understand and support our fellows during these changes.

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ABSTRACTIONS

Engineering is the art of modifying materials we do not wholly understand into shapes we cannot precisely analyze, so as to withstand forces we cannot properly assess, in such a way that the public has no reason to suspect the extent of our ignorance.

A. R. Dykes

An architect’s most valuable tools are an eraser and a wrecking bar.

Frank Lloyd Wright

An idealist believes that the short run doesn’t count. A cynic believes the long run doesn’t matter. A realist believes that what is done or left undone in the short run determines the long run.

Sidney J. Harris

“Point of view” is that quintessentially human solution to information overload, an intuitive process of reducing things to an essential relevant and manageable minimum. ... In a world of hyperabundant content, point of view will become the scarcest of resources.

Paul Saffo
Your mind is on vacation and your mouth is working overtime.

Mose Allison

Politics is the art of looking for trouble, finding it, misdiagnosing it, and then misapplying the wrong remedies.

Julius "Groucho" Marx

There are many theories that aren't ever wrong because they can predict anything.

Wolfgang Pauli

The greatest enemy of truth is very often not the lie: deliberate and contrived — but the myth: persistent, persuasive, and unrealistic.

John F. Kennedy

Love is the perception of individuals ... the extremely difficult realization that something other than oneself is real. ... It is in the capacity to love, that is, to see, that the liberation of the soul from fantasy consists. The freedom which is a proper human goal is the freedom from fantasy ... (from) the proliferation of blinding self-centered aims and images ... that is the realism of compassion.

Iris Murdoch

Compiled by Jeremy Klein
"General semanticists recognize that anger doesn't just happen; you make it happen by your interpretation of events."

SCREAM Before You Scream

JOSEPH A. DeVITO*

ANGER IS ONE OF the eight basic emotions identified by Robert Plutchik in his influential Emotions: A Psycho-Evolutionary Synthesis. It is also an emotion that can create considerable problems if not managed properly. Anger is emotional rage which varies from mild (just an annoyance) to intense (when you feel explosive). Accompanying anger are usually increases in pulse rate and blood pressure.

Although anger can cause problems, it is not necessarily bad. In fact, anger can be a self-protective mechanism, energizing your resources to fight or flee. Often, of course, anger proves destructive, when, for example, you allow it to obscure reality or to become a constant obsession with resulting harmful behavior.

General semanticists recognize that anger doesn’t just happen; you make it happen by your interpretation of events. Yet, events can contribute mightily: road repairs that force you to detour and you wind up late for an important appointment, or moths that attack your favorite sweater, or a water leak that ruins your carpet. People too can contribute to your anger: the driver who tailgates, the clerk who overcharges you, and the supervisor who ignores your contributions to the company. Outside events and other people may certainly put obstacles in your path. But it is you who interpret these events and people in ways that stimulate you to generate anger.

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Writing over a hundred years ago, Charles Darwin observed in his *The Expression of the Emotions in Man and Animals*: “The free expression by outside signs of an emotion intensifies it.... the repression, as far as this is possible, of all outside signs softens our emotions. He who gives way to violent gestures will increase his rage.” Darwin’s implied admonition was lost in the 60s and 70s when the suggested prescription for dealing with anger was to “let it all hang out,” “tell it like it is,” and “say what you feel.” Express your anger, you were advised, or risk it being bottled up and eventually exploding. But, more recent research — well summarized and argued by Carol Tavris in her *Anger: The Misunderstood Emotion* — has returned to Darwin and suggests that this may not be the best strategy. Expressing anger doesn’t get rid of it, it just makes it grow: Angry expression promotes anger which promotes more angry expression which promotes greater anger, and on and on.

A better strategy is to seek to reduce the anger and it is with this principle in mind that we offer some suggestions for analyzing anger and for communicating it.

**Anger Management**

Perhaps the most popular recommendation for dealing with anger is to count to ten. The purpose is to give you a cooling off period and the advice is not bad. A somewhat more difficult but probably much more effective strategy would be to use that cooling off period not for mindless counting but for mindfully analyzing and ultimately managing your anger. The procedure offered here is similar to those available in popular books on anger management but is couched in a communication framework. It’s called SCREAM for the major issues (that is, the major components of the communication process) that you need consider:

- **Self.** How important is this to you? Is it worth the high blood pressure and the general aggravation? Are you interpreting the “insult” as the other person intended or could you be misperceiving the situation or the intent? Is “insult” to you, the same as “insult” to your mother-in-law? Are you confusing factual with inferential knowledge? Are you sure that what you think happened really happened? Did you fill in the gaps with what might have happened, or other expectations?

- **Context.** Is this the appropriate time and place for you to express your anger? Do you have to express your anger right now? Do you have to express it right here? Might a better time and place be arranged?
• **Receiver.** Is this person the one to whom you wish to express your anger? Do you, for example, want to express your anger to your life partner when you’re really angry with your supervisor for not recommending your promotion.

• **Effect (immediate).** What effect do you want to achieve? Do you want to express your anger to help you get the promotion? To hurt the other person? To release pent-up emotions? To stand up for your rights? Each effect would obviously require a different communication strategy. Consider too what might be the likely immediate effect of your anger display. For example, will the other person also become angry? And, if so, is it possible that the entire situation will snowball and get out of hand?

• **Aftermath (long range).** What are the likely long-term repercussions of this expression of anger? What will be the effects on your relationship? Your continued employment?

• **Messages.** If you do decide — after this rather thorough analysis — to express your anger, what messages would be appropriate? How can you best communicate your feelings to achieve your desired results? This issue brings us to Anger Communication.

**Anger Communication**

Anger communication is not angry communication. In fact, it might be argued that the communication of anger should be especially calm and dispassionate. Here, then, are a few suggestions for communicating your anger, non-angrily.

1. Get ready to communicate calmly and logically — first relax. Try to breath deeply, think pleasant thoughts, and perhaps tell yourself to “take it easy,” “think rationally,” “calm down.” Try to set aside unrealistic ideas that might contribute to anger; for example, is what this person did actually so reprehensible, or was it perhaps just a selfish act of a frightened individual?

2. Examine your communication options. In most situations, there are lots of different ways to express yourself, so don’t jump to the first possibility that comes to mind. Assess your options for the form of the
communication — face-to-face? E-mail? Telephone? Similarly, assess your options for the timing of your communication, for the specific words and gestures you might use, for the physical setting, etc.

3. Consider the advantages of delaying the expression of anger. For example, you might write the e-mail, then send it to yourself and wait until the next morning to read it again, instead of sending it immediately. This will keep open the options of revising it or not sending it at all.

4. Remember that different cultures have different display rules — norms for what is and what is not appropriate to display. Assess your culture as well as the cultures of the other people involved, especially their display rules for communicating anger.

5. Apply the relevant skills of interpersonal communication. For example, be specific, use I-messages, avoid allness and polarized terms, and in general communicate with all the competence you can muster.

6. Recall the irreversibility of communication. Once you say something, you’ll not be able to erase or delete it from the mind of the other person.

These suggestions won’t solve all problems involving anger. Yet, they may help — a bit — in reducing some of the negative consequences of anger and perhaps of the anger itself.

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"Longevity has heralded a new era of shared opportunities for inter-generational time-binding."

AGING AND TIME-BINDING IN THE TWENTY-FIRST CENTURY

RISHA W. LEVINSON, DSW*

THE CONCEPT of “time” has a wide range of meanings and is applied to highly diverse settings. For example, prisoners serve time, musicians mark time, idlers pass time, referees call time, historians record time, and score keepers keep time (Greenberg, 1990). The Scriptures maintain that “to everything there is a season — a time to be born, and a time to die, a time to kill and a time to heal, a time to love and a time to hate … ” (Ecclesiastes, 3). Thus, time is assigned to a specific task or a predetermined event in accordance with a specific purpose. This article will explore different ideas related to how seniors can improve the way they spend time and maximize their positive impact on the next generation — in other words, how seniors can become better time-binders.

An Aging Society —
Socio-Demographic Trends and Time-Binding Opportunities

The general semantics formulation, time-binding, concerns our human ability to use language and other symbols to store and pass on knowledge, so that each new generation can benefit from earlier discoveries and start from where the previous generation left off. The concept of time-binding has assumed special significance in view of the unprecedented expansion of the aging population. Demographic forecasts predict that the aging population will continue to increase significantly in the twenty-first century. America is steadily growing older as more people are living longer and more are celebrating their centenarian birthdays. It is predicted that by 2030, one out of every five persons (20%) will be over 60 years old (Hooyman and Kiyak, 1996). Moreover, as the 75 million “baby boomers” who were born between 1946 and 1964 “come of age,” the number of older persons will significantly increase into what has been described as an “age wave” and a “gerontocracy.”

Another significant demographic trend is the increase of multi-generational families, which may include four- and five-generation families. This growing phenomenon is a consequence of extended longevity, in addition to higher divorce rates and remarriages, since the longer the members of a particular generation live on, the more likely it is that they will be living among subsequent generations. Consequently, opportunities for time-binding will multiply as younger and older generations engage in time-sharing.

In our post-industrial (or post-modern) society research no longer focuses exclusively on the pathology associated with aging, nor exclusively on what is possible despite aging. It also investigates what is possible because of aging, given the potential and opportunity for creativity during the advanced years. There is no denial of the “problems” that occur in later life. However, research is focusing more on the possibilities, the strengths, and the opportunities of inter-generational sharing.

Longevity has heralded a new era of shared opportunities for inter-generational time-binding. Older volunteers are engaged as readers and storytellers in elementary schools, as career counselors and tutors in high schools, and as associates in colleges. Older and younger volunteers share hours of community service in local neighborhoods as well as in health facilities. Children are teaching English to their newly arrived ethnic grandparents and they provide instruction in computer science to their parents. Grandparents are increasingly assuming responsibility for childcare in working families as well as in homes of divorced parents. The proverbial “empty nest” is intermittently
filled with adult children returning to live with aging parents or grandparents. These time-sharing experiences provide transmission of inter-generational values and culture that extend beyond the lifetime of individual family members.

Cultural Attitudes Toward Aging

In various traditional societies such as Asian and Biblical cultures, older persons tend to be regarded with reverence, and are often respected as "visionaries" and "persons of wisdom" in the transmission of culture from generation to generation. In contrast to these positive and respected roles of older persons, a bias against aging persists in our modern society, which Robert Butler (1969), renowned geriatrician, identified as "ageism." This type of negativism and rejection of older persons is based on a form of social discrimination and prejudice against older adults. Ageism stems from a belief that aging causes people to become dysfunctional and incapable of productive work and retraining. While current legislation formally prohibits age discrimination, ageism tends to persist in subtle as well as in overt situations.

One society's response to ageism has been the development of a vast multimillion dollar industry that is aimed at helping people "look younger" and to "melt away the years" with the aid of face lifts, miracle diets, liposuction operations, hair restoration, extensive and expensive "anti-aging" cosmetics, and countless devices and remedies to "restore that youthful image" (Hooyman, 1996).

A Look at Labeling

Benjamin Franklin wisely observed, "What signifies knowing the names if you know not the 'nature of things?'" How we determine and label who is "old" seems problematic and contradictory. In observing nature, one does not necessarily refer to natural processes as "aging." We do not say a sunflower grows older. We can say that it "ripenes," it drops its seeds, and the cycle goes on within the "ripening process." Therefore, might we call the process of humans moving through time a process of "ripening"? (Bergen, 1997)

There is no shortage of terms used to describe older persons. Some generally acceptable terms refer to older adults as "retirees," "senior citizens," "golden agers," and "pensioners." However, other labels can carry a sharp sting, for example, "geezer," "old hen," "fossil," or "old fogey." A new set of descriptions has evolved that tends to view older persons as "cool," and "really with it." We also see more commercial images of well-tanned older
people who play tennis, dance, jog, work out or lift weights, and are "sexually active."

The degree of aging of older persons may also be assessed by one’s capacity to operate with various degrees of bodily movement, as identified in the "go-go theory of aging." The initial "go-go" condition may over time become "go slow," followed by "slow go," "cannot go," and eventually "no go." (Shore, 1998). And how about the value-laden, controversial term that labels older adults as "chronologically gifted"?

Beyond Categorizing the Human Life Span

Traditionally, the span of a lifetime has been divided into a variety of sequential time periods. For example, in Shakespeare’s play, *As You Like It*, Jacques declares, “All the world’s a stage, and all the men and women are merely players.” After describing six discrete stages within a lifetime, Jacques concludes, “the last scene of all ends with second childishness and mere oblivion, sans teeth, sans eyes, sans taste, sans everything.”

*Society should enable mature persons to plan at least twenty more years of meaningful involvement.*

Within the human life span, sequential periods of time may traditionally be identified as "childhood," "adolescence," "adulthood," and "old age." Psychology Professor G. Stanley Hall (1922) invented the term "senescence" to identify the years of later life. Hall held that society is on the point of crisis because of the forthcoming demographic certainty that persons will live longer and retire earlier than their forebears. Hall claimed that the result of this newly anticipated longevity will cause society to suffer from "boredom and unproductivity." As early as 1922, Hall rejected the so-called Scriptural life span of “three-score and ten years” and prophetically proclaimed that society should enable mature persons to plan at least twenty more years of meaningful involvement (Cole, 1992).

In view of the extended longevity we are currently experiencing, many older persons may be seriously concerned about the meaningful and satisfying use of so-called “free time” or “leisure time.” In Moody’s book, *The Abundance of Life* (1988), the author laments the voids and discontent that can be inherent in “the abundance of time” for many older adults. Moody suggests that to engage in life more meaningfully, we abandon the “linear life
plan," which assigns specific tasks to fixed time periods, such as education
and training in youth; work and employment in the middle years; and unde-
finite "leisure and comfort" in later life. Moody endorses the "cyclical life
plan," which involves reduced schooling and training during youth, more
flexible retirement plans, and more options for education, work, employment,
and leisure throughout one's adult life. In other words, Moody's advice is to
"throw away the traditional clock" with its fixed time periods for specific
tasks, and thereby enjoy a more flexible and rewarding life (Moody, 1988).

According to psychoanalyst Eric Erikson, the blueprint of human emo-
tional development throughout life is summarized with the "Eight Stages of
Man." Erikson suggests that life unfolds in eight stages of emotional growth,
each one featuring a key emotional issue or developmental task that builds on
each of the prior stages and establishes the foundation for continued emo-
tional growth.

Erikson mapped out the psycho-social issues for infancy, early childhood,
school age, adolescence, and young and mature adulthood. The key issues in
the remaining two stages within a lifetime are the achievement of generativity
over stagnation, and ego integrity over despair. Generativity involves a sense
of care and concern for future generations rather than stagnation in the past. If
we resolve all the earlier tasks of adulthood, and if we succeed in looking out-
side ourselves and caring for others through generativity, we may move to the
final stage of ego integrity. This stage is aimed at establishing a sense of
meaning in one's life, rather than having feelings of despair or bitterness that
one's life has been wasted and unfulfilled.

Creativity and Aging

Accomplishments of persons in their later years are well-known and usu-
ally earn public acclaim. Creativity, as a powerful inner resource, may find
expression in the early decades of the twenties and thirties within one's life-
time. However, the ability to be creative and contribute to the culture may ac-
tually peak in the later years. A book by Dr. G. D. Cohen, The Creative Age,
is filled with references to older persons who have been highly creative in
their advanced years. For example, Michaelangelo painted the striking fres-
coes in the Vatican chapel at the age of eighty-nine. Benjamin Franklin in-
vvented the bifocal lens when he was seventy-eight, and Frank Lloyd Wright
completed the Guggenheim Museum when he was ninety-one years old. At
the age of 104, a retired teacher, Sarah Delany, collaborated with her 102-
year-old sister, Dr. Bessie Delany, a retired dentist, to write a book titled
Having Our Say: The Delany Sisters' First 100 Years. This book became a New York Times bestseller and subsequently, a Broadway hit.

These impressive accomplishments of older persons, which are highly lauded and applauded by the public, are referred to by Dr. Cohen as exemplifying the “Big C” in Creativity. As a psychiatrist and geriatrician, Cohen maintains that while the “Big C” is applicable to the creativity of selected older persons who have gained well-deserved recognition, the “little c” in creativity is universally applicable to “all” older adults in their personal lives. Cohen argues convincingly that “every” older person is capable of discovering his or her own creativity, be it a choice of a hobby, a new career, arts and crafts, new relationships, revitalized interests, a challenging new job, or involvement in volunteerism. Cohen’s premise is that “all” older persons are endowed with the human urge for creativity. The experience of advanced years provides a unique combination of creativity and life experiences that promotes a dynamic dimension for inner growth. Cohen refers to creativity as “an equal opportunity,” which does not belong solely to the acclaimed artist’s domain. He concedes that health complications are part of life for many older people, and that the risk of disabilities increases with age. However, he asserts that the creative spirit can find expression despite such obstacles (p.14). Cohen insists that the more mature years yearn for “something more” than the quantity of time. It is the desire for a “quality of time.” As another writer on creativity says, instead of the lament of being “over the hill,” the universal challenge for creative expression in life is the tantalizing prospect that “there is another peak to climb” (Czikszentmihalyi, 1996).

Aging and Time-Binding in the Twenty-First Century

With increased longevity, and the chance to be creative in advanced age, older persons have an opportunity to become more valuable time-binders, contributing to a richer and more advanced human culture. Society and individuals can help older persons take that opportunity by encouraging them to engage in creative pursuits and to interact more with younger people. Such efforts would be beneficial to all parties involved and, barring catastrophic events, make the twenty-first century the most notable so far in the history of human time-binding.
REFERENCES AND FURTHER READING


During the past year, our members gave generously to help with our educational mission. Many contributed more than the basic $55.00 membership, while others donated royalties from the publication of their writings. Volunteers gave many hours of their time to assist with ETC and with our membership program. To those whose names appear below, as well as our authors, editors, volunteers, and the anonymous members of the ETC peer review committee, the Directors and staff of ISGS offer our grateful thanks.

Australian Society for General Semantics
Dean Alterman
Leonard S. Amada
Arthur E. Bayce
Irwin Berger
Sanford I. Berman
George Black
Winton A. Bristol
Kenneth F. Brown
Peter Bulka
Burke Marketing Research
Edward J. Burns
Richard K. Carlson
C. Leslie Charles
Torkil Christensen
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Lida Cochran
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David Cox
Pamela Cawley
Ross Dagata
William Dallmann
Jeff and Becky Davies
Walter W. Davis
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Michael A. Griffin
William E. Haase
Gordon K. Haist
Ronald A. Handlon
George Hansen
Earl Hautala
Gary D. Henson
Stanley Herzstein
Letter to the Editor

Dear Editor:

In her excellent article on Anatol Rapoport in the Fall 2002 issue of ETC, Carmen Clark says that Rapoport was taken aback on meeting Alfred Korzybski and Hayakawa at a seminar in Chicago when Korzybski said, “You have read Science and Sanity ... how many times?” Readers of ETC may remember that on page 11 of his book, Korzybski wrote, “My earnest suggestion, backed by experience, to the reader is to read the book through several times, but not to dwell on points which are not clear to him. At each reading the issues will become clearer, ...” He also said, “Superficial reading of the book is to be positively discouraged, as it will prove to be so much time wasted.” Thus Korzybski’s comments to Rapoport should be considered in that light.

I would also point out that most of the books on general semantics that we regard as the most successful or classic were written by men who had learned much of their general semantics directly from Korzybski and Science and Sanity, e.g., Hayakawa, Lee, Johnson. I don’t know, but perhaps the smaller numbers of good textbooks since then could be partly attributed to the failure of many educators in the field to thoroughly learn the subject from the original sourcebook.

JAMES D. FRENCH
EDITOR-IN-CHIEF
GENERAL SEMANTICS BULLETIN

Is there a significant difference between reading a book “many times” and an in-depth study of it in some other way? Reply to the Editor of ETC, P. O. Box 728, Concord, CA 94522, or isgs@generalsemantics.org. — Ed.
CONVENTIONAL WISDOM in the West holds that the senses are "windows on the world." We look out through our eyes, hear what is happening with our ears, touch what is near to us through touch receptors on the skin, taste with our tongue, smell with our noses. Normally we speak of five senses, but the list sometimes gets longer, including an interior "proprioceptive" sense, the mind as a sense organ, and perhaps telepathic or precognitive senses as well.

In the Western view, our senses are mainly receptors of stimuli from outside the body. The metaphor of the window is commonly applied — information enters our bodies through the windows of the senses. In John Locke's classic formulation of this metaphor, the senses are the windows which let light into our minds, which otherwise would be dark, empty rooms. Locke said there was nothing in our minds which was not first in our senses. (See Leary, 1990, p.36.)

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This metaphorical construction of the senses underlies Western science's claims for valid knowledge. Scientific data must be accessible through the senses, or through instruments which are extensions of the senses. Any data not accessible through the senses is suspect, not objective. Therefore the senses are assumed to be relatively passive receivers of signals from outside.

Nothing shows up the shortcomings of one metaphorical system better than a different metaphorical system.

For many years I had been aware that this conceptualization of the senses was metaphorical. I still assumed that it pretty much told the complete story. But then I started studying Hindu and Buddhist conceptions of the senses, and encountered a completely different system of metaphors. Nothing shows up the shortcomings of one metaphorical system better than a different metaphorical system.

In Eastern thought, the senses are active, not passive. They do not bring us objective data about an outside world, instead they assault our minds with illusions. The Hindu Bhagavad Gita describes the senses as "unruly." To truly understand reality, the philosopher should draw in his/her senses like a turtle withdrawing its limbs into its shell (Bhagavad Gita Chapter II).

The Hindu account of the mind also differs from Locke's dark room metaphor. In Hindu philosophy, the mind is illuminated from within, by the true Self which is the spark of the divine. This interior illumination then allows the mind to "see" the stimuli pouring in from the senses. The senses are not windows letting light into a dark room of the mind. Rather the spark of the divine is like a searchlight allowing the mind to see the darkness of the senses. (See Mahadevan, 1985, p.4.)

The Buddha was especially eloquent about the dangers of the unrestrained senses. The senses produce desire. Desire leads to attachment. Attachment leads to pain and suffering. The Buddha's message was all about how to eliminate suffering. Therefore he emphasized the need to "guard the sense-doors," and avoid the "snares" of sense-pleasures (see Homer, 1974).

The idea of pleasure as a snare, or a trap, is not unknown in the West. Aldous Huxley (1958) and Neil Postman (1985) have pointed out the dangers of being distracted by too many pleasures. But in general Western culture takes a positive attitude toward sense-pleasures. Our consumer economy is built upon it. We inculcate sense-pleasures and their accompanying desires in
our very young through exposure to media. The message of fulfillment through sense-pleasures is daily drummed into us by the countless commercials we see and hear. And while we know that drinking Diet Pepsi will not really make us attractive to bikini-clad members of the opposite sex, we tend not to doubt the underlying assumption: sense-pleasures are good, they can bring us happiness.

To the Buddha, sense-pleasures bring us only temporary pleasures, followed inevitably by the pain of withdrawal. These temporary pleasures infatuate us, leading us to crave more, and we ultimately become addicted to our cravings. The Buddha says the Evil One can do as he wills with such a person. Therefore, the Buddha counseled a guarded attitude of non-attachment, so we could encounter sense-pleasures without being enslaved, infatuated, or addicted to them. (See Horner, 1974, p.20.)

Ever since reflecting upon these Eastern metaphors for the senses, emphasizing their active aspects, I have been questioning the Western model. When we look at something, do we do more than just receive impulses? Might we send out a “beam” from our eyes? How many times have we “felt” that someone was looking at us? How many times have we noticed that when we look at someone else, they seem to react in some way?

Perhaps our senses are both windows and searchlights. Both microphones and speakers. Both receivers and senders. More like radar, which sends out impulses and records when they bounce back. New metaphorical systems are needed to describe this complexity. That is a task for another day.

REFERENCES


The First Verbal Level: Description

By using language, we can assign symbols, in this case *words*, to our perceptions and sensations. This enables us to describe our experiences to ourselves and others. Hayakawa wrote, “Human beings use extremely complicated systems of ... noises called language, with which they express and report what goes on in their nervous systems.” (2, p.9)

In the structural differential diagram, we can represent this level of words by attaching a tag to a few of the strings that hang from the object level disk

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(Figure H). For Korzybski, this tag referred to the "descriptive" level of abstracting. (3, p.392)

We remember from Part I of this article that in moving from the process level to the object level, a human nervous system cannot abstract most of the process level 'characteristics.' Those 'characteristics' left out are represented by the process level parabola's free-hanging strings that do not connect to the object level disk.

Notice that the disk also has free-hanging strings. These indicate that in our abstracting from the object level to the descriptive level, some aspects of a person's 'sensations' about an object are left out of the description. Therefore, the tag represents a description that can account for only some details or features of something. As Korzybski put it, "The 'object' has more characteristics than we can include in the ... definition of the label for the 'object.'" (3, p.414)

To put it another way, you cannot know or describe all the details of anything, not even an ordinary object, such as an apple that you hold in your hand. (3, p.471). In this process, when we move from one level of abstraction to another, we abstract from the object level of firsthand sensory experience (seeing, feeling, and tasting the object we call "apple") to the verbal level of
words (thinking, speaking, or writing a description of the "apple"), which are about that experience, and are not the experience itself. (See Note 1.)

This abstracting from experience (disk) to words (tag) is represented in the diagram by having only some strings from the disk actually connect to the tag. Many details of the perceived object are left out of descriptive statements about the object. Korzybski wrote, when explaining how to train children in consciousness of abstracting:

We ... may start with any familiar daily-life objects and a microscope or magnifying glass..., [and] ask them to tell us 'everything' or 'all' about the ... apple. When the children have exhausted their ingenuity in telling 'all' about the apple, we should not be satisfied. We should make them doubt, urging them that, perhaps, they did not tell 'all' about it, using the word 'all' continually. The term 'all' should be stressed and repeated to the point of the children's being thoroughly annoyed with the term.... When the children have become thoroughly convinced of the non-allness and the impossibility of 'allness,' we are ready to explain to them what the word abstracting means." (3, p.471-472)

Your Map Is Not the Territory

Korzybski often used the terms map (a form of representation) and territory (that which is represented). These terms emphasize the difference between the non-verbal level (territory) and the verbal level (map). (3, p.58) We use language to create map-like descriptions of the territory of our 'reality.' When we create maps that are similar to the territory, our talk fits better with the facts of the situation. This can help us cope with 'reality' more successfully. Chisholm wrote:

If my territory has certain relations, if it is put together in a certain order, and I can build a symbolism [map] which has similar relations and a similar order, then what I deduce in the symbolism will be more accurate, more true to the territory, and I will get a predictability which is greater than if my symbolism is not similar in structure to the territory. (5, p.37)

Weinberg noted:

The words are maps, and the map is not the territory. The map is static; the territory constantly flows. Words are always about the past or the unborn future, never about the living present. The present is ever too quick for them; by the time the words are out, it is gone. (14, p.35)

When our maps do not fit the territory ... we prepare ourselves for a world that isn't there. (14, p.29)
Pitfalls of Language Use

The map is not the territory, and the word is not the thing; and, as Hayakawa said, there is "... no necessary connection between the symbol and that which is symbolized." (2, p.22) Because we have a word for something does not mean that it actually exists. For example, we have the word, *elf*, but not a real elf.

The cautionary phrase "the map is not the territory" warns us that if we carelessly label or describe something, it can lead us to make a false assumption and jump to the wrong conclusion. How many people have been killed by an "unloaded gun"?

No description can cover all the facts. As we have seen in the diagram, some strings hanging from the object level disk do not connect to the descriptive level tag; those free-hanging strings represent what gets left out — *a map cannot represent all details of a territory*.

For example, someone may observe a particular apple and then describe it as a "red, baseball-size object." But let's say that this apple has a worm in it; the worm is part of the territory. In abstracting from the observation of the apple (territory) to create the description (map) of the apple, if a person is not observant and does not notice the worm, it will be *left out* of the map.

Korzybski wrote: "The number of characteristics which we ascribe by definition to the label is still smaller than the number of characteristics the object has." (3, p.387)

The descriptive level tag actually represents an abstraction of an abstraction. When we say "apple," we are already at the *second* level of abstraction. Abstraction$_1$ is the experience; abstraction$_2$ is the description. (3, p.389)

To summarize, whatever we may say about the apple is only an incomplete map of the territory. Our knowledge and descriptions are based on limited information. Therefore, we should not assume that we have *all* the facts when we draw a conclusion or offer an opinion. In this way, we can avoid many unnecessary arguments, accidents, and other unpleasant experiences (such as biting into an apple and getting a "worm welcome").

The Animal Object Level

Now we will add a disk to the diagram to represent how an animal abstracts (Figure I). Korzybski called this the "animal object" disk. (3, p.390) The animal object level disk and the human object level disk represent the same level of abstraction — the level of firsthand sensory experience.
Both humans and animals can perceive objects in their surroundings. However, the structural differential indicates that the human brain and the animal brain are structurally different, resulting in different language-related functions — differences between what a human brain does and what an animal brain does in terms of abstracting at the verbal level of words or symbols.

The absence of strings connecting the parabola to the animal object disk represents Korzybski’s assertion that an animal cannot know that it abstracts. (3, p.395) Pavlov’s studies in classical conditioning showed that animals have limits in going to higher levels of abstraction (for example, a dog can learn to associate the sound of a bell with getting food, then later learn to associate a buzzer “symbol” with the bell “symbol,” etc., but a dog cannot learn an indefinite number of associations). (15, 4) The absence of tags below the animal object disk represents the observation by humans that animals have a limited ability to abstract to higher and higher verbal (symbol) levels. Apparently, an animal’s language ability allows it to ‘talk’ about some things that it experiences (a dog barking when a stranger approaches), but animals do not have much ability to ‘talk₂ about their ‘talk₁’. It seems that animals do not have the human ability to build new abstractions on top of previous abstractions, potentially indefinitely. (3, p.392)

Compared with the limited abstracting ability of animals, the abstracting power of humans seems to have the potential to go on indefinitely. It has en-
abled us to develop complex languages that we use to communicate and, hopefully, cooperate with each other in building a better civilization than we had in the past. We created the radio, telephone, television, newspapers, journals, books, and the Internet to communicate our activities to others. We created schools and libraries to teach future generations about the cultures and technologies developed by previous generations — this is time-binding in action. (1, pp.186-187; 3, p.395)

The Second Verbal Level: Inference

We can make a statement based on a description (the first tag), which is represented by a second tag (Figure J).

If the first descriptive level tag represents "apple," then the second tag could represent the statement, "This apple will taste good if I eat it." This is an inference, a guess (8, p.87). This statement is not based on sense perception (I have not yet tasted this apple). Hayakawa warns that ... "the making of inferences is a quick, almost automatic process." (2, p.36) Those who jump quickly to conclusions (inferences) seem to be unaware of the difference between a description and an inference.
More tags added to the diagram could represent more general statements, with the last tag representing the statement, "Everyone should eat apples," which is a broad generalization, a conclusion, an opinion, or a belief at a high level of abstraction. (Figure K)

It is always possible to make a new statement based on a previous statement. People can talk about their talk about their talk about their talk. For example, a new statement can be an elaboration, a criticism, a question, or a broader generalization about a previous statement.
Opinions, Beliefs, and Theories

Eventually, this chain of tags, representing higher and higher levels of abstraction, leads back to the process level parabola, as shown in the old photograph in Figure L (3, p.398). How we perceive 'reality,' how we think about it, and what we say about it can influence our behavior in coping with the challenges of daily life. The 'final' tag represents our highest level inference (such as a belief, opinion, conclusion, theory) at a given date. We cope with 'reality' by projecting our highest level inferences (maps) onto our 'reality' (territory). Our highest level inference (our "best educated guess," or our best theory) is what we might call "the sense we have made of a situation." Our behavior in the territory is often based on this best-guess map. (See Note 2.)

Our "As If" Formulations

Our highest level inferences about 'reality' can be called "as if" formulations, which constitute the best knowledge we have. (5, pp.105-106) Although they cannot be certain about what 'reality' is, car drivers can act as if
driving safely will reduce the chance of an accident; and restaurant cooks can act as if washing their hands frequently will help them keep dangerous microorganisms out of the food they prepare.

Earlier, I said that we must be vague in describing the process level of ‘reality.’ This vagueness is necessary because even our best and most advanced scientific knowledge about the nature of the process level is only an “as if” formulation (a theory) that matter is composed of atomic and subatomic structures. (5, p.105; 2) We cannot directly experience ‘reality’ at the process level; we can acquire some knowledge about it only indirectly. The human nervous system (even when aided by scientific instruments) is our inescapable, limited frame of reference for what we can discover about the process level. Our inferences about the subatomic structures of the process level are a function of how our nervous systems transact with it. All of our knowledge about anything results from our nervous systems transacting with some ‘energies’ of the process level. Our transacting nervous systems construct knowledge at successively higher levels of abstraction (descriptions, inferences, theories, etc.). Each level of abstraction represents a different level of knowing. (8, pp.83-84) Such knowledge is neither objective nor complete; however, it is still useful, so we are justified in projecting scientific “as if” formulation maps onto the process level territory (‘reality’). Weinberg gives us the justification for acting on our scientific “as if” formulations:

Why make these inferences [“as if” formulations] if they cannot be proved to be a fact? Because by making them we gain control of the environment. By acting as if they existed we build drugs, metals, radio sets, and hydrogen bombs. We believe in atoms because in the final analysis, it works. (14, p.60-61)

The structural differential diagram in Figure M shows three and a third tags connected to the object level disk, with an arrow leading from the last tag (broken off to indicate that the tags could go on and on) back up to the process level parabola. The arrow leading back to the process level parabola indicates that a person’s highest level abstraction (“as if” formulation) at a given date, is projected onto ‘reality,’ and the person acts as if ‘reality’ conforms to that formulation. (4) The sum total of our various levels of knowledge about ‘reality,’ at a given date, include our “as if” formulations, which we use to navigate through daily life.
Consciousness of Abstracting

When people are not aware that they abstract, they assume that their "as if" formulation is 'reality' — for them, there are no levels of abstraction: The word and the thing are the same; the description and the inference are not different kinds of statements; opinions, guesses, beliefs, and theories are all the same — just words. For these people, their words are the only facts or truth of the situation. In contrast, people who are aware of abstracting can distinguish between levels of abstraction and they recognize the limitations of higher level abstractions (inferences, guesses, conclusions, beliefs). They will recognize a margin for error in their talk, and to reduce the amount of that er-
ror they will qualify their statements to make their talk more accurately correspond to what they really know. They keep their language on a short leash—they don’t let it run and jump to conclusions that are unjustified by the facts of a situation. Korzybski’s primary purpose in developing general semantics was to help people acquire consciousness of abstracting.

“As If” Formulations in Action

We develop or acquire many different “as if” formulations that we use in different situations in ‘reality.’ It is important to realize that our “as if” formulations, whatever they are, have a strong influence on our perceptions (7, tape 104-A), and the nature of these perceptions influences the way we will react in a particular situation.

As an illustration, I have created this story about twin sisters, Diana and Lisa. Let’s say that, although they are alike in many ways, Diana has had only good experiences with dogs, and Lisa has had only bad experiences with dogs. So, Diana likes dogs in general, and Lisa fears dogs in general. When they are together, if a strange dog gets near them, Diana feels happy because she expects that this dog will be friendly and fun to play with. But Lisa feels scared because she expects this dog to bite her. Diana wants to pet the dog, and Lisa wants to run away from the dog. (14, pp.55-56) These contrasting attitudes (liking dogs vs. fearing dogs) are different “as if” formulations.

If we want to minimize unnecessary bad experiences, we should make our mental maps fit the territory of ‘reality’ as well as possible. Hayakawa noted: “If a child grows to adulthood with a verbal world in his head which corresponds fairly closely to the ... ['reality'] that he finds around him in his widening experience, he is in relatively small danger of being shocked or hurt by what he finds, because his verbal world has told him what, more or less, to expect. He is prepared for life. If, however, he grows up with a false map in his head — that is, with a head crammed with error and superstition — he will constantly be running into trouble, wasting his efforts, and acting like a fool. He will not be adjusted to the world as it is ...” (2, p.27)

In the introduction to this article, I could not properly explain the meaning of ‘reality,’ but now I can. From a scientific point of view, we recognize that the process of perceiving ‘reality’ involves abstracting—the nervous system selects, translates, and interprets. We cannot be objective, all-knowing, and absolutely sure when we talk about ‘reality.’ The perception of an object in ‘reality’ requires an observer and something observed. (3, p.61) A person’s knowledge of ‘reality’ is ‘filtered’ through the person’s nervous system (sense organs and brain), which abstracts and then interprets its abstractions.
One observer's nervous system is not identical with any other in how it deals with the 'energies' of 'reality.' Each observer abstracts a different sample of these 'energies' — for example, the raindrops that fall on my head are not the exact same raindrops that fall on your head. My life history of experiences is different from yours. (8, pp.81-82) 'Reality' results from a relationship between unique observers and their experiences of a unique combination of a few 'energies' of the process level. A father cannot experience the life of his daughter as she does. For example, she feels the pain of her toothache, but the father cannot feel her pain.

There is no factual basis for assuming that there is some kind of 'absolute reality,' which is made up of things possessing objective qualities of color, weight, goodness, badness, beauty, ugliness, etc. Such qualities are the result of the transaction between a nervous system and some 'energies' impinging on it. We cannot get outside of our own nervous systems; therefore, we cannot know what objective 'reality' is. We can know it only in terms of what sense our abstracting nervous systems can make of it. For more on this topic, see Weinberg (14, pp.55-57 & 59-61) or Bois (8, pp.34 & 48-50 & 82).

Earlier, I said that I would explain why we cannot perceive 'reality' with absolute objectivity. Now, I can provide that explanation. The structural differential illustrates a circularity that is important to recognize. Lower level abstractions (descriptions) influence high level abstractions (inferences), which influence very high level abstractions (theories, attitudes, generalizations, beliefs, 'as if' formulations), which influence future abstractions at the lowest level (perceptions), which will affect moderately low level abstractions (descriptions) and so on. (3, pp.444-445)

This means that what children learn about 'reality' will tend to determine what they notice about 'reality' as they grow up. This will influence how they interpret 'reality' in terms of what they think is right, wrong, beautiful, ugly, important, unimportant, etc. These interpretations will determine their behavior to a great extent. Through the process of "selective perception," humans tend to notice some aspects of 'reality' and fail to notice other aspects. (16, p.240) Sometimes, this takes the form of people noticing and accepting aspects of 'reality' that support their beliefs and ignoring or denying aspects of 'reality' that contradict their beliefs. (6, pp.50 & 65) However, this circularity of the structural differential also means that we can revise our beliefs or theories as a result of new information received at the object level — if we are inclined to let a new perception of 'reality' (the territory) influence our beliefs (maps). We can also use the diagram to illustrate the relative importance of the various levels of abstraction. In life, the process level is more important to
human survival than the object level; the object level is more important than the descriptive level, etc. Korzybski explained it this way:

Obviously, if we are hungry and we want to eat an apple, our belly actually wants the process apple, not the object apple. It would be possible to build a synthetic apple that would look like a real apple, smell like it, would even eventually taste like it and yet there would be no food in it. So the process is more important as far as life is concerned ... than the object which we see, handle, taste, and whatnot .... We can go farther in the same vein, namely, we go to the verbal level, we may call it the descriptive level ... In a great many instances, particularly when we deal with our psychological reaction ... we pay more attention to the word than we pay to the ... silent levels behind the label. (4)

Concerning higher level abstractions, Korzybski wrote:

... the reliability of inferences depends on the reliability of the descriptive premises, and ... description is more reliable than inference. (3, p.479)

Weinberg noted:

The verbal level, with its plotting, planning, theorizing, predicting, operates in the final analysis for the sake of the non-verbal [object level] and not vice versa. This is one reason the general semanticist assigns more value to this level than to the verbal level. This is not to say that the verbal level is valueless — far from it. It is extremely important, a level of abstraction achieved only by man. It is his unique and distinguishing characteristic and the foundation of civilization. (14, p.58-59)

Quality of Transition

By themselves, descriptions are primarily informative, not directive — they do not provide a direction or purpose for action. (13, pp.272 & 276-277) Generally, actions follow from conclusions related to what a person believes he wants or needs.

After recognizing that we often go to higher levels of abstraction to deal with ‘reality,’ it is important to recognize how we get to the higher levels. The danger in arriving at an incorrect conclusion lies in what I call poor “quality of transition” between levels. The term “quality of transition” refers to my idea that awareness of levels of abstraction is not necessarily enough to lead one to the right conclusions. To arrive at correct or reasonable conclusions, we need to have good quality of transition, which requires 1) con-
consciousness of abstracting (recognizing the different levels of abstraction), and 2) awareness of how well we make the change (transition) from one level to the next higher level. I will explain how this idea of "quality of transition" applies at each level of abstraction between the process level and the 'final' conclusion level.

Although we have some control over which 'energies' of the process level of 'reality' we allow to impinge on our nervous systems (for example, moving into the shade when it gets too hot in the sun), we have little control over how our nervous systems abstract, translate, and interpret these 'energies.' Between the process level and the object level, quality of transition is determined by how well our senses and nervous systems function. For example, I could say that quality of transition from the process level to the object level is better for a person with excellent hearing than it is for a person with a hearing loss.

For practical purposes, our concern for good quality of transition begins at the object level. Good quality of transition in abstracting from the object level to the descriptive level requires precise thinking and attentive self-reflection. For example, answer this question: "Does my description accurately represent what I saw?" If not, make your description more basic. Just report the observed facts, the sequence of actions, or relationships between things, as objectively as possible. Try to minimize the tendency to project your own attitudes and biases on the event you observed.

In abstracting from the descriptive level to the inferential level, ask such questions as, "How likely is it that this inference (guess) is correct?" "What other inferences could be possible explanations for what I observed?" "Am I stating my inference as a possible or likely explanation rather than as a certainty?" If not, state your inference as one possible explanation for what you observed.

In moving from the inferential level to the conclusion level, ask, "Do I have enough evidence now to come to a conclusion, or should I wait for more information?" "Is my conclusion stated in a way that reflects my awareness that my abstractions may be inaccurate and that new information could make this conclusion incorrect?" If not, then rephrase the conclusion by including a qualifying expression: "As far as I know...," "It seems likely that...," "I'm inclined to believe that...," "I imagine that...," or "It could be that..." Do not state conclusions or beliefs as if they are absolutely true or absolutely final.

Korzybski reminds us, "Whenever anyone says anything, he is indulging in theories." (3, p.279) Often it is reasonable to have strong convictions about something, but be aware that your conclusions could be inaccurate because,
after all, they are abstractions from your previous abstractions. Be flexible and reasonable. Consider other possibilities or different points of view. Be open to feedback and be willing to change your mind in light of reliable new information.

Above, we discussed how to move with awareness from one level of abstraction to another. Confusing one level of abstraction with any other level — for instance, believing that your inference is an unbiased description of fact — is what Korzybski called the error of “identification.” (3, Chapter 25)

When people have learned to be conscious of abstracting, they become less likely to confuse levels of abstraction. Several authors have discussed this problem of identification (2, 5, 7, 8, 13, 14).

When we realize that making sense of the world around us involves the process of abstracting from lower levels to higher levels, we may ask how we can most skillfully make the transition from one level of abstraction to the next. For example, if we create an accurate description (lower level abstraction), we can make a reasonable inference (higher level abstraction). This is good quality of transition. However, if we are not observant and we fail to notice important details, we may carelessly describe something and then build a faulty inference based on our inaccurate description, and then come to the wrong conclusion. This is poor quality of transition.

I regard the idea of good quality of transition as an important aspect of scientific method. For a discussion of scientific method, see Johnson. (13, pp.83-86)

A fundamental difference between the thinking of “science-oriented” individuals and those without such an orientation is that scientific thinkers generally have a greater consciousness of abstracting and they achieve a better quality of transition between levels of abstraction. These two factors are basic elements of the language of science and the language of sanity. (13, pp.69 & 227) I think this is why Korzybski chose “science and sanity” as the title of his book. (8, p.xxx) I regard general semantics as a science-oriented educational discipline intended to help us improve our thinking and living skills.

SUMMARY

We can use the structural differential diagram to train ourselves in consciousness of abstracting. According to Korzybski:
[Through this training] ... we become aware that characteristics are left out in the process of abstracting by our nervous systems, and so we become conscious of the possibility that new factors may arise at any time which would necessitate a change in our generalizations. (3, p.li)

To survive, we must somehow act to cope with 'reality.' To do this more successfully, we need to become skillful in creating more accurate mental maps of our territories. The structural differential diagram can help us do this.

NOTES

1. The word is not the thing. The word is about the thing. The term “about” reminds us that we are jumping from one level of abstraction to another. For more on the significance of “about,” as used by William H. Pemberton in explaining general semantics, see his article, Conflict Resolution for Major World Religions, ETC: A Review of General Semantics, vol. 57, no. 2 (Summer 2000), 234-239.

2. Korzybski wrote, “The use of the structural differential becomes a necessity for anyone who wants to receive full semantic benefit from the present work. A book is, by necessity, verbal.” (3, p.416) When using a three-dimensional structural differential model for training people in consciousness of abstracting, Korzybski wanted students to have multisensory inputs: seeing the different levels of abstraction, pointing to the tags at different levels while saying “this is not this,” and handling the tags. (3, pp.395, 399, 420-421, 427)

REFERENCES


N MOST SITUATIONS, we should use a metaphorical steering wheel, which allows degrees of adjustment, rather than using a metaphorical paddle, which permits only a limited, dichotomous, either-or response. So cautioned S. I. Hayakawa.

"From experience I have learned that you can’t criticize anything without having it supposed that you favor the opposite extreme," wrote Joseph Wood Krutch in The American Scholar. (Cited by Dr. Sanford Berman, in his audiocassette tape The Either-Or Way of Thinking.)

For years, thinkers have criticized reacting in terms of either one extreme or another. During the Age of Enlightenment or Age of Reason (generally considered from 1650-1850), the literary genre known as the comedy of manners attempted to combat such pernicious either-or ways of thinking. As a form of satire, the comedy of manners ridiculed human vices with the aim of producing an improvement in behavior. The major focus of Molière’s comedies was to mock excesses in thinking, behavior, or emotion, and to emphasize the rational middle course.

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In Moliere’s play *Tartuffe*, the patriarch Orgon becomes befuddled by his own excessive either-or reacting to life situations. His two children also behave in extremes. Orgon’s son Damis, with his hotheaded extremes of temper, and Orgon’s daughter Mariane, with her excessive timidity, appear as extreme characters and as extreme opposites. The father Orgon, son Damis, and daughter Mariane are prisoners of dichotomous either-or thinking and are unable to make the rational incremental adjustments needed for a harmonious life.

One of the goals of Enlightenment writers was to assist individuals to make rational adjustments, and therefore to find a wider choice of strategies than those available from rigid either-or evaluations. Representing the power of reason in Moliere’s *Tartuffe* are Orgon’s brother-in-law Cleante, who advocates moderation; Orgon’s second wife Elmire, who employs pragmatic negotiation; and Orgon’s practical maid Dorine, another pragmatist who offers alternative methods of responding to seemingly impossible dilemmas.

When a confidence man deceives Orgon, taking advantage of his excessive religious piety, relatives and friends try to point out the error of Orgon’s befuddled judgment. Orgon mistakenly thinks his brother-in-law is attacking religion or piety. However, in the scene which appears below, Cleante seeks to discourage Orgon’s either-or thinking. In effect, he wants to take away Orgon’s dangerous metaphorical either-or paddle and replace it with a useful metaphorical steering wheel, which emphasizes incremental degrees of response:

*Cleante:* Ah, Brother, man’s a strangely fashioned creature
Who seldom is content to follow Nature,
Beyond the narrow bounds of moderation,
And often, by transgressing Reason’s laws,
Perverts a lofty aim or noble cause.

*Act I, Scene V, Lines 81-86
Norton World Masterpieces, p.26*

Cleante doesn’t criticize legitimate religious practice; he criticizes excess, as he attempts to steer Orgon into emulating more moderate role models:

*Cleante:* With bright examples to instruct and guide us.
Consider Ariston and Periandre;
Their virtue is acknowledged; who could doubt it?
But you won’t hear them beat the drum about it.
They’re never ostentatious, never vain,
And their religion’s moderate and humane;
It’s not their way to criticize and chide;
They think censoriousness a mark of pride,
And therefore, letting others preach and rave,
They show, by deeds, how Christians should behave.

Act I, Scene V, Lines 125-136
Norton World Masterpieces, p.29

During Molière’s time, some Roman Catholic prelates savagely criticized the play *Tartuffe* as anti-religious, but Molière insisted that the play satirized only bogus hypocritical religious behavior, characterized by fanatical zeal which engendered ridiculous extremes in behavior. Support for that defense is apparent in Cleante’s response to Orgon’s mercurial behavior after Tartuffe’s villainy is unmasked:

**Orgon:** Enough, by God! I’m through with all pious men:
Henceforth, I’ll hate the whole false brotherhood,
And persecute them worse than Satan could.

**Cleante:** Ah, there you go — extravagant as ever!
Why can you not be rational? You never
Manage to take the middle course, it seems,
But jump, instead between absurd extremes.
You’ve recognized your recent grave mistake
In falling victim to a pious fake;
Now to correct that error, must you embrace
An even greater error in its place,
And judge our worthy neighbors as a whole
By what you’ve learned from one corrupted soul?

Act V, Scene 1, Lines 32-44
Norton World Masterpieces, p.60

Orgon’s second wife Elmire, the stepmother of Damis and Mariane, serves as another proponent of moderation and skillful diplomacy. When Tartuffe tries to seduce her, Elmire negotiates a pragmatic solution which stops his advances and assures that Mariane’s marriage to Valere will not be jeopardized. Perhaps, logically, the play should end here, with a negotiated solution and no compromises.
Elmire: I shall be discreet about your lapse;  
I'll tell my husband nothing of what’s occurred  
If, in return, you’ll give your solemn word  
To advocate as forcefully as you can  
The marriage of Valere and Mariane,  
Renouncing all desire to dispossess  
Another of his rightful happiness,  
And...

Act III, Scene 3, Lines 135-143  
*Norton World Masterpieces*, p.46

The audience may expect that Elmire’s skillful pragmatic diplomacy will send the scoundrel Tartuffe packing, but Damis’ dichotomous either-or thinking spoils the practical solution:

**Damis**: No! We’ll not hush up this vile affair;  
I heard it all inside the closet there,  
Where Heaven, in order to confound the pride  
Of this great rascal, prompted me to hide.  
Ah, now I have my long-awaited chance  
To punish his deceit and arrogance,  
And give my father clear and shocking proof  
Of the black character of his dear Tartuffe.

Damis’s hotheaded temper sets off a chain of polar reactions. By skillfully manipulating the biblical principle that self-abasement brings exaltation while pride brings a fall, the villain Tartuffe affects the most shameless self-disparagement, not to cleanse his conscience, but to push Damis deeper into trouble. Tartuffe audaciously proclaims his own most disgusting behaviors (ironically completely true) and this drives Orgon to the opposite extreme of defending Tartuffe and condemning his own son, Damis.

**Tartuffe**: Ah, no, don’t be deceived by hollow shows;  
I’m far, alas, from being what men suppose;  
Though the world takes me for a man of worth,  
I’m truly the most worthless man on earth.  
[To Damis] Yes, my dear son, speak out now: call me the chief  
Of sinners, a wretch, a murderer, a thief;  
Load me with all the names men most abhor;
I'll not complain; I've earned them all, and more;  
I'll kneel here while you pour them on my head  
As a just punishment for all the life I've led.

Act III, Scene 6, Lines 26-34,  
*Norton World Masterpieces*, p.48

Thus the wicked Tartuffe swings the pendulum to another extreme, as he manipulates the pious befuddled Orgon to disown his own son and entrust his daughter to Tartuffe.

**Orgon:** Yes, all of you — wife, children, servants, all —  
Conspire against him and desire his fall,  
Employing every shameful trick you can  
To alienate me from this saintly man,  
Ah, but the more you seek to drive him away,  
The more I'll do to keep him. Without delay,  
I'll spite this household and confound its pride  
By giving him my daughter as his bride

Act III, Scene 6, Lines 46-54  
*Norton World Masterpieces*, p.48

In the next scene, Moliere again shows how a person using either-or thinking will go to absurd and ridiculous extremes:

**Orgon:** [To Tartuffe] It pleases me to vex them, and for spite  
I'd have them see you with her day and night.  
What's more, I'm going to drive them to despair  
By making you my only son and heir;  
This very day, I'll give to you alone  
Clear deed and title to everything I own.

Throughout the play, Moliere dramatizes the debilitating, paralyzing, unproductive consequences of dichotomous two-valued thinking. When the dutiful but timid daughter Mariane learns her father has decided to make her marry the scoundrel Tartuffe, she reacts by threatening to kill herself or become a nun. Dorine, the practical-minded maid, asks Mariane to consider a wider selection of options other than "marry or die" or "marry or take religious orders." Dorine offers Mariane and Valere alternate strategies to counter her father's temporary insanity:
Dorine: We’ll use all manner of means, and all at once.
[To Mariane] Your father’s addled; he’s acting like a dunce.
Therefore you’d better humor the old fossil.
Pretend to yield to him, be sweet and docile.
And then postpone, as often as necessary,
The day on which you have agreed to marry.
You’ll thus gain time, and time will turn the trick.
Sometimes, for instance, you’ll be taken sick,
And that will seem good reason for delay;
Or some bad omen will make you change the day —
You’ll dream of muddy water, or you’ll pass
A dead man’s hearse, or Break a looking glass.
If all else fails, no man can marry you
Unless you take this ring and say “I do.”

Act II, Scene 4, Lines 113-124
Norton World Masterpieces, p.40

In the aberrant behaviors in all three of the victims — Orgon, Damis, and Mariane — we find dichotomous either-or thinking that leads them to jump to opposite extremes. The voices of reason — Cleante, Elmire, and Dorine — show a middle course which emphasizes moderation over extremes. They demonstrate skillful pragmatic negotiating, and offer practical alternatives to rigid thinking. Moliere stressed the moderate, practical, middle course, rather than unproductive polarizing extremes. This satire genre aims at incremental adjustment and change, rather than destruction.

Jonathan Swift, another Enlightenment satirist, was criticized as a misanthrope or hater of mankind because of his merciless indictment of mankind. When one realizes that Swift unselfishly gave great energy to the causes of others, we realize that this is an unfair characterization brought about by either-or thinking. Critics who call Swift a “hater of mankind” misunderstand the purpose of satire — to improve mankind by pointing out its faults.

Swift’s double-edged satire confounded his critics, who didn’t understand how he could criticize one side on an issue without totally favoring the other side. For example, in the Modest Proposal, Swift neither championed the Irish cause or the English cause, but dramatized the faults of both sides in order to bring about change in both sides:

To the absentee British Landlords, he commented:
I grant this food supply [children of Irish peasants] will be somewhat dear, and therefore very proper for the landlords, who, as they have already devoured most of their parents, seem to have the best title to the children.

_Norton World Masterpieces_, p.123

But Swift had equally harsh criticism for the Irish parents who teach their offspring to steal at the age of six, and for Irish marriage practices in which,

"... men would become as fond of their wives during the time of their pregnancy, as they are now of their mares in foal, their cows in calf, or sows when they are ready to farrow; nor offer to beat or kick them (as is too frequent in practice) for fear of a miscarriage."

_Norton World Masterpieces_, p.285

Like Moliere, Swift wanted to use satire to make the world better, and he had a deep love and concern for the people he lampooned and ridiculed. Other writers, such as Thomas Hardy, also realized that to bring about the best, we must look at the worst. The genre of satire, as well as the comedy of manners, seems to have the function of attacking rigid either-or modes of thinking, and encouraging incremental adjustments toward a more rational course. As practitioners of general semantics, we can alert our students to the valuable general semantics formulations often found in satire.

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EXECUTIVE SUMMARIES:

Where Less Really is More

PHILIP VASSALLO*

The Executive Summary, that brief, introductory section of a lengthy report or proposal, is often the only place decision makers go to determine whether they will take measurable actions on an idea or scrap it, whether they will allocate funds to a project or shred the document. Management demands that the executive summary live up to its name. (Summary comes from the Latin summatium, meaning epitome.) So the expectation is clear: tell me as thoroughly as possible, without wasting a word, only the information important to me so that I can decide on whatever you expect of me. “Millions of dollars are at stake,” a client for a major pharmaceutical company recently told me. “All the logic and due diligence I put into the proposal are useless unless I can move the CEO to act on the strength of the executive summary alone.”

* Philip Vassallo holds a doctorate in educational theory and provides communication consulting services to corporate, government, and academic organizations. His new book on business and technical writing, The Art of On-the-Job Writing (2002), is now available from the International Society for General Semantics.
What a challenge! Writing executive summaries requires the writer to fulfill two objectives:

- To understand management's objectives for reading the executive summary.
- To demonstrate content mastery of the original document by including and excluding information based on those reader's objectives.

Achieving these objectives means that executive summary writing is as much a reading assignment as it is a writing assignment; however, we read and write not for what interests us, but for what interests the executive who will read the summary. When writing an executive summary of research findings, we have many choices because volumes of information about most topics inundate us in a content-crazed world. And when writing an executive summary suggesting a course of action, we have many choices because management's direction changes course rapidly in a volatile marketplace.

For these reasons, I no longer express surprise when a corporate employee assigned to write an executive summary asks me, "What should go into an executive summary?" In the business world, many disparate staffers assume the task of summarizing, or epitomizing, in writing. Some are account executives writing executive summaries of their own proposals for their clients; others are junior executives briefing management on an issue by compiling useful data from numerous reports; still others are administrative assistants writing executive summaries of articles or books to save their managers reading time. Whatever the case, I find more training directors requesting courses, or at least course components, in writing effective executive summaries. The following discussion begins to answer most questions I field about this critical document. It comprises the key considerations for the writer in composing executive summaries that address their audience's reading inclinations and content expectations.

**Executive Summaries and Abstracts: Similarities and Differences**

An important first point is to distinguish between an abstract and an executive summary. Looking up the word summary in a dictionary, you would find its primary definition to include the word abstract. This fact does not help clarify the difference for those of us paid to write one or the other. Both the abstract and executive summary share at least these purposes:

- To index for readers the key points of a document.
- To help readers decide whether they should read the entire document.
Where the abstract and executive summary differ, however, is in their larger purposes — their personal connection to and professional expectation of the reader.

Personal connection. The abstract works best in technical fields where the reader understands the complex material in the document. For example, a biochemist friend recently showed me one of her published articles. As soon as I read the abstract preceding her article, I realized that its subject, a thermodynamic analysis of intramolecular electron transfer in trimethylamine dehydrogenase, was intended for the consumption of her fellow researchers or subject-matter experts, not for readers like me who lack the basic knowledge of the principles, particulars, and positions of her field. (1) However, if a drug manufacturer expressed interest in designing artificially engineered proteins, its executives would likely want the biochemist to rewrite the article as a report, tailored to the scope of their business, and to include with it an executive summary of the research to suggest whether they should invest funds in intramolecular electron transfer technology. An executive summary, then, may speak to non-technical audiences about their specific business needs.

Professional expectation. In the scientific or technical world, an abstract may require nothing from the reader but the assimilation of the knowledge contained in the article or report. At most, the abstract updates the reader on a breaking development in a specific field of research. True, some researchers may write a rejoinder to the article, but the implied purpose of the abstract is purely to transmit information. On the other hand, an executive summary does expect a reader response. It analyzes a business-impacting issue, draws conclusions about it, and specifically recommends a course of action for management in response to the issue.

Because of these divergent needs of their readers, abstracts tend to fit a formula better than do executive summaries. Word counts are often mandatory for the abstract, regardless of the length of the article it describes. In contrast, while executives like to insist that writers keep executive summaries to one page or even one brief paragraph, they may run anywhere from a 50-word précis to a 10-page document — depending on the readers’ needs.

The Executive Summary: Function and Form

Once readers complete the executive summary, they should have a clear picture of the entire document and feel confident that the writer accurately described the key points of the issue. They should feel that they have saved a great deal of time by not having to read the entire document, and that reading
on would only provide additional detail of what the executive summary already stated. As a result, they should stand ready to make business-impacting decisions about the summarized issue.

The executive summary should work for the readers in both function and form. In function it should:

- provide a complete but brief synopsis of facts stated in the document
- serve as the first place in the document where most readers would go
- appear in the beginning of the document work as a stand-alone document

In form it should:

- include a summary of the issue, discussion, conclusions, and recommendations
- take up, on average, less than 10 percent of the entire document (Many executive summaries run 1-3 paragraphs and run fewer than 300 words, but length must remain secondary to readers' needs; shorter or longer may be necessary.)
- use paragraphs to divide summaries of the document's sections

**Tips for Writing Executive Summaries**

Remembering the strategy, structure, substance, and style of executive summaries should go a long way toward composing them with a focus on the reader and the results.

**Strategy**

*Consider the executive summary as a whole new document requiring a whole new writing process.* First, write the major document without regard for the executive summary. Next, read the document with the summary in mind.

*Find the main point and the supporting points.* First, reduce the entire document to one concise sentence. Examples:

This proposal recommends an expansion of the Northwest Packaging Facility by 50,000 square feet to accommodate the robotic packagers planned for acquisition in June 2003.
This audit report summarizes the three key operational deficits of the ACFJ Corporation’s accounts payable system, discusses their impact on the business and root causes, and suggests corrective actions for management to consider.

In the first example, an educated reader would assume that the report will offer some detail on the space requirements of the robotic packagers, the limitations of the packaging facility’s current layout, and the proposed floor design for the new 50,000 square feet. In the second example, the reader will likely expect the audit report to follow a set organization:

- Finding 1, impact, cause, conclusion, and recommendations
- Finding 2, impact, cause, conclusion, and recommendations
- Finding 3, impact, cause, conclusion, and recommendations

After you have created that main sentence, find the necessary supporting material. The main headings, subheadings, and paragraph beginnings and endings of a well-written document often provide solid clues as to what you should include in the executive summary.

**Ask why the information is important to your audience.** You’ll find that answering this question is a major time and space saver because sometimes management doesn’t want a summary of the entire document (including background, methodology, results, discussion, and conclusions), but only a summary of the suggested actions to take. This also may require you to combine sections and exclude minor points.

**Keep whittling away.** One publishing executive told me that all executive summaries should pass the elevator test. For instance, imagine that you enter the elevator on the 30th floor office of your employer, Easy Enterprises. In your hand is a 100-page proposal that you have labored over for the past month. Into the elevator walks your CEO. The following dialogue ensues:

CEO: *(Pointing to proposal.)* Is that the Busybody proposal I’ve been expecting from you?

You: *(Handing it him.)* Yes, sir.

CEO: *(Not accepting it.)* Not now. I’m heading to a meeting. What does it say?

You: Acquiring Busybody Corporation offers Easy Enterprises excellent opportunities to expand market share in the Latin American market by at least 20 percent, or $25 million, within the first year. Since Busybody seeks to liquidate its United States debt and secure much-needed cash before the fiscal year’s end by selling its profitable franchises in Argentina, Chile, Colombia, Venezuela, and
Mexico, Busybody Latin America is ripe for a well-below-market purchase price of $10 million. This acquisition would expand our market knowledge, product line, and profit margin in Latin America, establishing Easy as the predominant leader in that region. (*The elevator door opens on the ground floor.*)

CEO: (*Rushes away.*) Well said. Please give it to my secretary, and I'll discuss it with the CFO sometime next week. Thanks.

That last statement you made probably contained all that the CEO would have needed if he had read your executive summary.

**Structure**

*Design the structure of the executive summary based on your argument.* Stay consistent with the order of your original document. Doing so provides a virtual table of contents for those readers interested in a more detailed examination of the document.

*Limit the executive summary to a few paragraphs, each of which can stand alone as a coherent, unified idea.* You’ll know that your paragraphs are rock solid if you can give each a one- or two-word title (e.g., recommendation, background, principles, observations, conclusions) — with each sentence in the paragraph relating to that title.

*Place the executive summary at the front of the document on its own page or pages.* Occasionally, writers place the executive summary at the end of the document. This practice defeats the point of its function — to summarize quickly and easily for the intended reader. Placing it in the front as a separate document enables the reader to separate and catalogue it for easy reference.

**Substance**

*Condense what you’ve already said in the lengthier document.* Add nothing new. If your document has an informational flavor, do not use the executive summary to editorialize. Moreover, do not use this precious space to evaluate what you have written. Using the earlier example of acquiring Busybody Corporation, resist the urge to write, “Our Company stands at the threshold of a monumental decision which could explode profits and trigger a new era of unprecedented prosperity.” Leave that chatter for your upcoming interview with the reporter from *The Wall Street Journal.* In short, claim only what you have already claimed in the document.

*Include only information relevant to the report or proposal.* Cutting entire sections is advisable if they do not advance the key sentence you established when beginning the executive summary.
Remember the 10 percent maximum rule. Keep the executive summary to fewer than 100 words for a 1,000-word report, to fewer than 1,000 words for a 10,000-word proposal, and so on. While this may not be a hard-and-fast rule, it makes for a sound guideline. Most executive summaries that sparkle meet this criterion.

Style

Prefer general language to jargon to reach all your readers. Try your executive summary with readers who may be familiar with your audience but unfamiliar with the technicalities of your subject matter. If those readers can understand your executive summary, so will your audience; if they cannot, then edit it for clarity.

Limit transitional phrases and prefer content language over context language — but not at the expense of clear expression. For example, note the context, or nice-to-know, language that the writer strikes out in the interest of brevity and highlighting the content, or need-to-know, language:

Investors Plus should hire three account executives in Region 3. In doing so, the Company will effectively achieve its stated objective to increase sales by $1.5 million within 18 months. As a result, it will succeed in and recovering sales lost to increased competition from Surety Banking over the past year.

Summarize information rather than repeat it verbatim. This is tricky. You do not want to recreate your story by changing its meaning; rather, you want to find quicker words and phrases that better serve the reader’s need to capture information efficiently. For example, say the original report stated:

An 8-square-centimeter area of polyvinyl chloride tubing triple-coated with Color R203 exhibited a 75% patina loss when exposed to 1 milliliter of Xylol over a 30-second period.

The executive summary may make the same point by stating:

Polyvinyl chloride coated with Color R203 suffers significant patina loss when exposed to Xylol.

Use bullets wherever possible to broadcast key points and reduce verbiage. Let the following example speak for itself.

BEFORE (62 words)

Moving the Creedwell Production Facility will reduce operating expenses by saving $25,000 on rental space annually. In addition, the move will make commuting easier by an average of 30 minutes each way for more than 75 percent of our existing staff. Finally, the move will substantially increase our labor pool because of the higher number of available workers in the new area.
Moving the Creedwell Production Facility will:

- reduce annual rental expenses by $25,000
- reduce commuting by approximately 30 minutes each way for over 75 percent of current staff
- increase the number of available workers

Using bullets positions writers in a brevity-focused mindset. By placing key details into bullets, the writer keeps whittling away until every word counts and the ideas presented are conceptually parallel.

**Brief Briefly**

The ironic adage, "Be brief, brother, be brief," seems to smack of the problem that the speaker admonishes others to avoid. Why couldn't he state the imperative in two words ("be brief") instead of five? The answer is quite simple: He could — if speaking to those inclined to listen; however, the five-word version adds emphasis for those inclined not to. I say this not to suggest that you repeat yourself in the executive summary, but to reflect on what your readers consider to be brief. President Ronald Reagan preferred just the high-level briefing to decide on issues and left the details to his trusted associates; Senator John Glenn liked delving into the details before taking a position. Clearly, you would have to write different executive summaries of the same report if either man were your chief executive. As I've said in this column before, knowing your readers should precede knowing what to write — if you are to write with ease and precision.

**NOTE**

Conference Theme

Confronting the Challenges of Conflicting World Views

The Institute of General Semantics will host The Twelfth International Conference on General Semantics, "Confronting the Challenges of Conflicting World Views," in Las Vegas, Nevada, from October 31 to November 2, 2003. The event is co-sponsored by The International Society for General Semantics and The New York Society for General Semantics.

"We intend to examine the many interactions, sometimes violent and deadly, that take place when individuals and groups from markedly different linguistic, social, and cultural environments come together. We will also welcome discussion on other topics consistent with our mission — the investigation and dissemination to the public of how an understanding of the ongoing interactions between our language, our behavior and our human nervous systems can contribute fundamentally to our well-being," notes Jeff Mordkowitz, Director of the Institute of General Semantics.

Suggested themes include:

Beliefs, Belief Systems, and Their Consequences: What constitutes a "system of beliefs"? Do standards exist for evaluating different belief systems? Can holders of competing belief systems mutually co-exist and/or cooperate with modern science and technology for the benefit of humankind?

Interpersonal to Intraplanetary Relationships: How do our underlying world views affect our relationships with others and with our environment? How do individuals within one group get along with individuals of competing groups?

Actions for Changing and Adapting: What programs or initiatives have you or your organization undertaken to meet the challenges posed by different belief systems? What actions for change do you recommend for individuals, organizations, and/or governments within this environment of multiple and competing world views?

Time-binding and General Semantics: What new theories, applications, or insights have been formulated or developed? What ought we be doing so
that future generations can build on our efforts — instead of having to repair the damage?

For information on the conference and the Call for Papers, contact the Conference Coordinator, Steve Stockdale, P. O. Box 1565, Fort Worth, TX, 76101-1565, USA. Phone: (972) 897-5620, E-mail: steve@dfwcgs.net.

Five-Day GS Seminar-Workshop

The Institute of General Semantics will hold a Seminar-Workshop in General Semantics from Sunday, October 26 to Thursday, October 30, 2003, in Las Vegas, Nevada, just before the Twelfth International Conference on General Semantics, at the same location.

The Seminar-Workshop will offer training and tools to navigate the increasingly difficult challenges we face today in our public and private lives. Participants will explore how our daily language influences the way we see the world, and how our language, behavior, and nervous systems mutually influence each other. They will learn specific practical GS techniques, and take part in the daily practice of non-verbal awareness to enhance the ability to learn and to change old habits.

For more information on IGS activities and publications, contact Martha Santer, Executive Secretary, Institute of General Semantics.

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New Editor for Time-Bindings

Time-Bindings, the newsletter of the Institute of General Semantics, has a new editor, Susan Presby Kodish, Ph.D. An instructor at many Institute Seminar-Workshops, co-author, with her husband Bruce I. Kodish, Ph.D., of Drive Yourself Sane: Using the Uncommon Sense of General Semantics (Extensional Publishing, 2001), and a co-editor of Developing Sanity in Human Affairs (Greenwood Press, 1998), Susan Kodish has also written articles for ETC and the General Semantics Bulletin.

Dr. Kodish welcomes readers of ETC to contribute to Time-Bindings: "We invite your comments, from a general-semantics perspective, on what you observe in your daily life. Also, please let us know of books, articles, movies, etc., that you recommend for other general semanticists. Your report can range from basic identifying information such as title, date, author, to a no-more-than two paragraphs review. Also, let us know what's new in your life regarding general semantics. Let's learn from each other; let's put time-binding into action in Time-Bindings."

Submission Guidelines for Time-Bindings: Please send hard-copy submissions or inquiries to Susan Presby Kodish at: P. O. Box 50490, Pasadena, CA 91115-0490; Fax (626) 795-0954. In addition to hard copy, whenever possible, send your article submission via internet by copying your text into the body of an e-mail to: timebindings
@aol.com. E-mail attachments will not be accepted.

Submission deadlines are as follows: Spring-March 1; Summer-June 1; Fall-September 1; Winter-December 1.

New York Society for General Semantics

The NYSGS holds monthly meetings open to members and the general public.


In a full-day stress reduction seminar, Jeff Mordkowitz, Director of the Institute of General Semantics, will present *The Seven Simple Steps™ Way to a Stress Free Day* on Saturday, May 17, from 10 a.m. to 4 p.m., at the Albert Ellis Institute, 45 East 65th St., New York City. This event is free to members of NYSGS and IGS. Non-members pay $20.

For details, including the New York Society’s 2003 lecture schedule or for a copy of the Society’s newsletter, *Verbal Level*, contact NYSGS President Allen Flagg at (212) 532-1467, or nysgs@msn.com, or visit www.nysgs.org.

New Editor for *ETC*

Paul Dennithorne Johnston, who has been Managing Editor of *ETC* and Executive Director of ISGS since 1990, has accepted the post of Editor of *ETC*, beginning with this issue. Johnston, who has participated in various full-length and weekend Institute of General Semantics Seminar-Workshops, holds a BA in Social Studies from the City of London Polytechnic (now London Guildhall University).

Johnston’s first short story was published in 1957, and he has been involved in writing and publishing ever since. He has worked as a newspaper reporter and editor, and has served as author, co-author, or co-editor of seven books. Among his GS books are *To Be or Not: An E-Prime Anthology* (edited with D. David Bourland, Jr.), *More E-Prime: To Be or Not II* (with Bourland and Jeremy Klein), and *E-Prime III: A Third Anthology* (with Bourland), and *Mapping the Media* (co-authored with Gregg Hoffmann). Paul Johnston is also the author of three short plays, which were staged in England, and some 70 published short stories and articles, including many in *ETC*. 
CAUSES & EFFECTS &

VIRGINS & RAISINS

ROBERT WANDERER*

If you put your hand on a hot stove, you’re going to get burned. That’s a simple cause and effect situation. Problems arise from more complicated conditions, such as a cause with many effects or an effect with many causes. Or effects that seem a long way from their “cause.”

Easily the most effect-producing cause of the new millennium was the 9/11 terrorist attack on American targets. Two obvious effects that appeared immediately: a desire to find and punish the perpetrators, and an intense campaign to prevent such events in the future. The find-who-did-it was hard to pursue, and we paid great attention to increased security checks, extending far beyond the obvious vigilance over who is allowed on a plane.

* Robert Wanderer taught adult classes based on general semantics for 30 years, was editor of The Map newsletter of the San Francisco Chapter ISGS for many years, and has written for ETC for four decades.
We have had a general tightening of security not related to 9/11. Applicants for jobs, even in unrelated occupations, are checked more carefully, and employees face new scrutiny even after years on the job. In one case a valued worker was dismissed because she had inadvertently bounced a check a few years before. Arab-Americans got nasty looks from people whose suspicions ran amok. On the trivial effect side, there was a large red-white-and-blue candle which played “God Bless America” when lit.

One question which arose from the 9/11 attacks: Why would anyone want to commit suicide in that way? We can understand why some disturbed people might want to kill themselves, and why some others might find some rationale. Kamikaze pilots died plunging their planes into large enemy ships, but at least they were helping their war effort. Individual servicemen may have been killed protecting each other, but this was viewed as heroism. But why would anyone join a group to seize an airplane and crash it into a major building, killing thousands of people whose only “sin” was that they belonged to a different religion?

These terrorists may well have believed not that they were killing themselves, but merely moving to a paradise where some 72 virgins were ready to help them enjoy their new incarnation. At least one extremist Islamic sect preaches that followers will win such a reward for furthering their religion and triumphing over other beliefs. A controversy centers on the ancient Aramaic word “hur,” meaning “white” and specifically “white raisin,” a much-prized delicacy in the Arab world at the time the Koran was written. Islamic tradition holds that “hur” stands for “houri,” which means “virgin.” The difficulty is part of a lack of scholarship about the Koran, with anyone questioning that holy book subject to death threats.

Look for the Small Economy Size

Shoppers often assume bigger is better, and tend to buy the larger-size item, often marked “Economy Size” or “Value Pack.” But with increasing competition between grocery stores and discounters, the medium and even the small size often turn out to cost less per unit than the large one.

You need to read the label and compute the per-unit price carefully. A Snickers bar called “The Big One,” at 3.7 ounces compared to the older 2.07 ounce bar, typically costs over 10 percent more on a per-ounce basis. Heinz Tomato Ketchup goes for $3.97 in the big 64-ounce bottle and $1.78 for the 36 oncer, the larger size costing 25 percent more per ounce.
Medium size products become better sellers, so stores running specials tend to feature that size with a lower price, bringing the per-unit price below that of the large ones.

**What's the Difference Between Humans and Chimpanzees?**

The Chimpanzee Collaboratory, a new coalition of research and animal rights groups, is seeking to allow judges to appoint a human “guardian at law” for any chimpanzee “subjected to the willful use of force or violence upon its body.” With such legal standing, chimps could be protected from researchers, animal trainers, and others who might harm them.

Advocates point out that the two species share 98.7 percent of their DNA, and some chimps have learned sign language.

The number of chimps in captivity increased in the 1980s for use in AIDS research, but they proved to be too similar to humans for testing. In 1997 breeding was stopped, but 1500 unemployed chimpanzees remain.

**What's the Difference Between a Car and a Truck?**

Most people can easily tell the difference between a car and a truck. The National Highway Traffic Safety Administration requires a manufacturer’s light-truck fleet to average 20.7 miles to a gallon, and car fleets must average 27.5 miles to a gallon.

A problem arises because sport-utility vehicles and some other popular cars are classified as trucks, and thus are permitted to operate with lower fuel economy. These rules were adopted in the 1970s when light pickup trucks accounted for only 20 percent of the market, but this category now runs to about half of vehicle sales.

Environmentalists believe these SUVs and minivans should be reclassified as cars, a change that would force manufacturers to improve their fuel economy, reduce their weight and power — and thus make them harder to sell.

One difficulty in classification involves Daimler-Chrysler’s PT Cruiser. The National Highway Traffic Safety Administration calls it a truck because its seats fold down to form cargo space, but the Environmental Protection Agency says it’s a car.

**Check Those Menus**

You might find a restaurant offering Argentine steak, wasabi-encrusted fish or a Camembert cheese plate. But:
• It's illegal to import beef from Argentina because of an outbreak of hoof-and-mouth disease.

• Wasabi is quite expensive and what you find in sushi bars is usually horseradish with mustard and bright green food coloring.

• U.S. law bans cheese makers from using raw milk, which is essential for French Camembert cheese.

• Chilean sea bass, which is neither sea bass nor from Chile, has become so popular that it is now an endangered species, which probably wouldn't have happened if it were called by its “real” name — Patagonian Toothfish.

British Paper Says Ships No Longer Feminine

Some languages assign gender to all nouns, apparently randomly. French makes all nouns masculine or feminine: La carte (feminine) n'est pas le territoire (masculine). German employs a neuter gender as well as feminine or masculine. Usually this does not occur in English, but there is a long tradition that ships are feminine, apparently stemming from seamen's affection for their vessels. Now Lloyd's List, the leading shipping industry daily in London, "decided it was time to catch up with the rest of the world and most other news organizations" and refer to ships as "it" rather than "she."

On a related matter: In the Summer 1994 issue of ETC I wrote an article "Warum Sagen Sie das Fraulein?" questioning why the German language uses the neuter gender for the word for an unmarried woman. Recently I received a letter from a doctor in Germany, telling how impressed he was with that piece, even many years later. "I've been speaking German all my life and I never noticed before that German females, when they are not married, are simply neuter .... When you use your own language you bury meaningful and important news and facts."

Also, a German woman who speaks English, visiting San Francisco, said that when asked her opinion of the Golden Gate Bridge, her response was "She is beautiful," using the gender of the German word for bridge.

Tony Wagner, co-director of the Change Leadership Group at the Harvard Graduate School of Education and Senior Advisor to the Bill and Melinda Gates Foundation education programs, believes that America's education system, based on rote learning and "test prep," has become obsolete. To bring education into the fast-moving technological information age of the twenty-first century, reform is not enough. Wagner maintains that reinvention is required.

The author argues that instead of drilling students on memorized information — effective in the early-twentieth century when there were few libraries and knowledge was more stable and enduring — schools should assess students on their ability to demonstrate performance competencies. That means students would be expected to demonstrate knowledge of science through science projects, knowledge of English through essays, and knowledge of physical education through assessment of progress on competitive and noncompetitive athletic achievement. *Doing,* rather than hearing or viewing, becomes the focus of measurement. (Piaget stated, "Understanding comes through inventing.")

Wagner also contends that schools should concentrate more on the "soft skills," which he calls the "new basics." Some of these skills are embodied in
the idea of emotional intelligence and include self-awareness, self-regulation, motivation, empathy, and social skills. The author also argues that schools should emphasize the importance of citizenship education and work toward getting students involved in civics and community improvement projects.

Wagner believes that teachers and parents must also be brought into the picture. For teachers, he suggests a shift from the current model of the autonomous and isolated professional to one of peer collaboration and team-driven professional development. Parental involvement can be encouraged by assigning advisors to schedule regular meetings with parents to assess student performance.

Wagner makes a strong case that a key factor to improving education is improving conditions in schools. This includes fixing school buildings in need of repair and reducing the incivility that is common in many school climates. He also postulates, in line with a current business axiom, that those closest to the problem know best how to solve it, that teachers and students ought to be solicited for their advice.

I have worked in public schools for more than thirty years and, as a veteran educator, find it difficult to get excited about new educational ideas and approaches. However, Wagner’s book got me excited. I hope it has the same effect on you.

Review by Martin H. Levinson, Ph.D.


In High and Mighty, Keith Bradsher, the longtime Detroit bureau chief of The New York Times, discusses the dangers that SUVs pose to their drivers and passengers, as well other drivers and pedestrians who must share the road with them. He examines the vehicles’ history, explaining how the automobile industry lobbied Congress to classify them not as passenger cars but as light trucks, which are subject to less stringent regulations on safety, gas mileage, and smog.

Bradsher says the automakers’ own market research has inspired the creation of ever taller and more menacing vehicles, to appeal to upscale drivers eager to wall themselves off from real or perceived threats. He asserts that insurers have been gouging car owners to subsidize SUV owners, and also warns of many more deaths when the first wave of SUVs starts to wear out
and begins falling into the hands of younger, less experienced, and less disciplined drivers.

One in every six new vehicles sold in the United States is an SUV, and there are now 20 million of them on the nation’s roads. Ad campaigns promote SUVs as safer and “greener” than ordinary cars and easy to handle in bad weather. Bradsher says that SUV occupants are at least as likely as car occupants to die in a crash and much more likely to be paralyzed, that SUVs are hard to control, especially in emergencies, and cause terrible injuries on the occupant of other vehicles they hit. They also guzzle gasoline, add to global warming, and emit up to 5.5 times as much air pollution as cars.

*High and Mighty*, in the tradition of *Unsafe at Any Speed*, is a damning account of an industry that the author says puts people at risk. Anyone who has an SUV, or faces them on the road, would be well advised to read this highly researched and clearly written book.

**Review by Martin H. Levinson, Ph.D.**


In *Tobacco*, Iain Gately depicts the long history of humanity’s fascination with our favorite recreational substance, from its origins among ancient civilizations, through its ascendance to global popularity, to its present day tribulations. The author shows that it was the key component behind the Dutch financial empire, the pivotal force behind the African slave trade, and the financial key to victory in the Revolutionary War.

*Tobacco* takes the reader into the royal residences of Ottoman sultans, the back offices of Hollywood studios, and the covert laboratories of cigarette companies, to investigate the many roles tobacco has played throughout history — spiritual ambassador, sexual emissary, medical panacea, and finally carcinogenic killer. At the various stages of the plant’s emergence, Gately offers intriguing historical analyses of these roles, from the deities of the ancient Mayas to the Marlboro Man, from pipe-smoking tobacco advocate Sir Francis Drake to anti-tobacco crusader C. Everett Koop, from urbane dandy Beau Brummel to cigar aficionado Bill Clinton.

According to the World Health Organization, “The tobacco epidemic is a communicable disease. It is communicated through advertising, through the examples of smokers, and through the smoke to which nonsmokers — espe-
cially children — are exposed. Our job is to immunize people against this epidemic.” Gately, who is pictured on the book jacket of Tobacco with a cigar in his mouth, takes a somewhat different approach. He maintains, “... to the 1.2 billion smokers of the world, tobacco is not just a killer, but a pleaser, a comforter and a friend.” For those who may be interested he also provides an appendix titled, “How to Grow Tobacco” (with a caveat that the information included is intended for home production only).

Review by Martin H. Levinson, Ph.D.


Contrary to its title, the Ultimate Visual Dictionary of Science is not basically a visual dictionary of the type that can be used to find the names of things from their pictures. I think it is not a dictionary at all. Rather it is a condensed, highly illustrated encyclopedia of science.

However, unlike a conventional encyclopedia, which is entirely alphabetical, the UVDS is divided into 11 topical major sections, namely Physics, Chemistry, Life Sciences and Ecology, Human Anatomy, Medical Science, Earth Sciences, Astronomy and Astrophysics, Electronics and Computer Science, and Mathematics. In addition it contains four additional sections: Useful Data, Biographies, a Glossary, and an Index with 15,000 terms. Each major section is divided into a variety of topics or subsections, with one or two pages on each: e.g., Physics has subsections on Waves and Oscillations, Heat and Temperature, etc., and Chemistry has subsections on Acids and Bases, Salts, etc. Each subsection provides an excellent overview of its topic, using clear, fully labeled color-illustrations (over 1600 in all) with accompanying descriptive paragraphs.

The 448 page UVDS will be very useful to anyone who wants an overview of any topic in science, who wants to find out how something or some process works, or who wants to find the name of any component of any scientific object. For those who merely have a general interest in science, the UVDS is simply fun to browse.

Review by David Pressman
San Francisco
It is with a modest measure of satisfaction that I retire from the office to which you generously elevated me in 1950. To the new incumbent, my close friend, Professor Anatol Rapoport, I extend my heartiest felicitations.

Perhaps the most welcome piece of information I can now give is the news that, despite occasional scoffers and the disquieting activities of that earnest but lunatic fringe which plagues every new proposition for dealing with the problems of the world, general semantics has enjoyed during the past three years a steady spread of influence in all circles — the arts and sciences, education, philosophy, the humanities, and the everyday pursuits of the man in the street. Its aims, messages, and technics are ever more frequently quoted in the daily press and in public places. Not least important is our awareness that general semantics has slowly won the respect of many who were at an earlier time suspicious that ours is but another messianic cult. Applications of general semantic principles are now being made in military circles, on police forces, in progressive business enterprises of many varieties, and wherever communication is recognized as integral to the sane conduct of human affairs. Courses in general semantics for the public are steadily increasing in number.

This gratifying circumstance is in part reflected by our roster of ISGS members. There are now 1,673 paid-up members distributed over the face of the earth — a new high for the Society — and there are 881 subscribers to

*ETC's RETROSPECT feature, begun by Jeremy Klein in 1993 and edited by him until 2003, continues under the editorship of Nora Miller.
our journal, *ETC.: A Review of General Semantics*. Some 300 foreign libraries now receive *ETC.* and from this source alone we have had a welcome influx of new members and new subscribers from abroad.

Meanwhile, the financial stability of the Society has been improved. Although still precarious, our financial status has for the first time in its history been transferred from the red to the black side of the ledger. This is owing to the skill and untiring efforts at economy exhibited by the executive secretary, Jean Taylor, and the membership secretary, Evelyn Rochetto, with the counsel and assistance of the secretary-treasurer, Karl Hauch. To all of them I express deep gratitude for the courage they have shown in the face of persistent personal deprivation and for their patience and ingenuity.

The spiraling of operating costs and the expansion of services rendered by the central office in Chicago, not only to individual members and chapters of the Society but to the ever-increasing number of non-members interested in general semantics, necessitated in 1952 an increase in minimal membership dues. Though small, this increase was reluctantly implemented by the Governing Board. ...

Our official journal, *ETC.*, which has now completed ten years of publication, has flourished gratifyingly under the expert guidance of Editors Hayakawa, Rapoport, and Smith. Several of the recent issues (e.g., that devoted to metalinguistics) have marked new “highs” in the history of a journal which has already earned an enviable respect in scholarly circles. The difficulties of editing such a journal and of maintaining high standards are enormous. Among other things required are countless hours of heavy spade work, much editorial skill, the possession of a large fund of general information, the ability to suppress one’s own “irrational prejudices,” and an abundance of tact. That our staff possesses such attributes is cause for rejoicing. May they long continue with us!


Growing like a mushroom, science fiction has in a few years achieved the status of a major literary genre in its own right. It has hardly yet, however, been subjected to systematic investigation. One of the first problems to be faced would be that its rapid sprouting must, obviously, be a symptom of whatever it is that is peculiar about the present state of our civilization. But what is that? One expects science fiction to be particularly concerned with
science, in the usual sense of the word. It is surprising to find that this is not so. These systems of fantasy are, rather, preoccupied with communication.

It may be that this preoccupation is the key to the question of how science fiction reflects broader trends of our times. For it is the same focus of interest which characterizes semantics; and the same preoccupation has played a growing role in our social and political life, coming to the fore in the importance of such concepts as the "iron curtain."

The science fiction literature of the last few years offers an abundance of material to illustrate the various forms that the preoccupation with communication may take. The classical guise is perhaps that displayed in "Discontinuity" by Raymond F. Jones (Astounding Science Fiction, October 1950).

The central character of the story is Dr. Mantell, a scientist who has "provided the medical world with its most brilliant technique in thirty centuries of its history.... With one sweep he eliminated the centuries old butchery of lobotomy and topectomy which had maimed hundreds of thousands in its long fad" (p.83). This he achieved by the "Mantell Synthesis": "He could tear apart the brain of a man, cell by cell, and reconstruct it in the image of a living human being" (p.79). The operation proceeds by building "blank molecules" which are then "punched" with data from "giant pattern molecules." A "semantic selector" is built in.

However, Mantell's experiments had led to "intensifying the very conditions they were designed to heal. In a hundred cases of extensive brain damage, his process had restored life, but only in varying degrees of hopeless aphasia. At first the public hailed the magnitude of his stride, then, revolted by the horror of his failures, they had turned against him with a mighty clamor" (p.83).

At the beginning of the story, after fifteen years of married life, Alice Mantell, with the help of her lover, has attempted to murder her husband, but has succeeded merely in bashing his head in. Mantell's coworkers, finding him after his wife's assault more dead than alive, decide to put him together again by subjecting him to the "Mantell Synthesis." The result is that he is restored to complete health — in fact, he feels better than ever before — but he finds himself totally unable to communicate with other people, either by speaking or writing.

It is noteworthy that no other symptom is mentioned, yet the reaction to his condition is drastic. Dr. Vixen, Mantell's chief assistant, "was staring, his face reflecting sickness of heart" (p.85). Dr. Mantell himself "knew what his fate would be. Visual, auditory, ataxic aphasia-schizophrenia — they would
put a label on him and lock him in a jail. They'd lock him up for the rest of his life because somehow he had become imprisoned behind an incredible wall of communication failure” (p.86).

So he escapes from the Synthesis Laboratory to a suburban insane asylum. There he finds several of his former patients who are in custody, and he is overjoyed to discover that he can talk to them. The cause of the supposed failures of the Mantell Synthesis is found: having “semantic selector banks” built into them, the brains of the synthesized have been freed of so much ballast that they, far from being schizophrenic, aphasic, etc., are really “the most completely sane people the world has ever known” (p.97). Their communication system is so nearly perfect that they can have no truck with the poor linguistic systems of communication of us non-synthesized folk — an astonishing situation which is explained as follows: “All are beyond our comprehension because, as Shannon demonstrated so long ago, a channel cannot pass a message of greater entropy than the channel capacity without equivocation. Since we demand zero entropy and ordinary communication employs so much higher values, we understand nothing” (p.99).

The rest is easy. Putting the Mantell Synthesis into reverse gear as it were, some “entropy” is reintroduced into the brain of one of the synthesized. Then two people — one of them Alice Mantell — are kidnapped and synthesized. These cases — both striking successes since they are made over into perfect beings — convince Dr. Vixen. “If those two could be changed,” he whispered half to himself, “the whole world can be made over. I am next. You’ll let me be next?” he demanded urgently. “And after me, the whole world”" (p.109).

All this sounds quite puerile. Surely one would not find a story of this sort in a purportedly scientific book. But, as Hayakawa points out, one does. To anyone who has read some of those “case histories” on which L. Ron Hubbard built his doctrine of “Dianetics” (the “Modern Science of Mental Health”), the motifs and the atmosphere of “Discontinuity” have a familiar ring. And one might doubt whether Jones would have displayed so much crusading zeal at the end of his story, were it not for the impression that his fantasy is backed by a new method which can solve the problem of communication once and for all.

What is noteworthy about both Jones’ science fiction and Hubbard’s fictitious science is that they give expression to the feeling that present methods of communication are unsatisfactory; according to both, not only technical means must be improved but also underlying mental processes. Communication is by definition interpersonal, but both Jones and Hubbard identify it
with an inner mental process. The demand for better communication changes in this way into a demand for clearing the mind. ...

The world of such stories — many modern science fiction tales as well as Hubbard’s “case histories” — is peopled with individuals who are able to exert a powerful influence on human minds, and especially on the mind of the hero. Depending on the place of those persons in the pattern of interpersonal relationships, this influence may be beneficent or sinister. It is, of course, always an essentially magical influence. It is a strongly directive communication, and usually perpetrated by methods which are outside of normal human experience, if not outside of experience altogether.

ROBERT PLANK, “COMMUNICATION IN SCIENCE FICTION”

DAUGHTER: Daddy, why do things have outlines?

FATHER: Do they? I don’t know. What sort of things do you mean?

D: I mean when I draw things, why do they have outlines?

F: Well, what about other sorts of things — a flock of sheep? or a conversation? Do they have outlines?

D: Don’t be silly. I can’t draw a conversation. I mean things.

F: Yes — I was trying to find out just what you meant. Do you mean “Why do we give things outlines when we draw them?” or do you mean that the things have outlines whether we draw them or not?

D: I don’t know, daddy. You tell me. Which do I mean?

F: I don’t know, my dear. There was a very angry artist once who scribbled all sorts of things down, and after he was dead they looked in his books and in one place they found he’d written “Wise men see outlines and therefore they draw them” but in another place he’d written “Mad men see outlines and therefore they draw them.”

D: But which does he mean? I don’t understand.

F: Well, William Blake — that was his name — was a great artist and a very angry man. And sometimes he rolled up his ideas into little spitballs so that he could throw them at people.

D: But what was he mad about, daddy?
F: But what was he mad about? Oh, I see — you mean “angry.” We have to keep those two meanings of “mad” clear if we are going to talk about Blake. Because a lot of people thought he was mad — really mad — crazy. And that was one of the things he was mad — angry about. And then he was mad — angry too about some artists who painted pictures as though things didn’t have outlines. He called them “the slobbering school.”

D: He wasn’t very tolerant, was he, daddy?

F: Tolerant? Oh, God. Yes, I know — that’s what they drum into you at school. No, Blake was not very tolerant. He didn’t even think tolerance was a good thing. It was just more slobbering. He thought it blurred all the outlines and muddled everything — that it made all cats gray. So that nobody would be able to see anything clearly and sharply.

* * *

F: Let’s think about a real concrete out-and-out muddle, for a change, and see if that will help. Do you remember the game of croquet in Alice in Wonderland?

D: Yes — with flamingos?

F: That’s right.

D: And porcupines for balls?

F: No, hedgehogs. They were hedgehogs. They don’t have porcupines in England.

D: Oh. Was it in England, daddy? I didn’t know.

F: Of course it was in England. You don’t have duchesses in America either.

D: But there’s the Duchess of Windsor, daddy.

F: Yes, but she doesn’t have quills, not like a real porcupine.

D: Go on about Alice and don’t be silly, daddy.

F: Yes, we were talking about flamingos. The point is that the man who wrote Alice was thinking about the same things that we are. And he amused himself with little Alice by imagining a game of croquet that would be all muddle, just absolute muddle. So he said they should use flamingos as mallets because the flamingos would bend their necks so the player wouldn’t know even whether his mallet would hit the ball or how it would hit the ball.
D: Anyhow the ball might walk away of its own accord because it was a hedgehog.
F: That’s right. So that it’s all so muddled that nobody can tell at all what’s going to happen.
D: And the hoops walked around too because they were soldiers.
F: That’s right — everything could move and nobody could tell how it would move.
D: Did everything have to be alive so as to make a complete muddle?
F: No — he could have made it a muddle by ... no, I suppose you’re right. That’s interesting. Yes, it had to be that way. Wait a minute. It’s curious but you’re right. Because if he’d muddled things any other way, the players could have learned how to deal with the muddling details. I mean, suppose the croquet lawn was bumpy, or the balls were a funny shape, or the heads of the mallets just wobbly instead of being alive, then the people could still learn and the game would only be more difficult — it wouldn’t be impossible. But once you bring live things into it, it becomes impossible. I wouldn’t have expected that.
D: Wouldn’t you, daddy? I would have. That seems natural to me.
F: Natural? Sure — natural enough. But I would not have expected it to work that way.
D: Why not? That’s what I would have expected.
F: Yes. But this is the thing that I would not have expected. That animals, which are themselves able to see things ahead and act on what they think is going to happen — a cat can catch a mouse by jumping to land where the mouse will probably be when she has completed her jump — but it’s just the fact that animals are capable of seeing ahead and learning that makes them the only really unpredictable things in the world. To think that we try to make laws as though people were quite regular and predictable.
D: Or do they make the laws just because people are not predictable, and the people who make the laws wish the other people were predictable?
F: Yes, I suppose so.
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BOOKS FROM ISGS — NEW AND OLD

On Writing NEW

Worlds of Wonder: How to Write Science Fiction and Fantasy
David Gerrold

Written with humor and verve, Worlds of Wonder offers a wealth of useful and practical information on how to write, tell a story, create characters and conflict, plus much more — and Gerrold’s wisdom applies to many types of writing, as well as science fiction.

For excerpts from Worlds of Wonder and Gerrold’s science fiction, see the Fall 2002 ETC, pages 245 to 259.


GS Fiction NEW

2 Kill or Not 2 Kill
William Dallmann

Two GS thrillers, Lobos, and A Dish Best Served Cold.

In two novellas, private shamus and semanticist Dr. Christopher Raven lives and sleuths, not coincidentally, on California’s beautiful Monterey Peninsula, where the author also happens to reside.

Bruno Power, villain: “A is A. ... It is only common sense.”
Dr. Raven, semanticist: “... someone once defined common sense as that which tells us the world is flat.”

For excerpts, see ETC vol. 59, no 4, Winter 2002-2003. For a review by Martin Levinson, see ETC vol. 59, no. 2, Summer 2002, page 221.

Infinity Publishing, 2001. 128 pages. 5¼ by 8 inches. Softcover. 1380KONTK. $11.95

On Living Skills NEW

The Inner Game of Life
Stewart Holmes

Learn to use general semantics methods to consciously adopt stress-reducing attitudes toward situations that arise each day.

For excerpts and information about the author, see ETC vol. 59, no. 1, Spring 2002, pages 4 to 24. For a review by Martin Levinson, see ETC vol. 59, no. 2, Summer 2002, page 221.


Classic Texts

The Tyranny of Words
Stuart Chase

Understand how we use words and how we let words use us.

“As I read it [Science and Sanity], slowly, painfully, but with growing eagerness, I looked for the first time into the awful depths of language itself — depths into which the grammarian and the lexicographer have seldom peered, for theirs is a different business.” — Stuart Chase, The Tyranny of Words, pages 7 & 8.

HBJ, 1938, 1966. 396 pages. 5¼ by 8 inches. Softcover. 1878TOW. $7.95

Explorations in Awareness
J. Samuel Bois

As it reveals linguistic habits that restrict vision and thought, this book helps readers develop semantic skills for sharper observations and more effective thinking, as well as more productive behavior at home and in the workplace. This popular introduction to general semantics has served as a required text in college courses and seminars for business and professional groups.

ISGS/Viewpoints Institute, originally published by Harper & Brothers, 1957. 212 pages. 5¼ by 8¼ inches. 1210EIA. $13.50

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An important theme of this book is that language and cognition combine with direct experiences and contribute to "indirect perception." Our culture, language, education, values, and experience act as filters of our direct experiences, which result in our indirect perceptions — the ways we think and feel about what we perceive. This book is not about culture and language per se. It focuses on interactions between and among language, culture, perceptions, and behavior. Readers will learn practical ways to prevent culture and language from controlling their world.

Although written for college students and designed for use by teachers, it provides a strong link between some formulations of general semantics and many subjects taught in college. And in this era of increasing diversity, it also provides vitally needed information for business people, public officials, trainers, and other individuals interested in language and behavior.

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