What It Means to Think Critically

The need to develop critical thinkers is currently something of a cause-celebre. The New York Times reports that "the public schools have discovered the importance of critical thinking, and many of them are trying to teach children how to do it" (Hechinger, 1987, p. 27). Educational journals regularly advertise conferences on critical thinking, and three recent major reports on American education, Involvement in Learning (National Institute of Education, 1984), A Nation at Risk (National Commission on Excellence in Education, 1983), and Higher Education and the American Resurgence (Newman, 1985), all call for the development of critical thinkers as a national priority for both civic and economic reasons. Civically, a critically informed populace is seen as more likely to participate in forms of democratic political activity. Economically, a critically active and creative work force is seen as the key to American economic resurgence in the face of crippling foreign trade competition. Johnston (1986, p. 4) observes that "it is generally agreed that nothing is more important to the nation’s ability to meet the competitive challenge of the future than what Samuel Ehrenhalt (1983, p. 43) of the Department of Labor has termed a ‘flexible, adaptable labor force.’ That the message contained in these reports is having some practical effect is evident from case studies of education for critical thinking (Young, 1980; Gamson and Associates, 1984; Stice, 1987), from special issues being devoted to this topic in such journals as Phi Delta Kappan and National Forum in 1985, from a flow of grant monies for projects to research applications of critical thinking, and from a recent upsurge in conferences on critical thinking. There have been attempts to propose a new concept described as critical literacy (Kretovics, 1985) and to outline the foundations of a critical pedagogy (Greene, 1986; Livingstone, 1987) that would foster this capacity. As Sternberg (1985, p. 194) observes, "It would be difficult to read anything at all in the contemporary literature of education without becoming aware of this new interest in teaching critical thinking."

But critical thinking is an activity that can be observed in settings and domains very far removed from the school or college classroom. Indeed, there is no clear evidence that any of the skills of critical thinking learned in schools and colleges have much transferability to the contexts of adult life. Sternberg (1985) points out the lack of correspondence between what is required for critical thinking in adulthood and what is taught in school programs intended to develop critical thinking. He writes that "the problems of thinking in the real world do not correspond well with the problems of the large majority of programs that teach critical thinking. We are preparing students to deal with problems that are in many respects unlike those that they will face as adults" (p. 194). In adulthood, we are thinking critically whenever we question why we, or our partners, behave in certain ways within relationships. Critical thinking is evident whenever employees question the appropriateness of a certain technique, mode of production, or organizational form. Managers who are ready to jettison outmoded organizational norms or unwieldy organizational hierarchies, and who are prepared to open up organizational lines of communication in order to democratize the workplace and introduce participatory forms of management, are critical thinkers. Citizens who ask "awkward" questions regarding the activities of local, regional, and national government offices, who call for political leaders to account for their actions, and who are ready to challenge the legitimacy of existing policies and political structures are critical thinkers. Television viewers who are skeptical of the accuracy of media depictions of what are portrayed as "typical" families, or of the neutrality and objectivity of television’s reporting of political events, are critical thinkers.

Recognizing Critical Thinking

What characteristics do we look for in critical thinkers? How can we recognize when critical thinking is happening? What are the chief capacities we are trying to encourage when we help people to become critical thinkers? What activities and processes are taking place when people are thinking critically? These questions, and others, are addressed in nine critical thinking "themes."
1. Critical thinking is a productive and positive activity. Critical thinkers are actively engaged with life. They see themselves as creating and re-creating aspects of their personal, workplace, and political lives. They appreciate creativity, they are innovators, and they exude a sense that life is full of possibilities. Critical thinkers see the future as open and malleable, not as closed and fixed. They are self-confident about their potential for changing aspects of their worlds, both as individuals and through collective action. Critical thinkers are sometimes portrayed as cynical people who often condemn the efforts of others without contributing anything themselves. Those who hold this view see being critical as somehow antisocial; it is seen as a belittling activity engaged in only by those with false assumptions of superiority. In fact, the opposite is true. When we think critically we become aware of the diversity of values, behaviors, social structures, and artistic forms in the world. Through realizing this diversity, our commitments to our own values, actions, and social structures are informed by a sense of humility; we gain an awareness that others in the world have the same sense of certainty we do—but about ideas, value and actions that are completely contrary to our own.

2. Critical thinking is a process, not an outcome. Being critical thinkers entails a continual questioning of assumptions. People can never be in a state of complete critical development. If we ever felt that we had reached a state of fully developed or realized critical awareness, we would be contradicting one of the central tenets of critical thinking—namely, that we are skeptical of any claims to universal truth or total certainty. By its nature, critical thinking can never be finished in some final, static manner.

3. Manifestations of critical thinking vary according to the contexts in which it occurs. The indicators that reveal whether or not people are thinking critically vary enormously. For some people, the process appears to be almost wholly internal; very few external features of their lives appear to change. With these individuals, we can look for evidence of the critical process in their writing or talking. With others, critical thinking will manifest itself directly and vividly in their external actions. People who renegotiate aspects of their intimate relationships, managers who deliberately depart from their habitual ways of coming to decisions or solving problems, workers who reshape their workplace according to nonhierarchical organizational norms after establishing a worker cooperative, or citizens campaigning for a nuclear freeze after observing the effects of a radiation leak in their community are all examples of how critical thinking can prompt dramatic action.

4. Critical thinking is triggered by positive as well as negative events. A theme common to many discussions of critical thinking is that this activity usually results from people having experienced traumas or tragedies in their lives. These events, so the argument goes, cause people to question their previously trusted assumptions about how the world works; and this questioning prompts a careful scrutiny of what were previously unquestioned ways of thinking and living. This often happens. It is also true, however, that critical thinking is triggered by a joyful, pleasing, or fulfilling event—a "peak" experience such as falling in love, being unexpectedly successful in some new workplace role, or finding that others place great store by abilities or accomplishments that we exhibit almost without being aware of them. In such circumstances we begin to reinterpret our past actions and ideas from a new vantage point. We begin to wonder if our old assumptions about our roles, personalities, and abilities were completely accurate. We begin to be aware of and to explore new possibilities with our intimates, at our workplace, and in our political involvements.

5. Critical thinking is emotive as well as rational. Critical thinking is sometimes regarded as a kind of pure, ascetic cognitive activity above and beyond the realm of feeling and emotions. In fact, emotions are central to the critical thinking process. As we try to think critically and help others to do so, we cannot help but become aware of the importance of emotions to this activity. Asking critical questions about our previously accepted values, ideas, and behaviors is anxiety-producing. We may well feel fearful of the consequences that might arise from contemplating alternatives to our current ways of thinking and living; resistance, resentment, and confusion are evident at various stages in the critical thinking process. But we also feel joy, release, relief, and exhilaration as we break through to new ways of looking at our personal, work, and political worlds. As we abandon assumptions that had been inhibiting our development, we experience a sense of liberation. As we
realize that we have the power to change aspects of our lives, we are charged with excitement. As we realize these changes, we feel a pleasing sense of self-confidence. Critical thinkers and helpers ignore these emotions at their peril.

Components of Critical Thinking

1. Identifying and challenging assumptions is central to critical thinking. Trying to identify the assumptions that underlie the ideas, beliefs, values, and actions that we (and others) take for granted is central to critical thinking. Once these assumptions are identified critical thinkers examine their accuracy and validity. They ask awkward questions concerning whether the taken-for-granted, common-sense ideas about how we are supposed to organize our workplaces, act in our intimate relationships, become politically involved, and view television fit the realities of our lives. They are open to jettisoning old assumptions when these are clearly inappropriate (for example, "Workers are there to work, not to think"; "Decisions made by executive directors, parents, and presidents are infallible and inviolable"; "Women should be kept barefoot and pregnant") and to search for new assumptions that fit more closely their experiences of the world.

2. Challenging the importance of context is crucial to critical thinking. When we are aware of how hidden and uncritically assimilated assumptions are important to shaping our habitual perceptions, understandings, and interpretations of the world, and to influencing the behaviors that result from these interpretations, we become aware of how context influences thoughts and actions. Critical thinkers are aware that practices, structures, and actions are never context-free. What we regard as appropriate ways of organizing the workplace, of behaving toward our intimates, of acting politically, and of viewing television reflect the culture and time in which we live. In realizing this, critical thinkers are contextually aware.

3. Critical thinkers try to imagine and explore alternatives. Central to critical thinking is the capacity to imagine and explore alternatives to existing ways of thinking and living. Realizing that so many ideas and actions spring from assumptions that might be inappropriate for their lives, critical thinkers are continually exploring new ways of thinking about aspects of their lives. Being aware of how context shapes what they consider normal and natural ways of thinking and living, critical thinkers realize that in other contexts entirely different norms of organizing the workplace, behaving politically, interpreting media, and living in relationships are considered ordinary. These contexts are scrutinized for assumptions that might be adopted and integrated into their own lives.

4. Imagining and exploring alternatives leads to reflective skepticism. When we realize that alternatives to supposedly fixed belief systems, habitual behaviors, and entrenched social structures always exist, we become skeptical of claims to universal truth or to ultimate explanations. In short, we exhibit what might be called reflective skepticism. People who are reflectively skeptical do not take things as read. Simply because a practice or structure has existed for a long time does not mean that it is the most appropriate for all time, or even for this moment. Just because an idea is accepted by everyone else does not mean that we have to believe in its innate truth without first checking its correspondence with reality as we experience it. Just because a chief executive officer, executive director, prime minister, president, religious leader, or parent says something is right or good does not make it so. Critical thinkers become immediately suspicious of those who say they have the answers to all of life's problems. They are wary of the management consultant who argues that "if only you will buy my training package and follow these steps to executive development, your executives will double the company’s output in the next fiscal quarter." They distrust the educator who purports to have a curriculum or model of teaching appropriate for all learners or subjects. They scrutinize carefully the therapist or counselor who argues that he or she has discovered the key to resolving difficulties within intimate relationships.
How Others Contribute to Critical Thinking

On a very personal level, practically all adults function in some way as critical thinkers. At some time or another, most people decide that some aspect of their lives is unsatisfactory, and decide of their own volition to change this. Such self changes are often (though not always) connected to externally imposed crises. Being fired or suffering crippling mental or physical disability is not something we choose to happen. When an intimate relationship dissolves, or a loved one dies, several reactions are possible. We may be thrown into an apathetic resignation to these changed circumstances, or we may deny this disappearance of a previously stable element in our life. We may well fluctuate between periods of acceptance of, and flight from, these changes. Energy alternates with apathy as we first scramble to deny or forget the changes forced upon us, and then become aware of their overwhelming reality. The rollercoaster turbulence of these changes is tiring and debilitating, and we describe ourselves as exhausted, burned out, or finished.

As people try to make sense of these externally imposed changes, they are frequently at teachable moments as far as the process of becoming critical thinkers is concerned. As people begin to look critically at their past values, common-sense ideas, and habitual behaviors, they begin the precarious business of contemplating new self perspectives, and actions. Skilled helpers can support these first tentative stages in critical thought by listening empathetically to people’s "travelers’ tales" of their journeys into unexplored personal and political territories. Helpers act as sounding boards, providing reactions to people’s experiences, pleasures, and anxieties. They help to make connections between apparently disparate occurrences and assist people in reflecting on the reasons for their actions and reactions. They encourage people to identify the assumptions under lying their behaviors, choices, and decisions. They help clients, learners, friends, and colleagues to recognize aspects of their situations that are of their own making and hence open to being changed by an act of will. They encourage skepticism of anyone claiming to have "the answer." They help people to realize that while actions are shaped by context, context can be altered to be more congruent with people’s desires.

When helpers and educators work in these ways, they are encouraging critical thinking. Critical thinking is complex and frequently perplexing, since it requires the suspension of belief and the jettisoning of assumptions previously accepted without question. As people strive for clarity in self-understanding, and as they try to change aspects of their lives, the opportunity to discuss these activities is enormously helpful. By providing an opportunity for reflection and analysis, educators and other helpers, such as counselors, therapists, trainers, and friends, are crucial. They are sympathizers, empathizers, reactors, devil’s advocates, initiators, and prompters. They help people to articulate and understand the assumptions underlying their actions. In short, they assist people to become critical thinkers.

Concepts of Critical Thinking

Phrases such as critical thinking, critical analysis, critical awareness, critical consciousness, and critical rejection are exhortatory, heady, and often conveniently vague. We can justify almost any action with a learner, client, friend, or colleague by claiming that it assists the process of critical thinking. Haranguing a friend who feels satisfied with life, forcing a learner to view things the way we do, and requiring that lovers re-evaluate their relationship or that colleagues change their work patterns may all be claimed (inaccurately) as examples of facilitating critical thinking. Central to developing critical thinkers must be some minimal level of consent on the part of those involved. Trying to force people to analyze critically the assumptions under which they have been thinking and living is likely to serve no function other than intimidating them to the point where resistance builds up against this process. We can, however, try to awaken, prompt, nurture, and encourage this process without making people feel threatened or patronized. These are the skills of critical helpers.
As a concept, critical thinking has been interpreted in a variety of ways. It has been equated with the development of logical reasoning abilities (Hallet, 1984; Ruggiero, 1975), with the application of reflective judgment (Kitchener, 1986), with assumption hunting (Scriven, 1976), and with the creation, use, and testing of meaning (Hullfish and Smith, 1961). Ennis (1962) lists twelve aspects of critical thinking, which include analytical and argumentative capacities such as recognizing ambiguity in reasoning, identifying contradictions in arguments, and ascertaining the empirical soundness of generalized conclusions. D’Angelo (1971) specifies ten attitudes that are necessary conditions for being critical, including curiosity, flexibility, skepticism, and honesty. As the central component of critical thinking, O'Neill (1985) proposes the ability to distinguish bias from reason and fact from opinion. To Halpern (1984), critical thought is a rational and purposeful attempt to use thought in moving toward a future goal.

Critical thinking is generally conceptualized as an intellectual ability suitable for development by those involved in higher education (Drake, 1976; Young, 1980; Meyers, 1986; Stice, 1987). Empirical studies of the development of critical thinking capacities focus on young adults (Kitchener, 1986; King, Kitchener, and Wood, 1985) or college students (Perry, 1970, 1981). While this setting for critical thinking is undoubtedly crucial, it is but one of the many settings in which critical thinking is practiced, particularly in adult life. The concepts of critical thinking, analysis, and reflection need to be taken out of the classroom and placed firmly in the contexts of adults’ lives—in their relationships, at their workplaces, in their political involvements, and in their reactions to mass media of communication. Critical thinking is not seen as a wholly rational, mechanical activity. Emotive aspects—feelings, emotional responses, intuitions, sensing—are central to critical thinking in adult life. In particular, the ability to imagine alternatives to one’s current ways of thinking and living is one that often entails a deliberate break with rational modes of thought in order to prompt forward leaps in creativity.

One alternative interpretation of the concept of critical thinking is that of emancipatory learning. The idea of emancipatory learning is derived from the work of Habermas (1979), who distinguished this as one of the three domains of learning (technical and communicative learning being the other two). As interpreted by adult educators (Collins, 1985; Hart, 1985; Apps, 1985), emancipatory learning is evident in learners becoming aware of the forces that have brought them to their current situations and taking action to change some aspect of these situations. To Apps (1985, P. 151), "emancipatory learning is that which frees people from personal, institutional, or environmental forces that prevent them from seeing new directions, from gaining control of their lives, their society and their world.''

A second concept closely related to that of critical thinking is dialectical thinking. Dialectical thinking is viewed as a particular form of critical thinking that focuses on the understanding and resolution of contradictions. Morgan (1986, p. 266) writes that "dialectical analysis (thus) shows us that the management of organization, of society, and of personal life ultimately involves the management of contradiction." As proposed by Riegel (1973) and Basseches (1984), dialectical thinking is thinking in which elements of relativistic thought (for example, "Morality can be understood only in the context of the culture concerned") are fused with elements of universalistic thought (for example, "Moral conduct is recognizable in any society by certain innate features"). Dialectical thinkers engage in a continual process of making judgments about aspects of their lives, identifying the general rules implicit in these judgments, modifying the original judgments in light of the appropriateness of these general rules, and so on. To Deshler (1985, p. 6), "dialectical thinking is thinking which looks for, recognizes, and welcomes contradictions as a stimulus to development." Change is regarded as the fundamental reality, forms and structures are perceived as temporary, relationships are held to involve developmental transformations, and openness is welcomed. Hence, we are involved in a constant process of trying to create order in the world—to discover what elements are missing from our existing ordering and to create new orderings that include these. Daloz (1986, p. 141) echoes this idea in his belief that dialectical thinking "presumes change rather than a static notion of 'reality.' As each assertion is derived from the one before, truth is always emergent, never fixed; relative, not absolute."
Being a critical thinker involves more than cognitive activities such as logical reasoning or scrutinizing arguments for assertions unsupported by empirical evidence. Thinking critically involves our recognizing the assumptions underlying our beliefs and behaviors. It means we can give justifications for our ideas and actions. Most important, perhaps, it means we try to judge the rationality of these justifications. We can do this by comparing them to a range of varying interpretations and perspectives. We can think through, project, and anticipate the consequences of those actions that are based on these justifications. And we can test the accuracy and rationality of these justifications against some kind of objective analysis of the "real" world as we understand it.

Critical thinking, then, involves a reflective dimension. The idea of *reflective learning* is a third concept closely related to that of critical thinking. Boyd and Fales (1983, P. 100) define reflective learning as "the process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective." Boud, Keogh, and Walker (1985, p. 3) view reflection as "a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation." To Schlossberg (1981, p. 5), the outcome of these activities is "a change in assumptions about oneself and the world" requiring "a corresponding change in one's behavior and relationships."

**Conclusion**

Critical thinking is a lived activity, not an abstract academic pastime. It is something we all do, though its frequency, and the credibility we grant it, vary from person to person. Our lives are sufficiently complex and perplexing that it would be difficult to escape entirely from feeling that at times the world is not working the way we thought it was supposed to, or that there must be other ways of living. Critical thinking is at the heart of what it means to be a developed person living in a democratic society. The ability to think critically is crucial to understanding our personal relationships, envisioning alternative and more productive ways of organizing the workplace, and becoming politically literate.