Editor’s Message

After September 11, 2001, many people who had once celebrated change became all too familiar with its dark side. Most crushing, of course, was the loss of loved ones, but soon people around the world began to experience material losses of various kinds, divided communities and increased racism, the loss of civil liberties, and war, not to mention a diminished peace of mind.

Nearly everyone was affected by the declining economy, and many lost jobs, not only in New York City but around the world. The World Bank (2001) saw the economic downturn as “condemning as many as 10 million more people to live in poverty next year, and hampering the fight against childhood diseases and malnutrition.” It further estimated that “an additional 20,000–40,000 children under 5 years old could die from the economic consequences of the September 11 attack as poverty worsens.” Meanwhile, ideas such as torturing people suspected of terrorism to force them to talk became commonplace, and alliances with rogue nations and groups that abuse human rights were fully acceptable.

Change—which once associated itself with new clothes or the latest movie, with growth and improvement, and with enticing possibilities for the future—suddenly became a monster to be feared. People in the United States talked as if the once-hailed revolutions in computers and medicine had ended along with the destruction of the World Trade Center in New York. They wanted to turn back the clock on immigration or at least stop it. There was an understandable desire to bring everything to a halt and rewind to an earlier time.

Without dwelling on one of the most reported stories ever, it is fair to say that few people were happy about the changes wrought by the events of September 11. Even accepting or understanding these changes seemed impossible. It may still seem incomprehensible to speak of a friendly, welcoming attitude toward change. However, that is exactly what I would like to argue; such an attitude is necessary if we are to make sense of the world and our place in it. Moreover, it is the only way we can grow. This type of attitude applies not only to the catastrophic events, but also to the mundane experiences in our lives. It applies to the ways we teach and learn and to our efforts to understand new technologies.
Coping With and Welcoming Change


Near the end of the fifth century BCE, the Greek philosopher Heraclitus pointed out, “You cannot step twice into the same river” (Fieser, 2001). He even went so far as to say that the one who steps is not the same person from one moment to the next. Heraclitus saw that unified things in the world inevitably break apart into a multiplicity of opposing phenomena. At the same time there is a way back to unity through harmony and peace. Phenomena in nature are constantly dividing and uniting in this way.

For Heraclitus, change was a fundamental constant in the way he conceived the world. If we accept his account it is not surprising that we see change as fundamental to our definition as human beings. We change along with the world around us, and who we become is determined by how we react to change. When a change occurs, it is often disruptive. Although change is rarely as disruptive as the events of September 11, any change can nevertheless upset the course of life. We know the world as it is, not as it might be. These perturbations can be purely destructive or they can be opportunities for growth.

It is no accident then that major theories of learning center around how an organism responds to disruption. For Piaget (1970/1972), the drive of the mind to assimilate new information periodically results in a condition of imbalance termed disequilibrium or cognitive dissonance. This conflict between expectations and experiences is essential for learning or development of cognitive structures. In Dewey’s (1938) account, it is difficulty, especially a felt difficulty, that provides the raw material for learning. As we seek to overcome a difficulty, we are forced to modify our previous ways of thinking and acting. Similarly, Vygotsky’s (1934/1962) zone of proximal development is that space in which an individual cannot succeed alone but can succeed with additional cultural mediation (e.g., artifacts, texts, and social structures). In each of these theories learning is essentially the trace of a successful response to change.
The processes of coping with the change that an individual undergoes are analogous to those that we see in disciplinary inquiry. In his well-known analysis of knowledge construction in science, Kuhn (1972) argued that normal science proceeds by working on problems within a paradigm or schema, much as an individual learns through small but generally expected changes. A revolution in science, meaning a shift in paradigm, occurs as the result of a crisis, something that cannot be assimilated (Piaget’s term) into the dominant paradigm. Similarly, developments in educational practice can be viewed as paradigm shifts occurring in response to disequilibrating events. Hairston (1982) described this process in the field of composition that took place in the 1970s.

**Coping With Change in Education**

We see education today as a system that needs to respond to dramatic changes. These changes deriving from September 11 are set against a backdrop of economic, demographic, and technological developments in society at large. As we address them, we typically adopt one of many stances, spanning the spectrum from denial to celebration (see Glossary).

The most common stance toward change, and the one we nearly all adopt from time to time, is the utilitarian. Changes are seen instrumentally—as things to be analyzed and utilized. In the realm of new technologies most people emphasize the need for everyone to improve their skills. It is believed that if we learn how to control new technologies we can cope with change and make effective use of new tools. The clearest example of this approach is the development of standards for technology skills. These include defining the competencies needed to use a particular technology, specifying what students need to know to sign up for a subject of study or to graduate from a program, and articulating what teachers need to know or teach.

In the United States, official bodies such as the International Society for Technology in Education (ISTE) are concerned with accrediting teacher preparation programs and promoting appropriate technology use in education. They have developed guidelines for students, teachers, technology specialists, administrators, and programs (ISTE Accreditation and Standards Committee, 1996; National Educational Technology Standards Project, 1999). Individual states have developed similar standards, in many cases working from the ISTE and National Council for Accreditation of Teacher Education (NCATE) model. The ISTE and NCATE standards
cover a broad area. In the case of foundations for all teachers there are standards for the following:

- Technology operations and concepts
- Planning and designing learning environments and experiences
- Teaching, learning, and the curriculum
- Assessment and evaluation
- Productivity and professional practice
- Social, ethical, legal, and human issues

These standards can be quite useful as a heuristic to promote dialogue about what is most important in teaching.

However, there are several problems that are quite familiar to anyone who has served on a standards committee. Sometimes, individual standards are far too specific (e.g., that people should know how to use a particular piece of software to do a given task). It is likely that the software in question is only one of many ways to accomplish a task, and would be superceded by the time the standards are actually implemented. On the other hand, a standard can be quite general, as in the ISTE/NCATE III. B: “Use technology to support learner-centered strategies that address the diverse needs of students.” Representing what someone needs to know is difficult when circumstances vary and the type of knowledge needed is multifaceted.

Beyond the problem of representation is the underlying issue that the world is changing. We would like to prepare students and educators to cope well with the world they are about to enter, but as Dewey (1938) showed, the idea of education as preparation for life is self-contradictory. What one learns to satisfy a specific aim is too often compartmentalized—unavailable when one needs to react to a new situation. Learning how to learn is far more important than obtaining any specific skill or bit of knowledge.

**Welcoming Change**

If change is inevitable as Heraclitus said, if it is unpredictable as much of our recent experience tells us, and if it is traumatic as September 11 emphatically declared, we naturally seek some framework for response. The standards movement started with these premises, intending to provide us with tools to accommodate change.
Ultimately it is a reductionistic approach that attempts to categorize the modes of response, showing us only what we need to know and do.

Limitations of the standards and of other conventional process technologies—benchmarks, performance indicators, scope and sequence, and so on—are well known and perhaps best by those who work with them on a daily basis. Is there any alternative? How else might we think about a changing world and its implications for teaching and learning?

I suggested that Kettering’s “welcoming attitude toward change” might be what is needed not just for research, as he says, but for response to any situation. But should we welcome all change? Aren’t there times when we should say no either to disasters or to newness that undermines values we hold dear? That answer depends on what we mean by the word welcome.

If, by the word welcome we mean to accept without question or to embrace in all its dimensions, then the answer is clearly yes. We all need to develop the critical faculty that can help us look at something new and assess its strengths and limitations. However, there is another sense of welcome that Kettering probably intended. It is closer to the way one might interact with a visitor, for example, someone who has just moved to your neighborhood. In this second sense, welcoming means graciousness and openness to difference. There are several key aspects.

**Listening.** A welcoming attitude toward change requires listening and making the strange familiar. Rather than compartmentalizing experiences as good or bad it asks how meaning can be derived from the experience. Through listening, it attempts what Gadamer (1960/1994) called “fusing horizons,” a process in which we stretch from our current understanding and our very personal history to understand the perspective of another.

**Respect for diversity.** Welcoming implies a respect for diversity. It recognizes that no one individual has the source of all knowledge and that every individual possesses knowledge no one else has. Thus, diversity becomes a resource for growth and not a problem to be overcome.

**Humility.** A welcoming attitude incorporates a strong dose of humility as well. Rather than emphasizing the accumulation of chunks of knowledge and skills, it assumes a continual incompleteness in knowledge and skills. It sees each situation as an opportunity to learn more. Thus, the teacher is a learner.

**Growth through overcoming difficulties.** In welcoming change, we seek to discover new connections and open new possibilities. When experiences are negative they still provide opportunities for growth, often more than positive ones.
do. Thus, the emphasis shifts from a model of things as they are to a dynamic one in which each experience brings with it the chance to grow. In the case of new technologies, a welcoming attitude would not include seeking mastery. Instead, the focus is on being open so that one is able to learn more easily.

(I would like to thank Ellen Knutson for pointing me to the Kettering Foundation’s work and Christine Jenkins for discussions that enlightened my conception of change and inquiry.)

Other Views

For Gadamer (1960/1994), understanding can never be complete or total, but there can be partial understanding through which we can grow.

One intends to understand the text itself. But this means that the interpreter’s own thoughts too have gone into re-awakening the text’s meaning. In this the interpreter’s own horizon is decisive...as a possibility that one brings into play and puts at risk, and that helps one truly to make one’s own what the text says. I have described this above as a “fusion of horizons.” (p. 388)

Website of the Month

The Pew Research Center is an independent opinion research organization (sponsored by the Pew Charitable Trusts) that studies attitudes in the United States toward the press, politics, and public policy issues. It publishes widely cited research on the use of the Internet and other media by various groups, including adolescents (see http://www.pewinternet.org). Following September 11, the center tracked public attitudes about the events. Pew studies are an important resource for politicians, journalists, scholars, and public interest organizations. All the current survey results are made available free of charge on their website. The research program includes five principal areas of investigation.

- The People & The Press—explores public attitudes about the credibility, social value, and salience of the news media.
- The People, The Press & Politics—features a typology that divides the American electorate into distinct voting groups and identifies the basic values and attitudes that animate political behavior.
• The News Interest Index—measures on a regular basis how closely the public follows the major news stories and links this to views about politics and policy issues.

• America’s Place in the World—a series of in-depth surveys and analyses of the public and opinion leaders on international policy in the post–Cold War era.

• Media Use—major surveys that measure the public’s use of, and attitudes toward, the Internet and traditional news outlets.

**Glossary**

**Stances Toward Change**

I have argued that there were several classic stances concerning how new technologies should change education (Bruce, 1997). These stances apply to our attitude toward change in general.

**Aesthetic**: Others adopt an essentially aesthetic stance toward change. They believe change should be described and commented on but not fully engaged. This stance is similar to what Rosenblatt called the “aesthetic response” to reading.

**Neutrality**: Some say no specific stance toward change is needed, implicitly advocating a neutral stance. They fear the allure of today’s fashion, stressing instead what they see as enduring values. Thus, they give little consideration to how events might alter their practices. In traumatic changes, it is often difficult to distinguish neutrality from denial.

**Opposition**: Others go beyond the neutral position to stand in active opposition to change. In many cases, their concern is that humanistic values will be subsumed by technocratic or economic forces. Kaufmann (1977) used the term *dogmatic* in a similar way in his discussion of the art of reading.

**Skeptical**: The pessimistic side of utilitarianism is practical skepticism. Proponents point to past unfulfilled promises and to the inertia of large systems as justification for their doubts.

**Transactional**: Dewey and Bentley’s (1949) theory of transaction provided one more way to respond to change, whether that be in the form of new ideas in a text, a new technology, another person, or events in the world. In this theory, a transaction is the encounter of a person’s unique, situated history with something new. Every transaction is different and holds the seeds of new meaning (see McDermott, 1981, p. x). A transactional stance means a welcoming attitude toward change, opening oneself to the significance inherent in such encounters.

*continued*
Glossary (cont.)

**Transformational:** In contrast to the oppositional position is the transformational one, especially when that stance conceives the transformation as positive. In extreme versions, we get what Kaufmann called the “exegetical response,” a faith in the transformative powers of the new. The transformationalist argues that our task is to understand and guide the transformation.

**Utilitarian:** Some argue for a utilitarian stance (for Kaufmann, agnostic), saying that new tools or ideas need to be incorporated intelligently into practice. The utilitarian stance toward change is much like Rosenblatt’s (1978) efferent stance in reading—a view of the text as a repository of information.

REFERENCES


