

Research Capsules

A F O C U S O N D E V E L O P M E N T

What difference does a day make—or a year, or a decade—in the way a person is treated by an organization? How do human beings develop over time? What effect might an organization's environment have on individual development? And what types of organizational factors and HRD efforts might encourage individual and organizational development? Those thorny, intriguing questions are addressed by the researchers featured in this column.

As a maturing person in a transforming organization, living in the last decade of one century and preparing myself and others to dwell in the next, I find those questions apropos. Moreover, because of today's dynamic demographic, economic, and social conditions, individual and organizational development—and the interaction of the two—may become human resource development's most significant leverage point to increase productivity and release creative energy.

Older Workers Viewed as Less Likely To Be Promoted

Sid Siegel of Drexel University analyzed the relationship between current performance and the likelihood of promotion for more than 700 matched pairs of young and old managers and their immediate supervisors. He found no significant differences in performance evaluations between the age groups. But he found significant differences between supervisory perceptions of the likelihood of future promotions for the older managers and the younger managers.

The managers involved in the survey performed lower- to middle-

management functions in three companies—one in communications, one in banking, and one in the electronics industry. Data were obtained from a 22-item rating scale on performance, completed by the supervisors. The survey included a question about the likelihood of promotion.

Siegel uses three age groupings of older workers:

- ▶ 45 to 63
- ▶ 50 to 63
- ▶ 55 to 63.

The age groups established for their younger counterparts:

- ▶ 23 to 44
- ▶ 23 to 49
- ▶ 23 to 54.

Analysis of covariance is used to determine relationships between the old and young groups of managers and the performance evaluations by their supervisors, and for relationships between the same age groups and their perceived likelihood of promotion. Regression analysis is used to assess relationships between each age group's performance evaluation and its likelihood of promotion. The data analysis controlled for confounding variables such as gender, education, and career plateaus.

Results show a positive relationship between performance and promotability for younger groups of managers. For two of the groups—23 to 44, and 23 to 54—the relationship is significant.

Siegel carefully noted that this study addresses the likelihood of promotability, not the actual promotion or even the intention of promotion. He raises the possibility that specifically age-related variables other than chronological age may be at work here. For example, supervisors may perceive a reduced likelihood of promotion for older workers because they believe older workers

In this month's column, researchers examine factors that affect individual and organizational development.

will have less motivation to perform new jobs, will not be available for relocation, have less useful time remaining with the organization, or represent a lower return on investment for training.

Siegel suggests that supervisors need to be sensitized to their possible perceptual biases, and that older workers require equal access to organizational programs aimed at preparing them for future promotions. He recommends involving them in mentoring opportunities.

Siegel's work may be particularly pertinent, given that the U.S. Bureau of Labor Statistics projects that by the year 2000, we can expect more than 19 million workers (14 percent of the workforce) to be 55 years old or older.

For a report of Siegel's study, "Relationships Between Current Performance and Likelihood of Promotion for Old Versus Young Workers," contact Sid Siegel, Department of Management, College of Business and Administration, Drexel University, 32d Street and Chestnut Street, Philadelphia, PA 19104; phone 215/895-6933; fax 215/895-2851.

Some Perspectives on Adult Development

The possible inability of some supervisors to see expanded work opportunities for older workers ironically runs counter to the growing body of knowledge about adult development.

The study of adult development was pioneered by such people as Piaget, Kohlberg, Loevinger, and Perry. Now it is attracting a growing group of theorists and researchers who posit that throughout their life spans, adults expand their capacities to deal with multiple perspectives and increased complexity.

From a developmental perspective, the "graying" of the workplace may be occurring at an opportune time. It is increasing the number of older workers in the workforce who can develop or who have developed increased abilities to deal with the complex business and organizational problems that are becoming the hallmark of the 1990s.

Understanding the theory of and current research in adult development can provide a valuable basis for work in human resource development. The three frameworks for development presented here, while different, are remarkably related.

Modes of Being and Learning. In Working Paper 8, "Modes of Being and Learning," Tom Boydell defines development as a process of irreversible qualitative change that involves definite jumps to a new state of being.

Modes of Being and Learning

Mode 7: Dedicating

- ▶ having a sense of the task (of the times) in front of me—and my part in it
- ▶ being able to see through things to the essentials—to sum this up in a word or an idea
- ▶ having a deep conviction and sense of purpose
- ▶ finding meaning in what I am doing and the way it is done.

Mode 6: Connecting

- ▶ realizing that things are somehow connected, that they are interdependent
- ▶ seeking wider overviews, bringing things together
- ▶ widening my outlook and my perspective, looking at consequences and implications
- ▶ being able to work across a whole field of activity.

Mode 5: Experimenting

- ▶ needing to find out things, experiment, and try out
- ▶ taking active steps to discover more, to increase my understanding
- ▶ planning how to carry out experiments
- ▶ having a deep urge to discover—seeking, striving
- ▶ developing new ways of doing things for myself and others.

Mode 4: Experiencing

- ▶ learning from experiences—and using this as a basis for action
- ▶ noticing what is going on, how I am affecting it, and how it affects me; having my own ideas and theories that work for me
- ▶ being independent and working things out for myself
- ▶ doing things "my way"—express-

ing myself through what I do.

Boydell indicates that development occurs in distinct stages that appear in a particular sequence; once a new stage is reached, previous ones remain but have a different significance. He claims that the process of moving from one stage or mode may be triggered by all sorts of motivations that differ widely, and that may themselves be related to one's stage of development.

The box, "Modes of Being and Learning," summarizes the descriptions of each of the seven modes

ing myself through what I do.

Mode 3: Relating

- ▶ being sensitive, aware, and in tune with what is happening
- ▶ understanding at a deeper level what is going on and being able to explain this to others in terms of established ideas and theories
- ▶ having a "feel" for the situation; relating to it in an appropriate manner, as defined by norms, customs, and practices
- ▶ tuning in to the situation and responding in a skilled and effective way.

Mode 2: Adapting

- ▶ responding to variations from the routine by adapting the way I operate
- ▶ recognizing patterns of information and noticing the effects of changes
- ▶ wanting to make procedures work well, making modifications to bring things back into control
- ▶ putting together a series of skills and behaviors, making slight modifications to the way I have been taught.

Mode 1: Adhering

- ▶ working to set standards or ways of operating that have been previously set down by others
- ▶ operating from memory, thinking in terms of rules, checklists, and set procedures
- ▶ feeling insecure if there is no "correct" answer provided for me
- ▶ carrying out prescribed routines, implementing them "to the letter."

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Boydell identifies. The figure compares some of their key dimensions. In this paper, Boydell describes the seven modes, whose origins can be traced to Bloom's *Taxonomy of Learning*, and shows their relationship to other stage models of development.

Boydell provides a fairly comprehensive, although not all-inclusive, map of theories of adult development. It is valuable for understanding the interrelations among research conducted in the field. Specifically, he illustrates how 20 other researchers' theories relate to the seven modes of being and learning, and thus to one another, in the areas of ways of knowing, moral and ethical development, interpersonal and management styles, learning, knowing, training, and education.

Boydell associates some training and development activities with particular modes of being and learning. Among them:

- ▶ expository teaching with mode 3 (relating)
- ▶ experiential exercises with mode 4 (experiencing)
- ▶ action learning with mode 5 (experimenting).

The synthesis he presents suggests new possibilities for research as well as a useful conceptual approach for HRD professionals.

For example, Boydell assumes that action learning is an appropriate vehicle for learners in mode 5 (experimenting), and concludes that learners in mode 5 operate at Piaget's "formal operations" level of development. If we accept those premises, then HRD professionals who are designing learning strategies for individuals and organizations that are operating at mode 5 may benefit from increasing emphasis on action learning and decreasing emphasis on formal lectures and case studies.

Boydell has developed a 115-item questionnaire designed to assess individuals' use of the seven modes. To obtain the working paper or to discuss collaborative research possibilities, contact Tom Boydell, the Learning Company Project, Transform Individual and Organization Development, Suite 55-56, 22 High Street, Sheffield S1 2GE, ENGLAND; phone 44-742-721178; fax 44-742-729706.

Summary of Some Key Dimensions of Mode

Mode	Prime Influence	World Is...	I Seek...	"Trade"
7. Dedicating	myself on outer world	living, in need of help	purpose	visionary
6. Connecting		magical, awesome	connections, wholeness	artist
5. Experimenting		interesting	insight	scientist
4. Experiencing	myself	exciting	experience	
3. Relating	outer world on myself	attractive	membership	craftworker
2. Adapting		dangerous	to conquer it	manipulator
1. Adhering		dangerous	protection	operator

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World View Shift. The Society for Research in Adult Development held its Seventh Adult Development Symposium in June 1992, in Toronto. At the symposium, Melvin Miller shared preliminary trends from a 12-year longitudinal study that looked at changes in the world views, personalities, and thinking styles of adults over time. Miller's nine world views:

- ▶ 1. atomism (mechanistic/reductionistic)
- ▶ 2. stoicism (the doer and the experience)
- ▶ 3. traditional theism (law-and-order position)
- ▶ 4. nihilism (nothing is knowable)
- ▶ 5. skepticism/agnosticism (the doubter and questioner)
- ▶ 6. traditional humanism ("the person is the measure...")
- ▶ 7. pantheistic monism (Eastern mysticism)
- ▶ 8. integrated/committed existentialism (a maker of meaning)
- ▶ 9. integrated/committed theism and humanism (true commitment beyond self).

Like Boydell's modes, these world views denote broadening perspectives. People who look at life from world views 1 through 3 view truth as being objective or outside of themselves. From world views 4 through 6, they see truth as being determined subjectively, by the self. From world views 7 through 9, they see truth in terms of a relationship between a per-

son and the other. Shifts in locus of control and ego development are accompanied by upward mobility on Perry's positions of intellectual and ethical development.

In 1981, Miller administered the Washington University Sentence Completion Test, the Rokeach Dogmatism Scale, and the World View interview to 40 men from five vocational and professional areas (science, social science, law, religion, and the military). Based on the interviews, Miller assigned each subject to one of the nine different world views. He also assigned each subject to one of the Perry positions of intellectual and ethical development, on the basis of their responses to specific world-view interview questions.

Statistical tests were conducted to analyze differences in personality and cognitive variables among the subjects in the various world-view categories.

In 1992, he repeated the process with 19 of the original participants in order to study changes that occurred in the interrelated variables over the intervening 12 years. Miller found changes in participants' personalities and cognitive functions. For example, participants revealed higher degrees of dialectical thinking. Miller also noted trends toward higher ego levels and higher scores on the Perry scheme for all subjects and actual changes in world views.

For a copy of Miller's paper, "World View, Ego Development, and Epistemological Changes in Adulthood: Preliminary Longitudinal Trends," contact Melvin Miller, 18 Murray Hill Drive, Montpelier, VT 05602; phone 802/229-0847.

The Effect of Organizational Atmosphere on Development.

Organizational environment may be key to individual ability to continue along a developmental path. A group of Harvard researchers describe their investigation of the relationship between individual moral development and the developmental stage of a workplace environment, in a paper called "Institutional Atmosphere and the Higher Moral Stages."

The researchers are Michael Commons of Harvard Medical School; Sharon Krause, Gregory Fayer, Jonalu Johnstone, and Jeremy Straughn of Harvard Divinity School; and Maryellen Meaney of Harvard University. Commons presented the paper at the Toronto Adult Development Symposium.

The researchers define "atmosphere" as the dynamic and reciprocal relationship between individuals and the organization itself. In this work, atmosphere refers to the manner in which contingencies either constrained or motivated the development of individuals. A contingency is viewed as a relationship between events and outcomes. Consequences that increased the likelihood of events are termed reinforcers. Those that decreased the likelihood of events are termed punishers.

The researchers used the General Stage Model to interview 28 Harvard students, faculty members, and administrators. Participants were asked the following questions:

- ▶ What is a good university?
- ▶ What is good government?
- ▶ What is good government for a university?

They were also presented with a dilemma involving a conflict between students and administration on the issue of free speech, and the Heinz Dilemma, a moral dilemma used by Lawrence Kohlberg and other researchers.

Responses were analyzed using the General Stage Model, which classifies development in terms of the

Research Guidelines

"Research Guidelines" is a quarterly column sponsored by the Research Committee of the American Society for Training and Development. It is compiled and edited by Linda Morris, director of industry services education for Ernst & Young.

Topics of interest include studies of attitudes or trends in training and development, HRD techniques and methods, and research findings that have clear HRD implications. Of special interest are research studies conducted in your own organization.

To contribute, please send a complete report and a brief description of the problem investigated, methods used, results, conclusions, and implications for HRD. Include your name, address, and phone number so that readers may contact you for further information. The address is at the end of the column.

A Research Resource

For membership and symposium information about the Society for Research in Adult Development, contact Patrice Miller in the membership office, Society for Research in Adult Development, 234 Huron Avenue, Cambridge, MA 02138.

task-required hierarchical structure of response. Researchers point out that in professional-level workplace interactions, three developmental stages predominate:

- ▶ formal operational
- ▶ systematic
- ▶ metasystematic.

People operating at the formal operational stage exhibit the ability to explain relationships through causal statements. They can use causal arguments to convince people of empirical relationships. At the systematic stage, people can synthesize elements into a network of relationships. They can build single unified systems that they believe are comprehensive. At the metasystematic stage, people coordinate two or more systems according to a princi-

ple that is external to both systems.

The researchers provide examples of situations in which individuals exhibited an ability to deal with a higher level of complexity in their thinking than was reinforced by the institution in which they worked. They suggest that organizations in which decision making is grounded in lower-stage perspective-taking may perpetuate atmospheres in which individuals' higher stages of perspective-taking are not reinforced.

They also suggest that organizations might reinforce individual behavior that takes the perspectives of others into account and that such action may enable the organization to operate at the higher stages of perspective-taking.

The researchers conclude that workplace atmosphere typically places a ceiling on individual moral development. In the university, for example, metasystematic thinking might be reinforced in a person's research but not with regard to policy decisions involving the university itself.

The research suggests that metasystematic responses typically challenge the existing norms and policies of a workplace by integrating perspectives that fall outside of the organizational bureaucracy. They argue that organizations that reinforce higher-stage responses increase the perspective-taking abilities of their members, who in turn will be more likely to integrate the organizations' perspectives into decision making.

For a copy of the paper, contact Michael L. Commons, Department of Psychology, Harvard Medical School, Massachusetts Mental Health Center, 74 Fenwood Road, Boston, MA 02115-6196; phone 617/497-5270.

"Research Capsules" is a quarterly column by Linda Morris. Send submissions, comments, and suggestions for topics to her at Ernst & Young, Fairfax Square, Tower 2, 8075 Leesburg Pike, Vienna, VA 22182; 703/903-5000.