

A Kind Word for Theory X: Or Why So Many Newfangled Management Techniques Quickly Fail

Michael P. Bobic

Emmanuel College

William Eric Davis

Community College Southern Nevada

ABSTRACT

Forty-three years ago, Douglas McGregor's *The Human Side of Enterprise* offered managers a new assumption of management (Theory Y), which would be more effective than what he considered then-current management assumptions (Theory X). While McGregor's Theory Y model has been widely adopted in management literature as the preferred model, Theory X management still persists in practice. Moreover, many efforts to introduce management initiatives based on Theory Y have failed to reform the workplace or worker attitudes. While most explanations of these failures focus on training, implementation, or sabotage, this article proposes several defects in Theory Y that have contributed to these failures. Theory Y is based upon an incomplete theory of human motivation that erroneously assumes that all people are creative (and want to be creative) in the same way. Important research by Michael Kirton presents a different model of creativity that explains the failure of Theory Y and justifies Theory X as an important managerial theory and strategy. Theory X persists not because of circumstances or the nature of particular jobs, but because different people have personalities that respond to Theory X management better than to Theory Y management.

But if the times and circumstances change, [a leader] will fail for he will not alter his policy. There is no man so prudent that he can accommodate himself to these changes, because no one can go contrary to the way nature has inclined him, and because, having always prospered in pursuing a particular method, he will not be persuaded to depart from it. . . . If he were able to adapt his nature to changing circumstances, however, his fortunes would not change.

—*Niccolo Machiavelli, The Prince*

We thank Dr. Beryl Radin and the anonymous reviewers, whose contributions greatly improved this draft. We would also like to thank Dr. Bob Cunningham (University of Tennessee at Knoxville), Mike Berheide (Berea College), and Bob Berman (Marshall University) for their support and inspiration. All errors are solely those of the authors.

DOI: 10.1093/jopart/mug022

Journal of Public Administration Research and Theory, Vol. 13, no. 3, pp. 239–264

© 2003 Journal of Public Administration Research and Theory, Inc.

If man is not what conventional organizational theory assumes him to be, then much of the organization planning carried on within the framework of that theory is nothing more than a game of logic.

—Douglas McGregor, quoted in Warren Bennis, Edgar H. Schein, and Caroline McGregor, Douglas McGregor, Revisited: Managing the Human Side of Enterprise

In 1960, Douglas McGregor published *The Human Side of Enterprise (THSE)*, fundamentally altering the course of management theory. McGregor's perspective was that management was more than simply giving orders and coercing obedience; it was a careful balancing of the needs of the organization with the needs of individuals (McGregor 1960, 53–55; Bennis, Heil, and Stephens 2000, 87). He defined these individual needs through psychologist Abraham Maslow's hierarchy of needs (Bennis, Heil, and Stephens 2000, 129). At the time of McGregor's writings, social scientists were finding a great deal of support for Maslow's arguments (McGregor 1960, 36). By applying the idea of a hierarchy of needs to the work environment of the mid- and late 1950s, McGregor offered a new theory of management that promised to unlock the creative potential of the American workforce and bring about a new era of management theory and practice.

In the forty-three years since the publication of *THSE*, three core elements of McGregor's theory have undergone substantial erosion. First, many workers today find themselves in an environment that inspires neither satisfaction nor job loyalty (Bennis, Heil, and Stephens 2000, 12); second, Maslow's hierarchy of needs theory has more critics than supporters; and, finally, research on human motivation no longer defines "creativity" simply as "innovation." Moreover, even with a plethora of Theory Y–based management methods and approaches, recent scholarship points out the lack of measurable improvement in job performance, satisfaction, or quality (Staw and Epstein 2000; Fernando 2001). Despite the almost universal belief that Theory Y assumptions are superior to Theory X assumptions (McGregor 1960, 49, 245; Tausky 1992, 4), Theory X assumptions still prevail in the workplace (Collins 1996) and some management students still prefer those assumptions to Theory Y assumptions (Weinstein 2001).

This article argues that Theory X methods persist because the view of human nature found in Theory Y is incomplete. Managers surmise that, in many cases, the view of human nature in Theory X reflects the realities of modern workers more accurately. This article offers a theoretical justification for that intuition. To do so, it is first necessary to review the historical context in which McGregor developed Theory Y. That history will explain why Theory Y's view of human nature is incomplete. Given the fundamental changes in our understanding of personality and motivation theory and the dramatic changes in the economy, it is time to reevaluate McGregor's theory.

THE FOUNDATION OF THEORY Y

The Work Environment

McGregor's research occurred from the mid-1930s until the mid-1950s. The Great Depression, World War II, and the cold war represented an exceptional time in American economic history, a time in which many new employees entered the workforce as the United States demobilized and scaled down its standing army (Faulkner and Kepner 1950; Bailyn et al.

1981, 873). Soldiers returned to the home front to seek jobs, housing, and the like. Moreover, the mid-1950s brought a tremendous growth of industry, the interstate highway system, and a substantial rise in the number of middle-class families (Bailyn et al. 1981).

With a strong economy and such new benefits as Social Security, the GI Bill, and other entitlement programs, most Americans settled into regular work patterns that they anticipated would persist well into the future (Whyte 1956, 129; Manchester 1974, 527–28, 708). By the late 1950s, it was commonly believed that a worker would work for the same firm for many years following a relatively stable and clear career path until retirement (McGregor 1960, 186; Whyte 1956; Helmich and Brown 1972; Mihal, Sorce, and Comte 1984). This was a work environment in which employment was stable, career paths were well-defined, and employees followed certain life patterns in which basic needs for shelter and the like would be met for a very long time (McGregor 1960, 186; Gabor 2000, 166).

McGregor wrote *THSE* in 1960 after almost three decades of investigation into working conditions and workers' attitudes toward their jobs (McGregor 1960; Gabor 2000, 164). He was fascinated by the idea of motivation—that special something in a person that drives him or her to work hard, to perform often routine or thankless tasks with energy and enthusiasm. He wanted to know what motivated a person and what managers or supervisors could do to encourage that motivation. More importantly, McGregor wanted to know why, in a world in which financial and retirement needs were met so effectively, so many workers were dissatisfied with their jobs (McGregor 1960, 22–24, 54).

The answer for McGregor seemed to rest in the degree of control or autonomy a subordinate was granted over his or her work environment (1960, 28, 29, 110–12; 1967, 61 and the following pages) (although to be precise, the 1960 edition of *THSE* does not mention any female managers or line employees). McGregor believed that the more autonomy and responsibility workers had, the more likely they were to be motivated in their jobs (1960, 36–40; in Bennis, Schein, and McGregor 1966, 52–53; 1967, 11).

McGregor believed that motivation grew out of the inherent human drive to satisfy needs, but his ideas about how motivation and needs were linked evolved throughout his career. His early writings stress extrinsic rewards such as pay and benefits (Bennis, Schein, and McGregor 1966, 43; 1967, 10–11); however, he soon began to focus on intrinsic or internal motivations for behavior. McGregor often drew on the works of Chris Argyris, Frederick Herzberg, and others who believed that manager-subordinate relationships should be understood as social constructs or complex role interactions (1960, 32, 55, 173, 186–88; 1967, 76). By the time McGregor began work on *THSE*, he had encountered the work of Abraham Maslow. Maslow's work not only supported McGregor's own ideas about a hierarchy of motivation (McGregor in Bennis, Schein, and McGregor 1966, 22, 40, 44), it provided a stronger theoretical foundation for McGregor's work (1960, 35–37, 67; 1967, 75; McGregor in Bennis, Schein, and McGregor 1966, 43, 52–135).¹

1 McGregor relied upon a number of theories, including social constructivism, to explain the manager-subordinate relationship and its pathologies. However, both internal and external evidence support the central importance of Maslow's hierarchy to McGregor's new theory of management. McGregor states in *THSE* that Maslow's hierarchy was central to his work (1960, 36–40). He noted that its key concepts (particularly self-actualization) were “central to my view of appropriate managerial strategy” (1967, 75) and critical to the success of the Scanlon Plan (quoted in Bennis, Schein, and McGregor 1966, 135). He often referred to fulfilling higher-order needs as part of management (1960, 37, 67; 1967, 75–77; McGregor in Bennis, Schein, and McGregor 1966, 43, 52, 135). Scholars almost exclusively interpret McGregor in terms of Maslow's hierarchy as well. Twenty-eight of the thirty-four most popular management texts discussed McGregor's Theory X and Theory Y directly in relation to Maslow. None of the twenty-four texts that discussed social construct theory mentioned McGregor.

Figure 1

Maslow's Hierarchy of Needs. Image provided by Chris Jarvis, of the Business On Line Archives, Brunell University. Used by Permission. <http://sol.brunel.ac.uk/~jarvis/bola/motivation/masmodel.html>



Maslow's Needs Model

Maslow believed that human beings have five ascending types of needs that they seek to satisfy or fulfill within different environments (1999, 39–40). At the bottom of Maslow's hierarchy of human needs are the basic physiological needs for food, shelter, and clothing (figure 1). These needs must be “reasonably satisfied” before a person will turn his or her attention to the next higher order need, though “reasonable satisfaction” is culturally defined. A subsistence level of satisfaction of physical needs in our society today is far higher than that, say, in the villages of India” (McGregor 1967, 11). Once physiological needs are met (and there is a certain assurance that they will continue to be met), a person turns his or her attention toward the need for safety from danger. McGregor's observations about the work environment led him to conclude that most employees were not primarily concerned about either physiological or safety needs. The culture and structure of the workplace in the mid-twentieth century generally seemed to satisfy such needs (1960).

Once a person feels reasonably certain that he or she can obtain necessary food and shelter, and that these items will not be taken away, that person will then turn his or her attention toward social relationships. Humans have a need for a sense of belonging and to share personal experiences with other human beings, but that need is pursued only when lower level needs have been met.

Beyond the need for belonging are two forms of “esteem” needs. The first is the need for respect from one's peers, or status, which Maslow called a “lower” form of esteem (1998, 23; Rowan 1998). The higher form is self-esteem, a sense of confidence and autonomy in which a person may not care as much about the respect or esteem in which others hold him or her (without being self-centered).

At the top of the hierarchy of needs is self-actualization. Self-actualization needs are complicated, but they encompass the idea of reaching one's fullest potential, doing work that is important and challenging and that provides a sense of creative satisfaction:

We may define [self-actualization] as an episode, or a spurt in which the powers of the person come together in a particularly efficient and intensely enjoyable way, and in which he is

more integrated and less split, more open for experience, more *idiosyncratic*, more perfectly *expressive or spontaneous*, or fully functioning, more *creative*, more humorous, more ego-transcending. . . . (Maslow 1999, 106 [emphasis added])

Innovativeness was, for Maslow, the essential characteristic of a self-actualized person (1998, 229–30). Self-actualized people were far more likely to be creative, to find new solutions to problems than people at lower levels of the hierarchy (Maslow 1970, 170–71). Self-actualization, then, represented the peak of one’s creative potential. This point was not lost on McGregor.

The Concept of Creativity

McGregor believed that the real problem with modern employment was that it stifled human creativity (1960, 55–56; 1966, 55–56), which in turn hindered motivation. Central to McGregor’s (and Maslow’s) understanding of motivation and behavior is an assumption that all people are inherently creative and innovative:

The key question isn’t “what fosters creativity?” but it is why in God’s name isn’t everyone creative? Where was the human potential lost? How was it crippled? I think therefore a good question might be not why do people create? But why do people not create or *innovate*? (Maslow 1998, 13 [emphasis added])

For Maslow, creativity means the ability to innovate. This is demonstrated in his definition of self-actualization. One can clearly see the link between creativity and innovation within self-actualizers throughout Maslow’s works:

- Self-actualizers are “less bound, less enculturated. They are more spontaneous, more natural, more human” (1970, 171).
- Enlightened management assumes everyone prefers to be a prime mover rather than a passive helper (1998, 29).²
- “We learn from the T-Group experiences that creativeness is correlated with the ability to withstand the lack of structure, the lack of future, the lack of predictability, of control, the tolerance for ambiguity, for planlessness” (1998, 220).
- “You’ll notice that I stress a great deal improvising and inspiration. . . .” (2000, 189).

Maslow believed that creativity and innovation were interchangeable terms, that a creative person seeks to change things, to challenge existing paradigms, to find new ways of doing things (1999, 200–202, for example).³ Douglas McGregor also assumed that creativity and innovation were indistinguishable. He claimed that “the capacity to exercise a relatively high degree of imagination, ingenuity and creativity” to solve problems is widely distributed among people (1960, 48). McGregor’s examples in *THSE* of good or successful applications of Theory Y methods generally include examples of managers who innovate by recreating

² Note the use of rhetorical terminology: *passive*.

³ Maslow did wrestle with the concept of adaptive creativity (1999, 152–155), but the bulk of his work shows a preference for, and perhaps tacit approval of, innovative creativity.

their jobs or by redefining a problem. Moreover, throughout the text, McGregor's emphasis is on breaking current paradigms, seeing problems from different perspectives, and on "relationships, rather than control" (1960, 121). McGregor shared Maslow's belief that everyone had the potential to be self-actualized. The question remained: Why weren't they?

Needs and Work: Theory X and Theory Y

For McGregor, Maslow offered a new interpretation of the work environment, one in which managers worked to facilitate the development of each employee's potential by organizing work to meet the needs most workers were presumably seeking to satisfy: the needs for esteem and self-actualization (McGregor 1960, 41–42). McGregor believed that most managers' theories of motivation and most work tasks were not ordered to allow workers to satisfy these higher-level needs (1967, 76). People were not encouraged to be innovative.

McGregor believed that the key to understanding these management failures was to understand how the assumptions or mental models that managers used to interpret workers' actions and behaviors led them into specific counterproductive behaviors (1960, 33). McGregor believed that the average manager operated under a set of assumptions he called classical management, or Theory X management:

- People dislike work and will avoid it if possible.
- Most people must be "coerced, controlled, directed, and threatened with punishment to get them" to work (McGregor 1960, 33–34).
- The average human prefers to be directed, wishes to avoid responsibility, has little ambition, and wants security.

These assumptions lead managers to deny employees control over their work environment and to use methods of influence that are direct and harsh. Theory X managers emphasize the chain of command, reward-or-punishment motivational techniques, and close supervision of subordinate behavior along rigidly defined behavioral parameters. McGregor argued that classical management practice was hindering rather than helping organizations solve problems, meet goals, and deliver a product in a reliable manner (1960, 62–64; 1966, 29–30).

A Theory X management style assumes that people are interested in safety and physiological needs rather than higher needs, but McGregor believed that workers in the 1950s had moved beyond lower needs and were seeking to meet social or esteem needs (1960, 40). Based on that conclusion, he proposed a new set of managerial assumptions, which he called Theory Y management:

- The expenditure of physical and mental effort in work is as natural as play or rest.
- External control and the threat of punishment are not the only means for bringing about effort toward organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed.
- Commitment to objectives is a function of the rewards associated with their achievement.
- The average human being learns, under proper conditions, not only to accept responsibility but to seek it.

- The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population.
- Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partially utilized (1960, 47–48).

Theory Y managers assume that the people they supervise are as committed to work and as capable of finding solutions to work-related problems as they are themselves (McGregor 1960, 11–12). Theory Y managers also assume that people inherently prefer to work rather than not to work. As a result, they tend to push responsibility for work down the chain of command. They grant employees autonomy within their areas of accountability, and they structure work so that subordinates have ample opportunity to identify problems and find creative solutions to them. Theory Y managers attempt to structure the work environment so that employee goals coincide with organizational goals, resulting presumably in greater creativity and productivity (McGregor 1967, 77).

Choosing to Be Creative

Managers, according to McGregor, must choose between the assumptions of Theory X and Theory Y management (1967; Strauss 1968, 121). Once they make that choice, their management behavior will change as well. Instead of directive management, a manager who chooses a Theory Y orientation will also choose strategies that are more collegial and more likely to transfer power to subordinates or at least create reciprocal relationships between subordinates and themselves (McGregor 1960, 47–48; 1967, 15). This is a core component of McGregor's approach to management: Managers want employees to perform well, and, given the right environment and incentives, employees also want to perform well. What is missing is the right mind-set or "cosmology" through which managers understand their subordinates (Strauss 1968, 121; McGregor 1967, 4–5, 79–80).

CRITIQUES OF MCGREGOR'S MODEL

McGregor's model of motivation and management can be said to have revolutionized the field of management theory. Grounded in psychological theory, a clear definition of creativity, and many years of observations, McGregor's model is persuasive, intuitively appealing, and attractively simple. Although the assumptions underlying the model seem to have endured over the last four decades, many elements of this model have in fact been subjected to serious criticism. These criticisms are important enough to require a reevaluation of the foundations on which McGregor built his theory. In this section, we will reexamine the key components of McGregor's model: the modern work environment, Maslow's hierarchy, assumptions of creativity, whether or not managers can choose different management assumptions, and whether that choice alters a manager's behavior.

The Nature of Work

Perhaps the most important issue in assessing McGregor's work since the publication of *THSE* is the dramatic changes in the work environment. Theories of work must account for such changes, as McGregor himself noted in 1960: "We live today in a world which only

faintly resembles that of a half century ago. The standard of living, the level of education, and the political complexion of the United States profoundly affect both the possibilities and limitations of organizational behavior” (17). There are four aspects of work in America that have changed: employees’ career paths, employees’ sense of job security, employees’ job satisfaction, and the degree to which employees prefer security to creativity.

Career Path Changes

While employees in the 1960s could anticipate long careers following a given career path under one or two employers, today’s workers face a fundamentally different environment. Employees today expect to work for between four and seven different employers in their careers (Hart and Associates 1998). In a recent Shell Corporation survey, more than 52 percent of the 1,100 employed adults surveyed expected to hold five or more jobs in their careers (Hart and Associates 1998). The youngest employees in the sample (those who were in college) had already had more jobs (a mean of five) than most retirees in the sample had held in a lifetime of work (an average of four and a half) (Hart and Associates 1998). Employees today engage in a “constant” search for new jobs, even if they are satisfied with their current positions; they “remain plugged into the job market—even if they are not actively searching for a job” (PRN News Service [PRN] 2001). This clearly contrasts with McGregor’s assumption that careers would exist largely within the same company: “With the modern emphasis on career employment and promotion from within, management must pay more than casual attention to its recruitment practices” (1960, 186).

Workers no longer express loyalty to their place of employment, and they believe that their employers have little loyalty to them (Camp 1995; Ciulla 2000). Of the Shell survey respondents, 65 percent believed employees were “only slightly” loyal or “not too loyal” to their employers. Forty-eight percent of the Shell respondents indicated that if their employer wanted to transfer them to a different city, they would quit and find another job in the same city. The survey also found that most employees believe that companies are not very loyal to their employees: fully 75 percent of respondents said companies were either somewhat loyal or not loyal at all. Camp (1995) found that decreased loyalty to a company (in the case of Camp’s study, decreased loyalty among prison workers) correlated strongly with high turnover among employees. He concluded that employees begin to seek other occupations as institutional commitment declines.

Job Security

Workers also demonstrate far less security in their prospects for continued employment at any given company than they did in the 1960s and 1970s (Schmidt 1999; Valetta 1999). Using data from the General Social Survey (1976–1997) and the Displaced Workers’ Survey (1982–1996), Schmidt (1999) found that during the 1990s workers were more fearful of job loss and were less optimistic about the possibility of finding new employment than they had been in twenty years. Schmidt and Svorny (1998) found that the decline in a sense of job security correlated with a rise in “involuntary separations” as opposed to employees quitting. Stuart Welsh (1997) argued that the point at which “job security die[d]” was in early 1996 when AT&T announced a substantial reduction in force, laying off more than fifty thousand employees. Subsequent to that action, other companies began to reduce their workforces as well. The result was perceived loss of job security among American workers. Welsh concludes his article with a series of recommendations to prepare workers for the eventual loss of a job.

Those recommendations, interestingly enough, include making contacts in other companies. In other words, Welsh inadvertently linked the loss of job security to a strategy which involved decreased loyalty to one's company based on the assumption that the company would no longer be loyal to employees (for a similar analysis of that AT&T layoff, see Ciulla 2000, 153). The impact of lesser job security and lesser job loyalty has altered employee perceptions about what they seek from jobs.

For instance, the Hart survey indicated that workers preferred job security to "finding the ideal job" by a margin of three to one. When asked to choose whether they preferred having a job that provided greater financial success but also had greater risks or a job with fewer monetary rewards and fewer risks, 58 percent chose the stable job with fewer risks. Only when risk was not at issue did 54 percent indicate that they preferred a job that allowed them to use their talents and "make a difference" as opposed to a job that provided a good income and good benefits (Hart and Associates 1998). Ciulla (2000, 232) found a similar pattern, particularly among younger employees. As employees perceive the workplace to be less secure, they consequently desire and value security (Schmidt 1999).

The loss of job security represents a serious challenge to managers (Barrows and Wesson 2000; Ciulla 2000, 231). If employees believe corporations will not be loyal to them and they see no reason to be loyal to companies, then managers cannot readily link individual needs to those of their companies. The problem is particularly acute because the loss of job security is coupled with a loss of loyalty. Barrows and Wesson (2000) have summarized literature suggesting that survivors of layoffs often respond with increased negative attitudes toward work. McGregor argued that management's goal was to assist employees in aligning their personal goals with those of their employer (1960, 55; in Bennis, Heil, and Stephens 2000, 14), but employees in today's work environment increasingly disbelieve that such a congruence of interests is realistic (Welsh 1997; Yankelovich and Immerwahr 1986).

Job Satisfaction

Americans became increasingly dissatisfied with their jobs throughout the 1990s. According to a Conference Board survey of five thousand households conducted by NFO Research Incorporated, there was an 8 percent decline in overall job satisfaction among U.S. workers in the last half of the decade (58.6 percent were "satisfied" or "very satisfied" in 1995, and only 50.7 percent were satisfied or very satisfied in 2000; Conference Board [CB] 2000). Americans are more dissatisfied with their work than are employees in Denmark, the Philippines, Cyprus, Switzerland, Israel, Spain, or The Netherlands (Oswald 1999). Oswald found that only 49 percent of Americans were "satisfied or completely satisfied" with their jobs.

Dissatisfaction with current employment is highest among minorities and women (United Press International [UPI] 2001; Schmidt 1999), while higher executives and more senior personnel demonstrate the highest levels of satisfaction (Hamermesh 2001; Traut, Larsen, and Feimer 2000). Recent surveys of newsroom employees (UPI 2001), nursing professionals, doctors, public servants (Barrows and Wesson 2000), and public school teachers (National Center for Education Statistics 1997) reveal substantial declines in job satisfaction in each field. However, each study also points out that dissatisfaction varies greatly depending on the gender, tenure, position, and salary of respondents.

The aspect of work employees found most dissatisfying was the pay and benefits (Hart and Associates 1998; CB 2000), followed by advancement opportunities (CB 2000; Barrows and Wesson 2000), while dissatisfaction with the nature of the job itself ranked almost last

as an option. However, not all surveys find high levels of dissatisfaction with work. The Conference Board survey, for example, found that while overall job satisfaction had declined from 1995 to 2000, more respondents in 2000 felt secure about their jobs than did respondents in 1995. The PRN News Service survey found that among its respondents, nearly 70 percent responded that they were satisfied or very satisfied with their jobs.

Few workers expected their jobs to offer satisfaction of what Maslow would call esteem or self-actualizing needs (Hart and Associates 1998; PRN 2001). The difference in needs satisfaction also exists when comparing public managers to private-sector managers (Lan and Rainey 1992; Crewson 1997). These findings support an earlier study of what employees want from jobs conducted by Boris Blai (1964). Blai found that employees working in blue-collar occupations were far more concerned about lower-level needs, while upper-level, white-collar employees sought to satisfy higher-order needs from their work.

Because the work environment today is less stable and more uncertain than it was during the 1950s and 1960s, one could simply state that this environment makes Theory X management more prevalent (Collins 1996) and perhaps as successful as Theory Y management. After all, if McGregor argued that the work environment of his day offered (or should have offered) people greater chances to fulfill themselves (1960, 186), a return to a more uncertain time should create the opposite environment. But the problem is much more complex than that: There may not be a clear link between work performance and needs satisfaction (Kirton and Hammond 1980). Recent scholarship has raised serious questions about the hierarchy of needs as a theoretical and empirical concept.

Maslow's Critics

Given the importance McGregor placed on Maslow's hierarchy of needs, any criticism of the Maslow model must be taken quite seriously.⁴ Since its appearance, Maslow's hierarchy has been the subject of controversy, with numerous critics challenging its theoretical and empirical foundations (Heylighen 1992; Rowan 1998; Pearson 1999). What follows is a brief summary of the more important works challenging the hierarchy of needs model.

Theoretical Problems

Maslow developed his model of needs largely through a series of lectures and writings, and in no one place presented formal discussion of his theory (Heylighen 1992). Moreover, in developing his theory of needs, Maslow used personal interviews and read biographies of great individuals. Heylighen (1992) pointed out that Maslow himself was often ambiguous about the methods used to select subjects and the criteria used to evaluate biographies. Maslow conceded that he consciously rejected the canons of scientific study (Goble 1970), but he justified the departure on the grounds that "it is preferable to carry out methodologically primitive research about fundamental problems . . . rather than restrict oneself to technically sophisticated observations about minor issues" (Heylighen 1992, 45).

Scholars have pointed out that Maslow failed to consider key elements of human motivation. For example, Maslow overlooked such motivators as power-seeking and group approval (Groves, Kahalas, and Erickson 1975; Rabinow and Dreyfuss 1983; Pearson 1994,

4 It could be argued that Theory Y failed precisely because scholars implemented it by stressing the hierarchy of needs rather than other possible theories in McGregor's work. However, it can be shown that these alternative theories (social constructivism, role interpretation, and the like) increase information costs for managers and thus increase the odds of a Theory X approach as well. We are currently developing this argument.

1999). Aron (1977) feared that the hierarchy's amoral structure would lead to a disregard for ethical and political considerations other than the self, a fear Maslow shared (Rowan 1999).

Most critics also point to the fundamentally Western and specifically American bias found in Maslow's concept of self-actualization. Pearson (1999) argued that Maslow's concept of self-actualization was based on a uniquely American concept of the individual. Mook (1987) argued that this concept of the individual as the highest good contradicted many cultural constructs in non-Western societies. Related to this is the undercurrent of elitism in Maslow's writings (Buss 1979). Shaw and Colimore (1988) argued that Maslow's discussion of self-actualized individuals was actually a validation of social and political elites and implied a certain social Darwinism. As a result of these criticisms, some scholars wonder if the hierarchy is itself an invalid concept (Schott and Maslow 1992).

Empirical Problems

Empirical criticisms are just as numerous as the attacks on the theoretical basis. The most common criticisms of Maslow's hierarchy are that it has never been validated empirically (Wahba and Bridwell 1976),⁵ that it is hard to reproduce (Heylighen 1992), and that efforts to use or validate the construct often rely on redefinition or restructuring of Maslow's categories. Despite the creation of a valid index of self-actualization (Shostram 1965) and a demonstration of the scalability of Maslow's needs hierarchy (Porat 1977), the performance of Maslow's hierarchy in empirical settings is not impressive.

Mook (1987), for example, studied prisoners in Nazi death camps. Contrary to Maslow's expectations, these people, when deprived of basic physical and safety needs, still demonstrated a pursuit of higher needs through compassion for fellow prisoners and altruism. Heylighen (1992) summarized a substantial body of literature questioning the order of needs outlined in the hierarchy. In particular, scholarly studies fail to confirm at what point the need for love emerges.

Heylighen (1992) also argued that Maslow's concept of self-actualization was confusing and that a theory based on the gratification of needs was not enough to explain human behavior. By redefining needs and their satisfaction, Heylighen was able to integrate Maslow's work into more recent personality theory. Kiel (1999) rejected the notion that self-actualization was the pinnacle of human development; she argued that self-actualization was itself composed of multiple layers and that the hierarchy of needs should have been a "ladder of development."

Rowan (1998) redefined both self-actualization and esteem needs so "that [Maslow's] theory . . . fits in much better" with current research into personality and development (84). Note that Rowan did not intend to revise or reject Maslow but conceded in two separate places that, without revisions, Maslow's theory was contradicted by more recent research (1998, 83, 85).

Even if one were to set aside such criticisms of Maslow's model, McGregor's use of the hierarchy of needs would still present substantial problems. The first problem is that Maslow's model was designed to explain *human* motivation, not necessarily *employee* motivation (1998; 2000, 251 and the following pages). No matter how stimulating one's job may be, if the bank threatens foreclosure and seizure of one's home, one is unlikely to attempt to satisfy higher-order needs. Alternatively, if one's job is not particularly challenging but

⁵ Maddi (1976) argues that Maslow's model has never been empirically contradicted, but even this work concedes that there is little verification of Maslow's model. As the text demonstrates, later works have contradicted components of Maslow's ideas.

allows one to pursue desired hobbies or to meet the needs of home, then a person may seek to satisfy higher-order needs. McGregor explains it thus: “Unless the job itself can be satisfying, unless there are opportunities right in the work situation to get fun out of working, we will never get people to direct their efforts voluntarily towards organizational goals. . . . Work becomes a kind of punishment [people] undergo in order to get those things they require for need satisfaction after they leave the job” (1967, 47).

Second, only a few people in any population are likely to reach the stages of esteem or self-actualization (Hansen 2000), and there are not that many jobs in the economy that realistically provide the opportunity for employees to self-actualize (Lethbridge 1986, 90). This is not a trivial point: McGregor, citing work by Herzberg and others, claimed “opportunities for ‘self-actualization’ are the essential requirements of both job satisfaction and high performance” (1960, 55). If this is the case, then satisfaction in one’s job is a rare event regardless of managers’ assumptions. McGregor was concerned about this problem (1960, 223). In *The Professional Manager*, he seems to argue that the solution can be found in how a manager structures different jobs (McGregor 1967, 76–77). This is not a trivial solution: McGregor argued that managers could have a profound impact on their subordinates’ senses of self and self-worth (1967, 72–75). Unfortunately, McGregor passed on before he could develop these ideas more fully.

Third, if Maslow’s hierarchy is culturally biased, then McGregor’s model is limited as well. If one concedes that Maslow’s model is Western in outlook and that he never intended any broader application, then as America’s population diversifies, any Maslowian theory of management will become less and less relevant. It is projected that by 2050, the majority of U.S. citizens will be of non-Western descent, meaning that McGregor’s theory would apply to less than 8 percent of the country’s population (assuming that current U.S. immigrants or succeeding generations of immigrants do not adopt traditional American values). As this demographic trend continues, McGregor’s ideas would find even less validity.

Finally, Rowan (1999) argues that people moving down the hierarchy of needs respond differently than those moving up. For example, a person who has satisfied his or her esteem needs will continue to be self-motivated even when facing problems with lower-order needs satisfaction (Rowan 1999, 129–30). Alternatively, another person in similar circumstances may be overly anxious about the possibility of the loss of esteem-needs satisfaction and engage in unproductive behavior.⁶ Simply because the work environment of the 1990s and into the twenty-first century is more uncertain than that of the 1960s, this does not imply that workers will then require a more or less directive style of management in order to generate high performance.

It has been argued that because Maslow consciously rejected standard scientific methods in developing his theory, any criticisms based on scientific findings are reductionist. This argument is disingenuous on two levels. First, it misinterprets Maslow’s intent. Maslow always intended his work to be scientific or, at least, subsequently supported by empirical work (1968, 220; 1998, 70–71), but he knew he was dealing with a new, relatively unexplored topic (Heylighen 1992). He chose a methodology that was “primitive,” not “unscientific” or “metascientific.” He anticipated that social science would evolve new methods with which to explore and (he hoped) validate his theory. Second, by denying that his work is scientific, one neatly sidesteps the very real problem that scientific evidence simply does

⁶ Rowan does not make this point in his article, but it is logically implied by his discussion and certainly by common experience.

not confirm Maslow's hypotheses. Even if Maslow intended his model to be a holistic approach to human motivation, scientific verification is at least a part of holistic theory.

Maslow's critics do not challenge the notion that people are motivated by a drive to satisfy needs. Nor do they challenge the particular needs identified in Maslow's hierarchy. Critics only dispute Maslow's construction of those needs into a specific type of hierarchy. There are multiple alternative constructs of needs in administration literature, many of which have a substantial body of empirical support and contradict or challenge Maslow's construct (Rowan 1998). Without this hierarchical structure, McGregor's argument that worker satisfaction and productivity will increase when managers provide autonomous and responsible environments (1960, 61) is substantially weakened. This would help explain findings that indicate worker satisfaction is substantially unrelated to productivity (Caruth and Noe 1986; Locke 1982) and workers who are "self-actualized" are as likely to prefer a directive style of management as they are to prefer more autonomy (Kirton and Hammond 1980).

One must not forget that Maslow's model of human motivation was more than a needs hierarchy. Maslow believed that motivation or needs satisfaction was also tied to human creativity. He believed that all humans had the capacity to be creative (1998, 13) and that creativity took different forms (1968, 137). Maslow (and McGregor) understood self-actualized creativity to be innovative, that is, to consist of the ability to develop new ideas or new solutions to problems (Maslow 1968, 137; 2000, 188). Maslow stated that the ability to innovate was an essential component of human life (1998, 13; 2000, 233 and the following pages). McGregor shared the belief that "the capacity to exercise a high degree of imagination" was widely dispersed in any population (1960, 48).

Both men personally approached problems innovatively. Warren Bennis once commented that Maslow approached problems "like a swashbuckling Candide, that is, with a powerful innocence that is both threatening and receptive to widely held beliefs" (Gabor 2000, 182). Douglas McGregor had a similar problem-solving approach (Gabor 2000, 176). Both men believed that innovation was a superior form of creativity and that every person had the capacity to be innovative and to see problems differently. The following research indicates that creativity is a much more complicated concept.

Creativity as a Multidimensional Concept

Certainly creativity involves innovation or breaking molds, but modern personality theorists argue that creativity may also be reflected in adaptive behavior as well. This theory, known as "requisite diversity," argues that maladaptive species fail because there are too few members using various creative models in order to adapt to rapid changes in their environment. Bobic, Davis, and Cunningham (1999) provided a review of the relevant works developing the concept of requisite diversity.

Social scientists have adapted the concept of requisite diversity to argue that organizations dominated by a single type of personality or work style are inferior to ones that are balanced or contain a diversity of work styles (Kirton 1989b). The principle holds that the latter generally produce a superior product or service.⁷ Michael Kirton has done substantial work in the field of requisite diversity and creativity, and his work contradicts much of

⁷ Maslow indicated that different kinds of management may be necessary in different circumstances. "Theory Y principles hold primarily for good conditions, rather than for stormy weather" (Maslow 1998, xxiii). McGregor's research indicates that personality, not circumstance, determines style.

Maslow's (and McGregor's) work, as do Bobic, Davis, and Cunningham (1999). What follows is a brief overview of Kirton's research.

Adapters and Innovators

Kirton believed that when people confronted problems or were asked to resolve a conflict or task, they had certain habitual characteristic modes of behavior (Kirton 1989b, 5). People either reacted by adapting to changed circumstances or by innovating, finding different or unorthodox solutions to these new circumstances. "Every individual can be located on a continuum on which the habitual Adapter and the habitual Innovator are at the extreme ends" (Kirton 1984, 11). Kirton (and others) created an index of creativity in 1976. It locates creatively "adaptive" people at one end of the scale and creatively "innovative" people at the other end.

Kirton's scale (the Kirton Adaptive-Innovative Inventory, or KAI) measures respondents' tendency to be innovative or adaptive in their work styles. The KAI is a 33-item questionnaire on which respondents indicate how difficult or easy it is for them to present themselves "over time" in specific ways (Kirton 1976; KAI form). Scale scores may range from 33 (highly adaptive) to 160 (highly innovative) with a mean response of 96 (Kirton 1984; Selby et al. 1993; Rosenfeld et al. 1993). Later research identified three "modes" or substrains of creativity identified through factor analysis of the original KAI (Kirton 1978; Taylor 1989a). These modes of creativity have been labeled the "rules-conforming" mode, the "efficiency" mode, and the "sufficiency of originality" mode. Adapters and innovators are identified according to their responses to the overall KAI and the individual subscales.

An adapter seeks to conform to accepted norms (Goldsmith 1984; Kirton 1976, 1989b). He or she uses conventional rules and perceptions of work, favors precision and methodical approaches to problem solving, and is seen as a safe, predictable, and consistent person who seldom approaches problems from new or unusual perspectives (Kirton 1976). In terms of the three modes (originality, efficiency, rules conformity), adapters tend to have a high degree of rules conformity, emphasize efficiency, and do not generate original or untried solutions to problems. Adapters generally seek to "do things better" within existing systems (Korth 2000).

An innovator is undisciplined, willing to break traditional paradigms and "go outside the rules." Innovators are most successful in unstructured and rapidly changing environments in which self-confident decision making is important (Goldsmith 1984; Foxall and Hackett 1992b; Jacobson 1993). Innovators challenge their colleagues to find new tasks rather than better ways of fulfilling current responsibilities (Kirton 1976). Innovators prefer to break the rules and are generally inefficient in their problem-solving methods but show great originality (Bobic, Davis, and Cunningham 1999). Innovators do things "differently" (Korth 2000). It is important to note again that adapters and innovators may be equally creative but that their creativity manifests itself in different ways.

KAI: Validity and Reliability Issues

Numerous studies have examined the validity of the KAI. Kirton (1976) hypothesized that his index accurately, validly, and reliably measured problem-solving styles. Most studies confirm the construct validity of the theory, the scale, and the subscales (Mulligan and Martin 1980; Kirton 1980, 1985b, 1989a; Goldsmith 1985, 1986a; Hammond 1986; Masten and Caldwell-Colbert 1987; Robertson et al. 1988; Beene and Zelhart 1988; Taylor 1989a, 1989b; Arbet 1991; Kirton 1992; Selby et al. 1993; Foxall and Hackett 1992a, 1992b;

Fleener and Taylor 1994; Bobic, Davis, and Cunningham 1999). Multiple studies have also confirmed the content validity of the KAI (Kirton and McCarthy 1985; Robertson et al. 1989; Singer 1992; Foxall and Hackett 1992b; Bobic, Davis, and Cunningham 1999).

The KAI performs similarly to and is highly correlated with other psychological scales such as the Myers-Briggs, the Torrance scale, the Cattell's Inventory, and the Gregoric Delineator (Kirton 1978; Keller and Holland 1978; Torrance and Horng 1980; Carne and Kirton 1982; Goldsmith 1984; Kirton and De Ciantis 1986; Goldsmith and Matherly 1986; Goldsmith 1987; Robertson et al. 1988; Isaksen and Puccio 1988; Elder 1989; Foxall and Payne 1989; Furnham 1990; Prato-Previde 1991; Foxall, Payne, and Walters 1992; Kubes 1992; Foxall and Bhate 1993; Jacobson 1993).

Other studies have confirmed the reliability and predictive ability of the KAI (Prato-Previde 1984; Hammond 1986; Holland 1987; Prato-Previde and Massimo 1987; Beene and Zelhart 1988; Joniak and Isaksen 1988; Taylor 1989b; Markus 1992; Foxall and Hackett 1992a, 1992b; Pettigrew and King 1993). The KAI has also proven a reliable measure in cross-validation studies (Keller and Holland 1978).

Multiple studies have replicated the early KAI studies of public and private managers and employees (Goldsmith 1986b; Goldsmith and Matherly 1986; Prato-Previde and Massimo 1987; Robertson et al. 1988, 1989; Clapp and De Ciantis 1989; Selby et al. 1993; Bobic, Davis, and Cunningham 1999). The KAI has been used successfully in studies of British (Jacobson 1993) and Australian managers (Foxall and Hackett 1992a), Italian citizens and students (Prato-Previde and Massimo 1987; Prato-Previde 1991), and New Zealand college students (Singer 1990) as well as in cross-cultural comparisons of different nations (Foxall 1990).

Prato-Previde (1984) concluded that the KAI was based on sound psychometric principles. The stability, validity, and reliability of the KAI measure of creativity has been so well established that the British Psychological Society has given it a B rating (DEVA Partnership 2001). Not only has the KAI been validated and its reliability established, a brief Internet search (using Netscape, AltaVista, Yahoo, Infoseek, and other search engines) revealed that over thirty major management consulting firms use the KAI in their professional consulting work. There were literally thousands of sites making reference to the KAI, most of which were either business or consulting firms. Further investigation revealed that corporations such as Proctor and Gamble, PricewaterhouseCoopers, Barclays, Kimball Consulting, and the American Chemical Society use the KAI for team building and task management.

Applying the Requisite Diversity Principle

An individual's tendency to use innovative or adaptive methods is deeply ingrained (Kirton 1984); even after training sessions, managers tend to revert to their basic management methods over time (Bobic, Davis, and Cunningham 1999). In other words, creative innovation, the type of creativity Maslow and McGregor assumed was widely distributed in the population, may only account for 40 percent of the population (Kirton 1976). This type of creativity seems to be greater among the type of manager McGregor was studying (upper-level management) than among first-line supervisors (Kirton 1985a). This is an important and compelling point: Most management positions available are staffed by people for whose personalities Theory Y is ill suited.

Innovators and adapters respond differently to a Theory Y style of leadership. If a manager uses Theory Y assumptions with a group of innovators, he or she is likely to have a

great deal of success. If that same manager applies Theory Y methods to a group of adapters, the reaction is likely to be negative because adapters in general are not seeking to break out of molds or change paradigms. Adapters enjoy structured environments and find great satisfaction in close detail work and clear procedures. Kirton notes that adapters bring to their team a sense of stability, order, and continuity: they provide a safe base from which innovators may take risks. Innovators bring to group dynamics the task orientation and sense of change that a group may need in addressing a problem (Kirton 1984, 7). While it may be true for innovators that “a decentralized organization provides an environment in which the individual, through taking greater responsibility for his own behavior, obtains intrinsic rewards” (McGregor 1960, 195), such an environment would drive an adapter to distraction (for a similar criticism of Maslow’s work, see Maccoby 1976).

Kirton’s research directly contradicted a number of key assumptions in McGregor’s work. First, if Kirton was correct, and the tendency to be adaptive or innovative is deeply ingrained, then where one is on the hierarchy of needs is irrelevant. Kirton and Hammond (1980) demonstrated that adapters were as likely to be self-actualized as innovators, which contradicted most of Maslow’s definitions of self-actualizers and self-actualization. Second, if Kirton was correct, then McGregor’s assumption that managers can change their assumptions (1960, 46, 245) may not be possible for most managers. Third, research by Kirton (1984) and Bobic, Davis, and Cunningham (1999) contradicted McGregor’s assertion that changing one’s assumptions will lead to changed behavior (1960, 48, 62 and the following pages; 1967, 79).

McGregor assumed that all people are innovative, but Kirton’s studies indicated that adaptive personalities tend to dominate certain occupations. Using an inventory to assess the tendency of a respondent to use adaptive or innovative approaches to problem solving, Kirton discovered that first-line supervisors such as manufacturing or plant managers, accounts supervisors, machinist superintendents, and the like tended to be adaptive in their approaches to problems (Kirton 1985a). Secondary managers, personnel managers, and “upper managers” tended toward the innovative approach to problem solving (Kirton 1985a).

What would McGregor have thought of this work? He would most likely have disagreed deeply with the idea that types of creativity are ingrained in people. He would have accepted the importance of building teams whose members had complementary creative styles. Nonetheless, Kirton and McGregor agreed on several points. First, they agreed that management is a complex social interaction, not a simple mechanical process (see McGregor 1960, 105). Second, they agreed that people *do* bring assumptions about human behavior to the management task. They agreed that managers must consider the natures of the people they manage. In the end, had McGregor lived to see Kirton’s work, we believe he would have incorporated Kirton’s findings into his own research. He hinted at such when he noted that “one of management’s major tasks . . . is to provide a heterogeneous supply of human resources from which individuals can be selected to fill a variety of specific but unpredictable needs” (1960, 185). Kirton himself could not have stated it more succinctly.

Final Concerns

Much of the criticism above is based on social scientific investigations of various propositions made by Maslow and McGregor. It may be argued that such analysis is unfair because McGregor never considered his work to be scientific (Strauss 1968; Schrage 2000) and because McGregor’s work encompassed more than a simple set of testable hypotheses. Three

points stand out. First, McGregor considered his work to be based on years of social scientific research (1960, 5–7; 1967, 6). Second, he fully expected his work to generate scholarly interest and testable hypotheses (McGregor 1967, 55). Third, his work has generated social scientific interest and controversy.

It may be argued that much of the evidence presented here is immaterial to McGregor's core ideas. McGregor's discussion of management is directed not toward first-line supervisors or their subordinates but toward those who manage managers (1960, 55), yet much of the research presented here explores relationships between line managers and subordinates. There are three reasons to reject this criticism. It is clear that McGregor considered first-line supervision to be a unique position (1960, 1961; quoted in Bennis, Schein, and McGregor 1966, 27). Nevertheless, he also expected future research to find ways to adapt Theory Y ideas to these circumstances (1960, 55; quoted in Bennis, Schein, and McGregor 1966, 27). McGregor clearly believed that management science could progress only to the degree that scholars abandoned Theory X assumptions and pursued research based on Theory Y assumptions (1960, 245). Such progress (he believed) would benefit all workers in the long run. For our purposes, the question remains: Was McGregor premature in dismissing the theoretical importance of Theory X assumptions? We now present a (relatively mild) defense of Theory X management.

A KIND WORD FOR THEORY X

Douglas McGregor's *THSE* is not a scientific treatise (Schrage 2000) although it was the product of decades of work and study (Gabor 2000). *THSE* presented two (among many) possible worldviews or "cosmologies" that managers bring to the workplace (McGregor 1960, 80). But the book was more than that: It was an effort to persuade managers to examine their assumptions closely. It was also a call to abandon Theory X management assumptions so that "future inventions" in management would be more than "minor changes in already obsolescent conceptions" of human nature (McGregor 1960, 245). The language used in the book demonstrates that McGregor intended his readers to react negatively to his portrayal of Theory X management but that he was more circumspect in his presentation of Theory Y ideals.

Two lines of reasoning justify this conclusion. First, McGregor himself conceded that readers would consider his portrayal of Theory X assumptions overly harsh (1960, 45). Second, an analysis of the language of the two sets of assumptions is revealing. The Theory X assumptions are simple, universal, declarative statements; Theory Y assumptions contain many qualifications and modifiers. McGregor presented Theory X at a tenth-grade reading level and Theory Y at a twelfth-grade reading level. A Flesch analysis of reading ease indicated that Theory X assumptions are easier to read than are Theory Y assumptions.⁸

To present a defense of Theory X, it is therefore necessary to remove the hyperbole from McGregor's discussion and revise the characteristics of Theory X so that they represent a more realistic set of assumptions. After we do that, we turn to a discussion of what circumstances and what kinds of employees would be conducive to a Theory X management style. First, though, let us review the assumptions of a Theory X manager:

⁸ These analyses were conducted using the Language functions in Word 97, Word 2000, WordPerfect Version 8, and WordPerfect 2000. The analyses generally agreed in their results.

- People dislike work and will avoid it if possible.
- Most people must be “coerced, controlled, directed, and threatened with punishment to get them” to work (McGregor 1960, 33–34).
- The average human prefers to be directed, wishes to avoid responsibility, has little ambition, and wants security.

The first assumption has been the subject of great debate in Western philosophy. Tausky (1992) argues that there is nothing in theology or psychology to support the notion that *all* people by human nature inherently like or dislike work. What seems to be more realistic is that any individual’s attitude toward work is a function of many sociological factors; the “desirability or loathsomeness” of work is likely to be a matter of individual development rather than a matter of human nature. Tausky’s work underscores the dangers of using either Theory X or Theory Y assumptions as a general rule of management. It is more likely that some people dislike work and others like it (Tausky 1992, 8). Thus, the first characteristic needs some modification.

The second assumption seems overly harsh (McGregor 1960, 36). It would mean that managers believe that their subordinates need to be directed and controlled in the execution of their duties. This assumption may result from various factors including a lack of knowledge on the part of subordinates, the consequences of poor performance of a specific task, the risks associated with a job, or a manager’s belief that he or she knows the job more thoroughly than his or her subordinates (Wilkinson, Godfrey, and Marchington 1997). The final assumption likewise seems to be a caricature of employees who seek direction and desire job security. Thus, a more realistic Theory X model assumes the following:

- Many people dislike work and will avoid it if possible.
- Many people must be controlled and directed in the execution of their tasks.
- Managers know more about a job and its requirements than do subordinates.
- Most subordinates conform to rules and are efficient and relatively unoriginal, seeking direction in the execution of their jobs (Aeppel 1997, for example).

A manager operating under these assumptions would use a directive approach to managing, allowing employees only limited autonomy and discretion. A Theory X manager is more concerned with performance and “getting product out the door” than about meeting the emotional or developmental needs of his or her subordinates.⁹

Under what circumstances would Theory X management be appropriate? If we redefine Theory X assumptions as adaptive and Theory Y assumptions as innovative,¹⁰ then we may make a number of conclusions about when Theory X management is appropriate. When facing routine or detailed tasks, an adaptive style is most likely to be successful. Kirton argued that adaptive managers are more appropriate when a team is composed of innovators, because the adapter would be able to keep the rest of the team on schedule (Kirton 1989b).

⁹ Note that even in the Mouton and Blake Managerial Grid, the assumption is that creativity means innovation, rather than adaptation.

¹⁰ This is not entirely correct, for it is possible for an adaptive personality to approach management from a Theory Y perspective and vice versa. However, for purposes of discussion, the analogy may be made.

Adapters are also more successful at “doing things better,” while innovators are more successful at “doing things differently” (Korth 2000). What one wants in a manager depends upon the task being performed.

Kirton (1978) noted that companies tended to seek out adapters rather than innovators, because adapters tended to fit well into bureaucratic organizations. On the other hand, Holland (1987) demonstrated that adapters had difficulty coping with an industry undergoing rapid change in technology or procedures. Foxall, Payne, and Walters (1987) argued that innovative managers were better suited to tasks that involved external relations for an organization, while adapters were more suited to tasks involving the internal operations of an organization. McNeilly and Goldsmith (1992) note that employee turnover is affected by whether a manager is an adapter or innovator. With a manager who is an adapter, people are less likely to leave a position if they have good relations with their coworkers. With a manager who is an innovator, people are less likely to leave a position if they are pleased with the pay they receive.

Nicholas Skinner (1989) conducted a fascinating study indicating that men and women both equate innovativeness in male managers with effectiveness but equated adaptiveness with effectiveness for female managers. Clearly, what model of management is best is a complex issue, involving considerations of the task to be performed, the subordinates to be managed, and the output that is desired. In any event, the belief that Theory Y is superior to Theory X cannot be supported.

IMPLICATIONS FOR MANAGEMENT METHODS

Evidence in this article indicates that several essential components of McGregor’s Theory X and Theory Y require reconsideration. First is the question of what kind of management is most appropriate for new kinds of organizations, such as technological organizations, ad hoc organizations, and regulated monopolies. Second is the impact these findings have on efforts to implement Theory Y ideas, in particular through the use of Total Quality Management (TQM).

Technological industries and the rise of Internet companies have led to a resurgence of interest in McGregor’s ideas (Bennis, Heil, and Stephens 2000, 4). These companies present managers with the kinds of challenges McGregor foresaw: employees working at home and requiring greater flexibility and understanding from managers in order to produce quality products. Internet companies and software companies stress creative solutions to various business, academic, and information control problems. Popular characterizations of those who work at such companies emphasize their free-spirited nature and unorthodox approach to work. Yet those who work in this industry tend to complain that what they lack in their work is clear direction from management (ComputerWorld 1999).

Moreover, information technology (IT) workers indicate that they are satisfied (and dissatisfied) with the same things as other workers. They believe they are underpaid and that they lack adequate vacation time (ComputerWorld, 1999). But most IT workers like their bosses and would like clearer direction in job assignments. Thus, one cannot simply assume that IT people will be innovators or that an innovative management style will satisfy all workers. In fact, given the innovative nature of IT work, one might suspect that an adapter boss would be more likely to keep projects on time and on budget.

Ad hoc organizations are a relatively new entity. These are organizations like Dish Network or DirecTV that have one main corporation offering a service but rely on locally

contracted employees to carry out specific tasks. Bennis (2000) claimed that this type of organization in particular requires a creative management style, that attempting to control the actions of literally hundreds of employees spread over the entire country seems an unmanageable task unless one is willing to allow for innovation among one's subcontractors. However, this has not proven to be the case. Both Dish Network and DirecTV have discovered that to ensure consistent, quality installations, they must require contracted installers to follow specific guidelines and to submit photographic evidence of completed work. Dish Network even requires that customers sign a work form indicating that installations met these guidelines and their requirements.

The main challenge presented by quasi-governmental organizations is that of democratic control and accountability. Koppel (1999) studied the U.S. Venture Capital Fund program and its two subsidiaries, the Enterprise Funds and the Overseas Private Investment Corporation, and concluded that in order to provide democratic accountability, these organizations require close regulation and "clear, unambiguous policy objectives" (664). In simple terms, such organizations function best if they have limited autonomy and there is strong regulatory control over their actions.

Research also suggests that regulated monopolies function best when government overseers exercise a directive style of management, rather than the more inclusive style suggested by McGregor. This conclusion seems true at least of the nuclear power industry. Verma, Mitnick, and Marcus (1999) studied several states' efforts to replace direct oversight of the nuclear power industry with performance-based incentive programs as a way to increase safety and efficiency. What they discovered was that incentive programs were less effective in controlling industry behavior. In some cases, incentive programs led to decreased efficiency and increased danger to the public. Regulated agencies often cannot delegate downward because many actions are illegal or would violate union-management agreements. Other scholars find that directed control of agencies might have negative effects. Maupin (1993) found that the Arizona Prisons System's method for following parolees worked best if parole officers had discretion in dealing with violations; however, Maupin points out (unintentionally) that many people associated with the program were innovators rather than adapters (335, for example).

A second implication from this work is that we should reconsider why management methods such as TQM cannot claim universal success or support, even among public administration theorists (Staw and Epstein 2000; Fernando 2001). Wilkinson, Godfrey, and Marchington (1997) summarize very effectively the differences in opinion over the utility and success of TQM to transform the work environment; they state that TQM attempts to "empower the workforce by delegating responsibility to those who actually carr[y] out the task" (799). When a TQM system fails to transform the work environment, blame is often laid at the feet of middle-level managers, who resist any method that reduces their power or role as "experts" in a system (Wilkinson, Godfrey, and Marchington 1997, 810; Berman and West 1995).

The issue is more complicated than tantrums from middle managers. Managers very often understand systems better than their subordinates do. Once again, those who support TQM are usually discussing nonroutine tasks or special projects, while the complaint of middle managers is that TQM is not appropriate for more routine tasks and day-to-day operations (Leidecker and Hall 1986). We find it interesting that Wilkinson, Godfrey, and Marchington (1997) concede that different managers implement TQM differently. Many managers adapted to TQM readily because "this approach matched their preferred style. . . ."

(810). The obvious implication is that any method that expects creativity to be universally innovative is unlikely to succeed in the long run.

CONCLUSION

This article began by examining the three foundations of McGregor's *THSE*. This analysis has revealed weaknesses in these key foundations: Workers face a different work environment than they did in the 1960s, Maslow's hierarchy of needs has fallen into question, and the concept of creativity is multidimensional. The foundations of Theory Y management and the assumption that Theory Y management is inherently better than Theory X management must be substantially reconsidered.

On the other hand, combining Kirton's ideas with McGregor's helps to explain the standard anomalies associated with Theory Y management. To those who claim Theory Y is just a hypocritical form of Theory X (Salaman 1979) or that it does not work in the real world, one may respond that the failure is not in the method but in the mismatch of method to manager. These findings also explain why Theory X management persists and why some students of management prefer Theory X assumptions: this theory fits more closely with their styles of creativity. The findings also explain why Staw and Epstein (2000) found no evidence of performance improvement when examining various management methods: It is not a matter of management strategy, but of managing people—which was McGregor's original point.

We conclude with a comment on what all this might mean for the future of management. If people are different (some adaptive and others innovative) and personality is relatively invariant, then the management task becomes increasingly complex. (For a different look at this aspect of management, see Moussavi and Ashbaugh 1995.) It is more than simply training managers and instilling a sense of obligation: It becomes a matter of coordinating managers, team members, and tasks in a way that takes advantage of the individual abilities and team dynamics of one's employees (Buijs 1998). The key is to understand which tasks require an adaptive approach and which require an innovative approach, to build work teams accordingly, and to select the most appropriate manager (Buijs 1998; Kirton 1989a). In other words, improving the work environment still requires one to pay attention to *THSE* and to find ways for managers and employees to capitalize on their strengths and rely on each other to overcome weaknesses. Such is the key to effective management.

REFERENCES

- Aepfel, Timothy. 1997. Missing the boss: Not all workers find idea of empowerment as neat as it sounds. *Wall Street Journal*, 8 September, 1.
- Arbet, Ladislav. 1991. Reflexions on creativity. *Studia-Psychologica* 33, nos. 3–4:175–80.
- Aron, Adrienne. 1977. Maslow's other child. *Journal of Humanistic Psychology* 17:2.
- Bailyn, Bernard, David Davis, David Donald, John Thomas, Robert Wiebe, and Gordon Wood. 1981. *The great republic: A history of the American people*. Lexington, MA: Heath.
- Barrows, David, and Tom Wesson. 2000. A comparative analysis of job satisfaction among public and private sector professionals. *The Innovation Journal*. From www.innovating.com.
- Beene, J. Morris, and Paul F. Zelhart. 1988. Factor analysis of the Kirton Adaption-Innovation Inventory. *Perceptual and Motor Skills* 66, no. 2:667–71.
- Bennis, Warren, Edgar H. Schein, and Caroline McGregor. 1966. *Leadership and motivation: Essays of Douglas McGregor*. Cambridge: The MIT Press.

- Bennis, Warren, Gary Heil, and Deborah Stephens. 2000. *Douglas McGregor, revisited: Managing the human side of enterprise*. New York: John Wiley.
- Berman, Evan M., and Jonathan P. West. 1995. TQM in American cities: Hypotheses regarding commitment and impact. *Journal of Public Administration Research and Theory* 5:213–30.
- Blai, Boris. 1964. An occupational study of job satisfaction and need satisfaction. *The Journal of Experimental Education* 32, no. 4:383–88.
- Bobic, Michael, Eric Davis, and Robert Cunningham. 1997. The Kirton Adaption-Innovation Inventory: Validity issues, practical questions. *Review of Public Personnel Administration* 18 (spring):18–31.
- Buijs, Jan. 1998. Viewpoint: Towards a new Theory X. *Creativity and Innovation Management* 7, no. 1:17–22.
- Buss, A. R. 1979. Humanistic psychology as liberal ideology: The socio-historical roots of Maslow's theory of self-actualization. *Journal of Humanistic Psychology* 193:43–55.
- Camp, Scott D. 1995. Assessing the effects of organizational commitment and job satisfaction on turnover: An event history approach. *The Prison Journal* 74, no. 3:279–305.
- Carne, G. C., and Michael J. Kirton. 1982. Styles of creativity: Test-score correlations between Kirton Adaption-Innovation Inventory and Myers-Briggs Type Indicator. *Psychological Reports* 50, no. 1:31–36.
- Caruth, Don, and Robert M. Noe III. 1986. Motivate! In *Motivation of personnel*, edited by A. Dale Timpe. New York: Facts on File.
- Ciulla, Joanne B. 2000. *The working life: The promise and betrayal of modern work*. New York: Random House.
- Clapp, R. G., and S. M. De Ciantis. 1989. Adapters and innovators in large organizations: Does cognitive style characterize actual behavior of employees at work? An exploratory study. *Psychological Reports* 65, no. 2:503–13.
- Collins, James. 1996. Tapping human potential to enhance performance. *Inc.* 18:1–2.
- ComputerWorld. 1999. 1999 satisfaction survey. *ComputerWorld*. From www.computerworld.com/cwi.
- The Conference Board (TCB). 2000. *Special consumer survey report: American workers grow increasingly dissatisfied with their jobs*. New York: The Conference Board.
- Crewson, Philip E. 1997. Public-service motivation: Building empirical evidence of incidence and effect. *Journal of Public Administration Research and Theory* 7 (October):499–518.
- DEVA Partnership, Ltd. n.d. Kirton adaption and innovation inventory. Retrieved on May 21, 2003, from Devapartner.com/kai.html.
- Elder, Richard L. 1989. Relationships between adaption-innovation, experienced control, and state-trait anxiety. *Psychological Reports* 65, no. 1:47–54.
- Faulkner, Harold Underwood, and Tyler Kepner. 1950. *America: Its history and people*. New York: McGraw-Hill.
- Fernando, Mario. 2001. Are popular management techniques a waste of time? *Academy of Management Executive* 15, no. 3:138–40.
- Fleener, John W., and Sylvester Taylor. 1994. Construct validity of three self-report measures of creativity. *Educational & Psychological Measurement* 54, no. 2:464–70.
- Foxall, Gordon R. 1990. An empirical analysis of mid-career managers' adaptive-innovative cognitive styles and task orientations in three countries. *Psychological Reports* 66, no. 3, pt. 2:1115–24.
- Foxall, Gordon R., and Seema Bhate. 1993. Cognitive styles and personal involvement of market initiators for "healthy" food brands: Implications for adoption theory. *Journal of Economic Psychology* 14, no. 1:33–56.
- Foxall, Gordon R., and Paul M. Hackett. 1992a. The factor structure and construct validity of the Kirton Adaption-Innovation Inventory. *Personality and Individual Differences* 3, no. 9:967–75.
- . 1992b. Cognitive style and extent of computer use in organizations: Relevance of sufficiency of originality, efficiency and rule-conformity. *Perceptual and Motor Skills* 74, no. 2:491–97.
- Foxall, Gordon R., and Adrian Payne. 1989. Adapters and innovators in organizations: A cross-cultural study of the cognitive styles of managerial functions and subfunctions. *Human Relations* 42, no. 7:639–49.

- Foxall, Gordon R., Adrian F. Payne, and Deborah A. Walters. 1992. Adaptive-innovative cognitive styles of Australian managers. *Australian-Psychologist* 27, no. 2:118–22.
- Furnham, Adrian. 1990. Faking personality questionnaires: Fabricating different profiles for different purposes. *Current Psychology Research and Reviews* 9, no. 1:46–55.
- Gabor, Andrea. 2000. *The capitalist philosophers*. New York: Times Business.
- Goble, Frank. 1970. *The third force: The psychology of Abraham Maslow*. New York: Pocket.
- Goldsmith, Ronald E. 1984. Personality characteristics associated with adaption-innovation. *Journal of Psychology* 117, no. 2:159–65.
- . 1985. Adaption-innovation and cognitive complexity. *Journal of Psychology* 119, no. 5:461–67.
- . 1986a. Convergent validity of four innovativeness scales. *Educational and Psychological Measurement* 46, no. 1:81–87.
- . 1986b. Personality and adaptive-innovative problem solving. *Journal of Social Behavior and Personality* 1, no. 1:95–106.
- . 1987. Creative level and creative style. *British-Journal-of-Social-Psychology* 26, no. 4:317–23.
- Goldsmith, Ronald E., and Timothy Matherly. 1986. The Kirton Adaption-Innovation Inventory, faking, and social desirability: A replication and extension. *Psychological Reports* 58, no. 1:269–70.
- Groves, David L., Harvey Kahalas, and David L. Erickson. 1975. A suggested modification of Maslow's needs hierarchy. *Social Behavior and Personality* 3, no. 1:65–68.
- Hamermesh, Daniel S. 2001. The changing distribution of job satisfaction. *Journal of Human Resources* 36:1–30.
- Hammond, Sean M. 1986. Some pitfalls in the use of factor scores: The case of the Kirton Adaption-Innovation Inventory. *Personality and Individual Differences* 7, no. 3:401–7.
- Hansen, James T. 2000. Psychoanalysis and humanism: A review and critical examination of integrationist efforts with some proposed resolutions. *Journal of Counseling and Development* 78, no. 1:21–30.
- Hart, Peter D., and Associates. 1998. Study #5184. Survey conducted for Shell Corporation, 17–20 July.
- Helmich, D. L., and W. B. Brown. 1972. Successor type and organizational change in the corporate enterprise. *Administrative Science Quarterly* 17, no. 3:1148–55.
- Heylighen, Francis. 1992. A cognitive-systematic reconstruction of Maslow's theory of self-actualization. *Behavioral Science* 37, no. 1:39–58.
- Holland, Peter A. 1987. Adapters and innovators: Application of the Kirton Adaption-Innovation Inventory to bank employees. *Psychological Reports* 60, no. 1:263–70.
- Horn, Laura J., and Lisa Zahn. 2001. *From bachelor's degree to work: Major field of study and employment outcomes of 1992-93 bachelor's degree recipients who did not enroll in graduate education by 1997*. Washington, D.C.: National Center for Education Statistics. Retrieved on May 21, 2003, from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2001165>.
- Isaksen, Scott G., and Gerard J. Puccio. 1988. Adaption-innovation and the Torrance tests of creative thinking: The level-style issue revisited. *Psychological Reports* 63, no. 2:659–70.
- Jacobson, Carolyn M. 1993. Cognitive styles of creativity: Relations of scores on the Kirton Adaption-Innovation Inventory and the Myers-Briggs Type Indicator among managers in the U.S.A. *Psychological Reports* 72, no. 3, pt. 2:1131–38.
- Joniak, Andrew J., and Scott G. Isaksen. 1988. The Gregoric Style Delineator: Internal consistency and its relationship to Kirton's adaptive-innovative distinction. *Educational and Psychological Measurement* 48, no. 4:1043–49.
- Keller, Robert T., and Winford E. Holland. 1978. A cross-validation study of the Kirton Adaption-Innovation Inventory in three research and development organizations. *Applied Psychological Measurement* 2, no. 4:563–70.
- Kiel, Joan M. 1999. Reshaping Maslow's hierarchy of needs to reflect today's educational and managerial philosophies. *Journal of Instructional Psychology* 26, no. 3:167–68.
- Kirton, Michael J. 1976. Adapters and innovators: A description and a measure. *Journal of Applied Psychology* 61:622–29.
- . 1978. Field dependence and adaption-innovation theories. *Perceptual and Motor Skills* 47, no. 3, pt. 2:1239–45.

- . 1980. The Kirton Adaption-Innovation Inventory: A reply to Mulligan and Martin. *Psychological Reports* 46, no. 3, pt. 1:950.
- . 1984. Adapters and innovators: Cognitive styles and personality. Occupational Research Centre Working Paper, Hatfield Polytechnical School, London.
- . 1985a. *KAI Report Back Form*. Author.
- . 1985b. Adapters, innovators, and paradigm consistency. *Psychological Reports* 57, no. 2:487–90.
- . 1989. Cognitive style and alcoholics: A comment on Robertson et al. *Psychological Reports* 65, no. 2:456–58.
- . 1989b. *Adapters and innovators: Styles of creativity and problem solving*. London: Routledge.
- . 1992. A velvet comment on the level-style debate. *Studia-Psychologica* 34, nos. 4–5:399–401.
- Kirton, Michael J., and S. M. De Ciantis. 1986. Cognitive style and personality: The Kirton Adaption-Innovation and Cattell's sixteen personality factor inventories. *Personality and Individual Differences* 7:141–46.
- Kirton, Michael J., S. M. De Ciantis, and Sean Hammond. 1980. Levels of self-actualization of adapters and innovators. *Psychological Reports* 46, no. 3, pt. 2:1321–22.
- Kirton, Michael J., S. M. De Ciantis, and R. M. McCarthy. 1985. Personal and group estimates of the Kirton Inventory scores. *Psychological Reports* 57, no. 3, pt. 2:1067–70.
- Koppel, Jonathon G. S. 1999. The challenge of administration by regulation: Preliminary findings regarding the U.S. government's venture capital funds. *Journal of Public Administration Research and Theory* 9, no. 4:641–66.
- Korth, Sharon J. 2000. Single and double-loop learning: Exploring potential influences of cognitive style. *Organization Development Journal*, 18, no. 3:87–98.
- Kubes, Marian. 1992. Cognitive style and interpersonal behaviour: The Kirton Adaption-Innovation and Schutz's FIRO-B inventories. *Psychology: A Journal of Human Behavior* 29, no. 2:33–38.
- Lan, Zhiyong, and Hal G. Rainey. 1992. Goals, rules, and effectiveness in public, private, and hybrid organizations: More evidence on frequent assertions about differences. *Journal of Public Administration Research and Theory* 2, no. 1:5–28.
- Leidecker, Joel K., and James J. Hall. 1986. Motivation: Good theory—poor application. In *Motivation of Personnel*, edited by A. Dale Timpe. New York: Facts on File.
- Lethbridge, D. 1986. A Marxist theory of self-actualization. *Journal of Humanistic Psychology* 26, no. 2:84–103.
- Locke, Edwin A. 1982. Employee motivation: A discussion. *Journal of Contemporary Business* 11, no. 2:71–82.
- Maccoby, Michael. 1976. *The gamesman: The new corporate leaders*. New York: Simon and Schuster.
- Maddi, S. 1976. *Personality theories: A comprehensive analysis*. Homewood, IL: Dorsey Press.
- Manchester, William. 1974. *The glory and the dream: A narrative history of America, 1932–1972*. 2 vols. Boston: Little, Brown.
- Markus, Anton. 1992. Adaptation-Innovation cognitive style and problem coping. *Studia-Psychologica* 34, no. 1:85–92.
- Maslow, Abraham. 1968. *Toward a psychology of being*. 2d ed. New York: Van Nostrand.
- . 1970. *Motivation and personality*. 2d ed. New York: Harper and Row.
- . 1998. *Maslow on Maslow*. New York: John Wiley.
- . 1999. *Toward a psychology of being*. 3d ed. New York: John Wiley.
- . 2000. *The Maslow business reader*. New York: John Wiley.
- Masten, William G., and A. Toy Caldwell-Colbert. 1987. Relationship of originality to Kirton's scale for innovators and adapters. *Psychological Reports* 61, no. 2:411–16.
- Maupin, James R. 1993. Control, efficiency, and the street-level bureaucrat. *Journal of Public Administration Research and Theory* 3, no. 3:335–57.
- McGregor, Douglas. 1944. Conditions of effective leadership in the industrial organization. *Journal of Consulting Psychology* 8, no. 2:55–63.
- . 1960. *The human side of enterprise*. New York: McGraw-Hill.
- . 1961. New concepts of management. *The Technology Review* 63, no. 4:2–4.

- . 1967. *The professional manager*. New York: McGraw Hill.
- McNeilly, Kevin M., and Ronald E. Goldsmith. 1992. The moderating effect of sales managers' approach to problem solving on the salesperson satisfaction/intention to leave relationship. *Journal of Social Behavior and Personality* 7, no. 1:139–50.
- Mihal, W. L., P. A. Sorce, and T. E. Comte. 1984. A process model of individual career decision-making. *Academy of Management Review* 9, no. 1:93–103.
- Mook, D. G. 1987. *Motivation: The organization of action*. New York: Norton.
- Moussavi, Farzad, and Donald L. Ashbaugh. 1995. Perceptual effects of participative, goal-oriented performance appraisal: A field study in public agencies. *Journal of Public Administration Research and Theory* 5:331–44.
- Mulligan, Glenn, and William Martin. 1980. Adapters, innovators, and the Kirton Adaption-Innovation Inventory. *Psychological Reports* 46, no. 3, pt. 1:883–92.
- Oswald, Andrew. 1999. Britain only 17 in new Job-Satisfaction League table. West Midlands, United Kingdom: University of Warwick Coventry.
- Pearson, Elaine M. 1994. *A new look at Maslow's humanism through radical and postmodern criticism*. Ann Arbor: University of Michigan Dissertation Services.
- . 1999. Humanism and individualism: Maslow and his critics. *Adult Education Quarterly* 50, no. 1:41–55.
- Pettigrew, Amy C., and Margaret O. King. 1993. A comparison between scores on Kirton's inventory for nursing students and a general student population. *Psychological Reports* 73, no. 1:339–45.
- Porat, Benjamin. 1977. Guttman scale test for Maslow need hierarchy. *Journal of Psychology* 97:85–92.
- Prato-Previde, Guido. 1984. Adapters and innovators: The results of the Italian standardization of the KAI (Kirton Adaptation-Innovation Inventory). *Ricerche-di-Psicologia* 8, no. 4:81–134.
- . 1991. Italian adapters and innovators: Is cognitive style underlying culture? *Personality and Individual Differences* 12, no. 1:1–10.
- Prato-Previde, Guido, and Carli Massimo. 1987. Adaption-innovation typology and right-left hemispheric preferences. *Personality and Individual Differences* 8, no. 5:681–86.
- PRN News Service (PRN). 2001. *U.S. workers continue to change jobs at an alarming pace in 2001*. Survey completed for CareerBuilders, Retrieved on February 6, 2001, from www.careerbuilders.com.
- Rabinow, P., and H. Dreyfuss. 1983. *Michel Foucault, beyond structuralism and hermeneutics*. Chicago: University of Chicago Press.
- Robertson, E., Glenn P. Fournet, Paul Zelhart, and Robert Estes. 1988. A factor analysis of the Kirton Adaption-Innovation Inventory using an alcoholic population. *Perceptual and Motor Skills* 66, no. 2:659–64.
- . 1989. Cognitive style and alcoholics: A comment on Richardson et al. response to Kirton. *Perceptual and Motor Skills* 69, no. 3, pt. 1:1037–38.
- Rosenfeld, Robert B., Michael Winger-Bearskin, Dorothy Marcic, and Charles L. Braun. 1993. Delineating entrepreneurs' styles: Application of adaption-innovation subscales. *Psychological Reports* 72, no. 1:287–98.
- Rowan, John. 1998. Maslow amended. *Journal of Humanistic Psychology* 38, no. 1:81–93.
- . 1999. Ascent and descent in Maslow's theory. *Journal of Humanistic Psychology* 39, no. 3:125–33.
- Salamon, Graeme. 1979. *Work resistance and control*. New York: Longman.
- Schmidt, Stefanie R. 1999. Long-run trends in workers' beliefs about their own job security: Evidence from the General Social Survey. *Journal of Labor Economics* 17, no. 4:S127–41.
- Schmidt, Stefanie R., and Shirley V. Svorny. 1998. Recent trends in job security and stability. *Journal of Labor Research* 194:647–68.
- Schott, R., and Abraham Maslow. 1992. Humanistic psychology and organization leadership: A Jungian perspective. *Journal of Humanistic Psychology* 32, no. 1:106–20.
- Schrage, Michael. 2000. The things about management that will never change. *Across the Board* 37, no. 7:67.

- Selby, Edwin C., Donald J. Treffinger, Scott G. Isaksen, and Stephen V. Powers. 1993. Use of the Kirton Adaption-Innovation Inventory with middle-school students. *Journal of Creative Behavior* 27, no. 4:223–35.
- Shaw, R., and K. Colimore. 1988. Humanistic psychology as ideology: An analysis of Maslow's contradictions. *Journal of Humanistic Psychology* 28, no. 3:51–74.
- Shostram, E. 1965. An inventory for the measurement of self-actualization. *Educational and Psychological Measurement Issues* 24:207–18.
- Singer, Ming S. 1990. Individual differences in adaption-innovation and the escalation of commitment paradigm. *Journal of Social Psychology* 130, no. 4:561–63.
- . 1992. Individual differences in adaption-innovation: A clarification. *Journal of Social Psychology* 132, no. 1:145–46.
- Skinner, Nicholas F. 1989. Behavioral implications of adaption-innovation: I. Managerial effectiveness as a function of sex differences in adaption-innovation. *Social Behavior and Personality* 17, no. 1:51–55.
- Staw, Barry M., and Lisa D. Epstein. 2000. What bandwagons bring: Effects of popular management techniques on corporate performance, reputation, and CEO pay. *Administrative Science Quarterly* 45, no. 3:523–55.
- Strauss, George. 1968. Review of *The professional manager*, by Douglas McGregor. *The Journal of Business* 41: 121–22.
- Tausky, Curt. 1992. Work is desirable/loathsome: Marx v. Freud. *Work and Occupation* 191:3–18.
- Taylor, William G. 1989a. The Kirton Adaption-Innovation Inventory: Should the subscales be orthogonal? *Personality and Individual Differences* 10, no. 9:921–29.
- . 1989b. The Kirton Adaption-Innovation Inventory: A reexamination of the factor structure. *Journal of Organizational Behavior* 10, no. 4:297–307.
- Torrance, E. Paul, and Ruey Yun Horng. 1980. Creativity and style of learning and thinking characteristics of adapters and innovators. *Creative Child and Adult Quarterly* 5, no. 2:80–85.
- Traut, Carol Ann, Rick Larsen, and Steven Feimer. 2000. Hanging on or fading out? Job satisfaction and the long-term worker. *Public Personnel Management* 29, no. 3:343–50.
- United Press International (UPI). 2001. *UPI hears . . .* News release, 4 April, p1008094u0700.
- Valetta, Robert. 1999. Declining job security. *Journal of Labor Economics* 17, no. 4:S170–97.
- Verma, Kiran, Barry Mitnick, and Alfred Marcus. 1999. Making incentive systems work: Incentive regulation in the nuclear power industry. *Journal of Public Administration Research and Theory* 9, no. 3:395–436.
- Wahba, M. A., and L. G. Bridwell. 1976. Maslow reconsidered: A review of research on the need hierarchy theory. *Organizational Behavior and Human Performance* 15: 210–240.
- Walesh, Stuart G. 1997. Job security is an oxymoron. *Civil Engineering* (February):62–63.
- Weinstein, Dianne. 2001. "Theory X" and "Theory Y" for today's soon-to-be managers. In *The executive and corporate coach*, Long Island Experts. Retrieved May 19, 2001, from http://experts.longisland.com/careercoaching/print_article.php?ID=454.
- Whyte, William H. 1956. *The organization man*. New York: Simon and Schuster.
- Wilkinson, Adrian, Graham Godfrey, and Mick Marchington. 1997. Bouquets, brickbats, and blinkers: Total quality management and employee involvement in practice. *Organization Studies* 18, no. 5:799–819.
- Yankelovich, Daniel, and Immerwahr, John. 1986. Let's put the work ethic to work. In *Motivation of personnel*, edited by A. Dale Timpe. New York: Facts on File.