Corporate America finds itself in a sea of change. This change is the result of many factors including rapid technological developments so revolutionary that some have suggested that a third industrial revolution, the Age of Informatics, is at hand. Dynamic and profound changes in corporate organizations abound as a result of the numerous leveraged buyouts of the 1980s and globalization of the world economy.

A special component of this new technical age is human capital. No longer simply a pair of hands to do a task, human capital has evolved into a creative source of ideas and thought, the principal raw material for creating the information product. The increasing need for highly skilled workers, coupled with a decrease in opportunities for the marginally skilled employees, presents significant challenges not only to businesses, but also to society in general. The challenges businesses face have the potential to create what Richard Freeman has labeled the "apartheid economy." Important as this issue may be, this paper will focus instead on the employee who possesses technical capabilities needed by the "high-tech" industries of the future.

It would seem to be the dawning of the golden age for these workers; yet critics ranging from academic literature to the popular press suggest that the situation of even the skilled workers in today’s corporation is far from satisfactory and that their productivity is less than optimum.3 Despite their valuable capabilities, many highly skilled workers have fallen victim to down-sizing, layoffs and corporate restructuring, leaving remaining workers demoralized and uncertain of their future. Corporate America’s significant investment in motivational and productivity consultants shows that the negative impact is not limited to the workers. Hence, consideration of the worker’s situation can lead to benefits for both individual workers and corporations.

As financial experts, legal scholars, economists, and corporate managers contemplate the course of corporate governance and the role of the employee in the corporation of the future, the voice of the technically skilled work force is conspicuously absent. The value of this section of the work force lies in its understanding of technology and in its analytical and problem solving skills. Only recently, an eloquent spokesperson for the technical work force in corporate America emerged from a most unlikely source. He is the beleaguered, cubical-dwelling cartoon character, Dilbert.4 Underscoring skilled workers’ identification with Dilbert’s disenfranchisement, frustration and confusion are: the rampant popularity of the Dilbert comic,5 which appears in over 1700 newspapers daily;6 the huge market for Dilbert books and paraphernalia; the ubiquitous presence of Dilbert quotations and cartoons in the work place; and the flood

4. Dilbert was born in a cubicle at Pacific Bell where his creator, Scott Adams, occupied cubicle 4S700R. Adams continued to work at Pacific Bell as a manager from 1989, when the strip began, until 1995, when he lost his job as a result of downsizing. See Lisa McLaughlin, Layoffs For Laughs: A Cartoon Called Dilbert Uplifts the Downsized, TIME, May 18, 1996, at 82; Ellen Forman, Dilbert Swamped By Information, AUSTIN AM.-STATESMAN, June 9, 1996, at F4.
of e-mail received daily by creator Scott Adams. Each day, "millions of [followers of Dilbert] see the banality and brutality of their own working conditions." Even experts agree that Dilbert provides much insight into modern day-to-day workplace conditions.

This paper considers the role of the technically skilled worker by: (1) identifying Dilbert's sources of frustration through a comparison to Dagwood Bumstead, (2) considering current corporate actions and initiatives to address the employee role in the changing corporate environment and identifying critical inadequacies in current efforts and (3) proposing strategies for addressing these deficiencies without radical alteration of the present system of corporate governance.


Although a cartoon character may seem an unlikely reference point in an academic article, identification with humor may be one of the most honest sources for determining individuals' attitudes. Professor M. Thomas Inge of Randolph-Macon College, author of *Comics as Culture*, says "Icomic strips are one of the few native American art forms, and they really reflect the social attitudes of the times." William B. Falk, *Serious Business on the Funny Pages*, NEWSDAY, Feb. 10, 1997, at B04. Humor strikes a basic spontaneous responsiveness in humans that is difficult to capture in formal forms and interviews. In the formal setting, the interviewee is much more likely to clothe his/her response in a fabric of perceived expectation. See also Cynthia Crossen, *Everybody's a Wisenheimer*, WALL ST. J., Jan. 31, 1997, at A1.
A general comparison of the tenor of Dilbert with the Dagwood cartoon character of forty years ago shows a transition in employee attitude. The employee as a character who seemed satisfied with his work, lived a fairly simple life, and had a home, family and neighbors, has evolved into a downtrodden, frustrated, isolated character with little life beyond the office and low job satisfaction. Many have attributed the decrease in job satisfaction to increased uncertainty in job stability due to downsizing and decreasing commitment of employers to a long term employment relationship. No doubt these factors do play a role, but to attribute the present low morale of large sections of the work force to them is to oversimplify the problem. Simple examination of the Blondie cartoon strip shows a frequent theme of Mr. Dithers, Dagwood’s boss, threatening to fire Dagwood. Granted, Dagwood reappeared in the office in subsequent strips; however, Mr. Dithers made Dagwood well aware that he was an at-will employee and his fate was in the hands of a boss who could fire him in an instant.
The inadequacy caused by uncertainty with the future as an explanation for the difference between Dagwood’s and Dilbert’s attitude is further eroded when one contemplates that those Dagwood comic strips appeared on the back pages of newspapers bearing headlines of the arms race and cold war with the shadow of nuclear destruction ever present. Even if Dagwood and the employees who identified with him had better prospects for keeping their jobs in the long term, they confronted daily unpleasant uncertainty regarding their basic survival. Hence, uncertainty regarding long term employment, while a legitimate factor in contributing to Dilbert’s pessimism, is not convincing as its principal cause.

At least four additional general areas of differences between Dagwood and Dilbert can be identified which shed light on Dilbert’s despair and provide insight for determining how to optimize the corporation/employee relationship of the future.

16. Blondie, Rich. Times-Dispatch, Apr. 12, 1987 (Reprinted with special permission of King Features Syndicate); see also: Blondie, Rich. Times-Dispatch, Jan. 27, 1963. The author analyzes Blondie cartoons of the 1950s and 1960s in developing her discussion of Dagwood’s life and working environment. However, copyright issues have precluded use in this publication of Blondie cartoons older than 1985. Subsequently, the author searched more recent Blondie strips to find publishable examples which correspond to the original cartoons analyzed. Cartoons used in this paper will be footnoted with their date of appearance after 1985 as well as reference to the earlier cartoon of comparable content used in the original analysis.

17. During the Cuban Missile Crisis, when newspaper headlines indicated that the world teetered on the brink of nuclear war, Dagwood appeared on the comic page continuing his usual activities of home and office. See, e.g., Blondie, Rich. Times-Dispatch, Oct. 15-31, 1961.
These areas are physical accessibility, communications, feedback, and human dignity.

A. Physical Accessibility

Dagwood's physical office surroundings differed markedly from Dilbert's. Dagwood sat in a spacious desk in an open space. No obvious barriers were placed between him and his coworkers. He did not appear to have a private office, and he appeared to have been readily accessible to his coworkers; yet, he had sufficient privacy when he was busy.

In sharp contrast, Dilbert is confined to the infamous cubical. It is a small space which lacks the dignity of an office, provides an ever-present physical barrier between him and his coworkers and creates a mental barrier of confinement. Dilbert's cubical bears a remarkable comparison to a stall in a stable. Instead of being an ongoing part of the corporate activities, Dilbert, like the horse in the stall, is stored by the corporation until his particular expertise is needed. The cubicle stifles creativity and denies Dilbert the opportunity to contribute, much less collaborate, with his coworkers because he is confined to such a small space surrounded by real physical barriers. The cubical is not a figment of comic strip imagination, but rather a real, omnipresent feature of the corporate office.  

---


B. Communications

Initially, one would predict that the Age of Informatics\textsuperscript{21} would present an age of enhanced communication. While e-mail, faxes and satellite transmissions of phone and video communications present the opportunity for instantaneous global communications, workplace communication has deteriorated in two respects. First, in excessive use of word-smithing, and second, in lack of substantive content. Dagwood’s communications with Mr. Dithers were timely, brief, used simple language and, from all appearances, contained adequate substance for communicating the critical information of the job at hand.

\begin{itemize}
\item \textbf{Dagwood, Dilbert and Beyond} \hfill 1503
\end{itemize}

\textbf{20.} \textit{Id.} at 23 (DILBERT reprinted by permission of United Feature Syndicate, Inc.).
\textbf{21.} See Brzezinski, \textit{supra} note 1 and accompanying text.
Dilbert is deluged with a constant barrage of elaborate sounding verbiage which camouflages the basic issues and typically marginalizes any substantive content. Frequently managers use acronyms not readily understood by the wider corporate community or hire an outside consultant who provides a new vocabulary of buzz words to create the perception of creativity when substance is lacking.\textsuperscript{23} Corporate management literature, such as the Research Technology Management journal, provides ample examples of this obfuscation of simple concepts in complex new vocabulary.\textsuperscript{24}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{dilbert-bingo}
\caption{Here's your "Buzzword Bingo" card for the meeting.}
\end{figure}

Words are essential elements in relaying concepts from one human to another and development of additional vocabulary is a natural outgrowth of new experience. Rapid changes in vocabulary and lack of commonality of understanding of new terms, however, thwart constructive cooperation. One of the most ancient stories known to man, the story of the tower of Babel, affirms this point. The Bible relates this story as: "Once upon a time all the world spoke a single language and used the same words . . . . [The people] said to one another, 'let us build our-

\begin{enumerate}
\item \textsuperscript{23} See ADAMS, supra note 19, at 40-41.
\item \textsuperscript{24} For example, see 1992 copies of Research Technology Management, a journal published six times per year by Industrial Research Institute (IRI), "a non-profit organization of [nearly 300] leading industrial companies. These companies [represent] . . . . 85 percent of the industrial research effort in the United States . . . . and account for 20 percent of the gross national product," according to note accompanying publication information inside the cover of the Jan.—Feb. 1992 (Vol. 35, No. 1) issue. This time period is selected for reference because it reflects the time frame in which much of the so called "new corporate culture" was introduced into corporate R&D organizations and gives a good view of the scope and nature of new language invention.
\item \textsuperscript{25} ADAMS, supra note 19, at 41 (DILBERT reprinted by permission of United Feature Syndicate, Inc.).
\end{enumerate}
selves a city and a tower with its top in the heavens, and make a name for ourselves . . . “26 God was displeased with this plan and thwarted it by confusing their speech “so that they [could] not understand what [was said] to one another.”27 This not only effectively stopped the building project, but also resulted in the people scattering over the earth. The counter-productivity of excessive language manipulation is not a novel concept. Effective communication is necessary not only for developing new projects but is also essential for maintaining progress in ongoing projects.

C. Feedback/Performance Evaluation

Dagwood’s interactions on job performance with his boss, Mr. Dithers, were frequent features of the Blondie cartoon strip. Sometimes, Mr. Dithers gave word of praise or a raise in salary, other times he conveyed a sense of urgency or expressed anger. These were all simple, direct communications, using straightforward language or actions, delivered in a timely fashion with regard to Dagwood’s current performance. His increases in wages were directly tied to his performance. He might reasonably have expected financial reward as a result of his outstanding individual contribution to a specific project.

27. Id.
Dagwood had ongoing feedback on how to best direct his efforts to optimize his contribution to the firm’s goals and endeavors. Not only did this enhance his self-esteem and feeling of worth to the company, but the company profited because the employee had both the information and motivation to give his best effort to the company. The directness and frequency of the Dagwood-Mr. Dithers interaction also created an accountability of the management to the employee. Dagwood knew precisely who evaluated his performance, had ready access to that individual and could challenge assessments. The concept of a yearly performance appraisal was foreign to Dagwood.

In contrast, Dilbert's principle performance feedback is the yearly performance appraisal. Dilbert receives only limited feedback near the time that he actually does a task or fails to accomplish a task. Instead, all of his efforts are reduced to a single document generated on a yearly basis. As the cartoon implies, frequently the manager is so removed from Dilbert’s work and unknowledgeable of his efforts that the performance


30. See generally AMA MANAGEMENT HANDBOOK 81-93 (William K. Fallon ed., 2d ed. 1983). In principle, performance management systems currently in vogue are supposed to enhance fairness and objectivity by evaluating all employees at the same time once a year and collecting input for that evaluation from a variety of sources. Typically, targets are set for the percentage of employees receiving ratings of above average, average or below average (also labeled exceeds expectations, meets expectations, fails to meet expectations, respectively) with most employees ranked in the average group. In practice, the system more resembles a lottery for the few above average ratings than a consideration of the employee’s contributions. It is not unusual for input into the performance appraisal to be derived from individuals who have little personal familiarity with the employee in question or her work.
appraisal (PA) becomes a collection of management style phrases which obscure his technical contributions or reflect any of the substance of his contribution to the corporation.

A recent posting on the internet widely circulated in corporate offices succinctly expresses the technically skilled employee's frustration with currently fashionable performance appraisal systems. As the author states:

[The performance appraisal] wasn't particularly a big deal, and it gave me an opportunity to sit down with my project leader and manager and talk about how things were going . . . . I believed that because I communicated frequently with my project leader, my actual skills, productivity, and contributions were understood and recognized. I only worried that when the director read my PA that his perceptions of me would be solely based on what he read, since my exposure to the director, especially in the early days, was almost nil.

Regardless of the PA, I was pretty much self-motivated . . . . PA's didn't particularly matter because most of my incentives lay elsewhere.


31. ADAMS, supra note 19, at 101 (DILBERT reprinted by permission of United Feature Syndicate, Inc.).
32. jklein@wpost.com of The Washington Post is credited as the author of this internet posting which appeared Friday, November 8, 1996.
Wow! Talk about progressive management! I was beginning to feel bad. All along I had thought that I was managing my own performance, and now someone else was responsible for my performance. Or so it seemed. Everyone had an input into my PMP and we were all evaluated at the same time (to make the process more fair!), because the PMP was now some sort of vague competition to get a little extra salary. I began to worry more about the appearance of my productivity and my image with the management, rather than what I needed to do to get the job done. . . . Odd things began to appear which I didn't think rang quite true. I was apparently not fulfilling someone's expectation . . . but who? Should I make a rebuttal on the PMP form? Would it make any difference? Why didn't these people talk to me directly? Why couldn't my manager explain the problem to me? My performance sagged; I was getting discouraged. Maybe someone with my background and approach didn't belong in this organization.33

The yearly performance appraisal system obscures, if not removes, management's accountability to employees for performance evaluation decisions, provides little opportunity for acknowledgement of the employee's technically substantive contribution to the corporation and provides little guidance to the employee on how to improve her contribution in the future. No wonder Dilbert seems confused and lacking direction. The employee in today's corporation is deprived of real time-specific feedback necessary for optimizing his contribution. Furthermore, the employee who works hard and feels that he has given his best effort is alienated when he, like most of his colleagues, receives a performance rating of average. "Even if he has a strong self-image, he has to keep thinking that in the corporation's eyes he's just average. He's told he's not one of the winners, therefore he's a loser, and it takes a heavy toll on him and his ability to work effectively."34 It is ironic, in an age of technology where ever increasingly sophisticated instrumentation is used to precisely monitor the manufacturing process in real time and correct errors in seconds, that the technically skilled worker whose intellect is so critical to information-based products is evaluated only yearly with a very general form of a

33. Id.
34. Id.
few pages and a generic rating with little real meaning and great potential for demoralizing workers.

D. Dehumanization

A cursory comparison of a Dagwood cartoon with a Dilbert cartoon reveals a sharp contrast in the physical appearance of the characters. The characters in Dagwood have distinctive, recognizable, very human features while Dilbert and his colleagues have semi-human features and sack-like bodies. This might be dismissed as artistic style were it not for the fact that some key corporate players in Dilbert’s office are characterized with non-human features, notably Catbert, the HR (human resources) Director, and Dogbert, the consultant.

The character Catbert, frequently called “The Evil HR Director” in the strip, is particularly revealing. He is a constant source of plans and schemes which humiliate Dilbert or degrade his value as a human being. At the same time, Catbert’s job description is to facilitate appropriate use and management of human resources. The non-human characterization of the HR

---

35. Deriving information regarding an individual’s state of mind from art is not a novel concept. Educators have long recognized the individual’s art work as a valuable tool for assessing affective states and personalities. For decades, researchers have used children’s art to interpret their mental state. See, e.g., Howard Protinsky, *Children’s Drawings as Emotional Indicators*, 12 Elementary School Guidance and Counseling 249, 249-255 (1978).

36. Adams, supra note 19, at 30 (Dilbert reprinted by permission of United Feature Syndicate, Inc.).

Director shows that Dilbert does not view the director as an equal colleague and perceives that the Director's role is to advance other interests at the expense of workers. The specific depiction of the HR Director as a cat implies that Dilbert perceives the director as cunning and clever and not to be trusted. Although Dogbert is not portrayed as being evil, the non-human depiction of the consultant reflects Dilbert’s alienation from and lack of trust for this outsider who seems to easily acquire from the corporation the respect and appreciation which eludes Dilbert. HR directors and consultants lack a counterpart in Dagwood’s office and all of his coworkers were depicted as distinctly human.

The dehumanization of other individuals in the office environment speaks to Dilbert’s low self-esteem and feelings of being out of sync with corporate objectives. An especially poignant feature of the cartoon is that Dilbert is drawn without a mouth. It is Dilbert’s technical expertise which will provide the breakthrough in technology which the corporation depends on to remain competitive in the future, and yet he is without a way to speak and have meaningful input in corporate plans and decisions.

Although analyzed separately, the barrier of the cubical, ineffective communication, inadequate counterproductive feedback, and the dehumanization of Dilbert’s world intertwine to create a working environment which minimizes not only Dilbert’s work satisfaction, but also his productivity and contribution to the company. Perhaps his chances for long-term employment with the same corporation are much less than those of the workers of Dagwood’s era, but that is only a part of the cause of the technically skilled worker’s career anxiety. The workplace itself is a hostile environment.

The corporation should address the technically skilled workers’ plight for at least three important reasons. First, a sense of justice insists that “community members owe each other duties of mutual regard and support.”38 This basic moral obligation is premised on the foundation that collective efforts

of a number of individuals are required to produce and market corporate products.

Second, put in the coldest of economic terms, the skilled worker is a form of corporate investment. When the corporation invests in machinery, it takes care to train operators to use the machine properly and establishes routine maintenance schedules or contracts. If the corporation fails to take these steps, it is highly unlikely that the equipment will perform in accordance with its specifications, and continued operation per se is questionable. The company is fully aware that buying a machine is only a first step and that a commitment to maintenance and accommodation of the machine's operating parameters are essential to obtaining its full productivity capacity. By analogy, the corporation should expect to accommodate the needs of its human capital to maximize its productivity.

Third, as corporations enter the Age of Informatics, whether corporations whose main focus is high-tech products or corporations producing a conventional product using high-tech equipment and processes, they are faced with a myriad of complex technical challenges. The mind of the technically skilled employee becomes the corporation's resource for understanding technology and creating new technology. High-tech advances are not self-generating. The workers' talent and creativity are the raw materials of the corporation of the future's product. This differs from the past age of Fordism and Taylorism where the worker was primarily a set of hands to do a single simple task on a production line.\textsuperscript{39} Under the system of the past, workers were interchangeable, like the parts on a assembly line, and the individual talents of a given worker contributed little to the worker's value to the corporation. The individual skills of a worker are the critical factor in determining her value to the technology-based corporation. It is in the corporation's best interest to optimize utilization of these skills.

\textsuperscript{39} See Marleen O'Connor, Global Capitalism and the Evolution of American Corporate Governance Institutions, Perspectives on Company Law (unpublished manuscript, on file with author).
II. CORPORATE AMERICA AND THE "NEW CORPORATE CULTURE"

A. Features of the "New Culture"

Corporate America has responded to changes initiated with downsizing and global competitiveness by espousing a "new corporate culture." One author describes this new culture as follows:

As organizations make the shift from the old paradigm to the new ways of doing business, they are reflecting a new set of values . . . . A new definition of equality that honors difference while assuring equity is evolving. Organizational leaders are taking action to develop employees to their full potential, increase workforce diversity, create environments based upon trust, and utilize teams of people with diverse backgrounds, talents, skills, and viewpoints to better meet client needs . . . . The organization of the future will thrive because it has learned to transform itself into an inclusive community where diversity is valued and power is shared.41

The tone of these words alone indicates that corporate management recognizes the negative effects of Dilbert's dilemma on both the employee and the corporation and is taking steps to address the problem. Further exploration of the key concepts of teams, diversity, and empowerment, as they have been expounded, suggests appropriate rhetoric, with little substantive value for improving the worker morale, and evidence of contradictions which subvert trust.

Teams, as defined by Shonk in his organizational development book on creating team environments, are "two or more people who must coordinate their activities to accomplish a common goal." He proceeds to explain the team concept in the corporate setting as follows:

40. See sources cited supra note 24 (showing that this wave of new culture was a prominent feature of the heavily technical Research and Development arms of corporations in the early 1990s).
Companies generally are organized around individuals, functions, or departments as the basic work unit. A team-based organization is one that uses a team as its basic work unit. Teams do much of the planning, decision making, and implementation within the work setting. The two basic reasons that companies organize around teams are to empower employees to more fully contribute and to increase organizational productivity. They go together. It is not a matter of either/or. The main value of teams is their ability to assemble and empower employees to use their talents to improve the organization. In more fully participating in decisions and planning how work will be performed, employee contribution and, for most, job satisfaction are increased.\footnote{Id. at 2-3.}

This rhetoric glows of promise for a better life for Dilbert and the technically skilled worker, but what is the substantive content? What choices are employees allowed to make? For the technically skilled worker, particularly the research and development employee, how does this differ from the familiar laboratory environment which clearly fits into the definition of “two or more people who must coordinate their activities to accomplish a common goal”?\footnote{Id. at 1 (citation omitted).} Furthermore, the role of the technically skilled worker has always included applying creativity and initiative to develop the products of the future, design efficient production processes and resolve production problems in a timely fashion. Since it seems that this team concept is quite similar to how technical laboratories have operated for years, why is it touted as a radically new concept to technical personnel? Is it further evidence that management is out of touch with the technically skilled employees’ capabilities and contributions?

Likewise, “diversity” concepts as expressed in modern corporate culture sound desirable and appropriate. Leach defines diversity as referring to “differences in race, gender, ethnic or cultural background, age, sexual orientation, religion, and physical or mental capability.”\footnote{LEACH ET AL., supra note 41, at 3.} Demographic changes in the work force underlie the move for corporations to consider diversity. From this reasonable and pragmatic basis, the corporate diver-
sity programs spring to "capitalize on differences rather than 
stifle them." As one diversity text describes:

The organization of the future will be shaped by the values 
of the new paradigm [community, inclusive/fully 
participative, value diversity, build consensus, shared pow-
er/teams, collaborate] . . . . The organization will consist of 
a community of people that have gathered for a common 
purpose and in which individuals add value by their contrib-
utions, skills, and creativity. In this fluid system, the orga-
nization continuously interacts with its internal and exter-
nal environment, fully aware of the forces that impact its 
health, growth, and viability . . . . The focus on diversity is 
about inviting people in, actively and consciously doing 
things that bring people forward.

These words become hollow when one considers that the 
one-a-year performance management systems, which mini-
mize individual contribution and recognition for efforts, were 
implemented in corporate America simultaneously with diversi-
ty programs. No wonder Dilbert and his colleagues are confused 
and distrustful of management. Why does the corporation spend 
millions on diversity programs to emphasize the value of unique 
individual contributions, but evaluate performance on generic 
forms and give performance appraisal ratings of "meets expecta-
tions" (average) to most of the employees?

The most nebulous of the concepts is "empowerment." A book 
widely used in companies to present the concept of empower-
ment to employees is a small paperback, written in fable form, 
called Zapp!: The Lightning of Empowerment. In telling a 
simple story of how everyone in a fabled company is "Zapped" 
with this rather mystical new power called empowerment and 
the company prospers, the authors fail to even offer a definition 
of empowerment. They do opine that direction, knowledge, re-
sources, and support are necessary for empowerment to oc-
cur, and they identify the key features of empowerment as

46. Id. at 14.
47. Id. at 16-18.
48. See supra text accompanying note 30.
50. See id. at 60.
(1) maintain self-esteem,51 (2) listen and respond with empathy,52 (3) ask for help in solving problems,53 and (4) offer help without taking responsibility.54 The last feature (offer help without taking responsibility), which would be equally appropriate on a list of ways to seem busy without really working, is identified as the “soul” of empowerment.55 “Empowerment” has the sound of enhanced self-direction and respect for the worker's skills, judgement and contribution, but just how much and what kind of power is the corporation willing to give the employees? Suggestions for the kinds of responsibilities empowered teams can assume include: “Determine who works on what. Handle absenteeism and performance issues. Get involved in all aspects of their work. Select their own team leader . . . . Perform basic maintenance. Schedule vacations.”56 To the technically skilled worker, is this an enhancement of opportunity for meaningful contribution to the corporation or an elaborate way of telling her to assume the duties of support personnel who were dismissed in downsizing?

A wide gap exists between the pleasant euphemisms of “the new corporate culture” and the day to day reality of the technically skilled worker’s corporate world. Not only is the rhetoric of the “new culture” doing little to resolve issues but in some ways it seems to be exacerbating the problems. This is evidenced by the timing of Dilbert’s rise to popularity. Dilbert came into being in 1989,57 which is roughly the same time the “new culture” with its “teams,” “diversity,” and “empowerment” started sweeping through Corporate America. His phenomenal rise in popularity has occurred only within the past three years.58 The technically skilled workers who relate to Dilbert

51. See id. at 70-77.
52. See id. at 78-88.
53. See id. at 89-96.
54. See id. at 97-103.
55. See id. at 97.
56. Id. at 162.
58. In July of 1995, Dilbert appeared in 450 daily newspapers; by January of 1997, the number increased to 1400. See Martin, supra note 6, at 25. Dilbert is not limited to the comic strips. A search of Westlaw’s “allnews” database in February of 1997 showed nearly 3500 references to Dilbert since 1993. These references include mention in nearly every kind of publication imaginable from the Wall Street Journal.
are not waiting to experience the “new corporate culture” but rather they have been experiencing it for several years.

B. Implementation of “New Culture”

Assuming arguendo that the “new corporate culture” possessed legitimate substantive merit and genuine intent on the part of the corporation to promote empowerment and respect for the unique contribution of each individual, the procedures typically employed to implement the new culture only compound technically skilled workers’ frustration and loss of self-esteem. These failures in implementation procedures can be categorized in three broad areas: (1) defects in goal-setting; (2) lack of consideration of basic education principles in employee “training” on new culture concepts, and (3) emphasis of process over substance.

1. Defects in Goal Setting

Mission and vision statements became a prominent feature of the new culture at all levels—project, team, and corporate. Dilbert captures the essence of the mission statement.

These statements are typically broad generalities liberally laced with key corporate buzz words. These statements, like mother, country, and apple pie, are noncontroversial generalizations with which no reasonable person could disagree. Yet, upon

and Financial Times, to local newspapers and People Magazine.
59. ADAMS, supra note 19, at 37 (DILBERT reprinted by permission of United Feature Syndicate, Inc.).
hearing these broad generalities, the technically skilled worker is to go forth and develop new and creative products and improved processes. What kind of products does the company want—brand extensions or entirely new product lines? What kind of financial and time investment is the company willing to set forth?

Goals should establish common purposes as well as set the tone and aspirations of an endeavor. The problem in goal setting arises not because management fails to set forth a goal, but rather that the goals set are very nonspecific. As Locke and Latham explain goal setting, the generalized goal may have only marginal impact in effectively accomplishing a task. A basic tenet of goal setting theory is that “goals that are specific and difficult lead to a higher level of performance than vague, non-quantitative goals such as ‘do your best,’ ‘work at a moderate pace’ or no assigned goals.” The mission statement typically falls at the extreme end of “do your best” goals. Likewise, the vagueness of the mission statement deprives it of the value of a difficult goal because difficulty can not be ascertained. The mission statement also lacks a time frame reference. Scholars may debate the relative merits of distal and proximate goals and contemplate the effect of the nature of the subject matter, but these discussions are all premised on the basis that an identifiable time frame for accomplishing the goal is a requisite in goal-setting. Corporations espoused the concept of goal-setting with the mission statement, but unfortunately did not adequately consider how to structure goals most effectively or establish effective mechanisms to transform the vague goals of a mission statement into specific goals with a challenging level of difficulty and measurable time frame.

Often the corporate process goes directly from a mission statement to a request for employees to fill in lines on a computer generated spreadsheet indicating in a brief phrase what they will do for the next year and when each task will be com-

62. Id. at 29.
63. See id. at 58-61.
The process lacks the transfer of meaningful information to create optimum results for the corporation and workable goals for the employee. The technically skilled worker does not need explicit directions of what to do or extensive supervision in performing a task. What she needs is feedback so she understands the corporation's needs and ambitions and applies her efforts and talents to projects or problem solving effectively. Feedback "increase[s] the employee's feeling of achievement and [p]rovide[s] her with a sense of personal responsibility ..."

The nebulous concept of feedback becomes concrete by addressing two questions: "[1] How does an employee know when he or she has achieved something? and [2] How does that employee know when he or she has adequately or successfully fulfilled his or her responsibility?" These questions have simple, straightforward answers in an environment of well-defined, clearly stated goals. This is not contradicting the concept of the "new corporate culture" mission statement, but it is a retooling of the concept from intangible generality to workable specificity.

2. Lack of Consideration of Basic Educational Principles

The typical format for introduction of the new culture concepts to the work force has been through half-day or one-day sessions conducted by consultants or by group participation in stylized models such as "Lego man," building model bridg-

---

64. Id. at 17.
65. Id.
66. A mailing of the University of Richmond Management Institute of The E. Claiborne Robins School of Business, February 24, 1997, is characteristic. The four-page letter advertises a lecture by Dr. Ken Blanchard, the co-author of One Minute Managers. The literature touts the one-day session as teaching the participant:
   - How everybody, not just "managers," should catch people doing things RIGHT;
   - How to empower everyone around you—using three dynamic methods;
   - How every worker can go beyond goals by overlearning;
   - How to earn and retain long-term customers with "recovery strategy;"
   - How to instill in each worker the principles of situational self-leadership;
   - How to turn groups into high-performing teams;
   - How to contribute to a working atmosphere of trust and openness.

The promotional materials also include three testimonials of former participants regarding the overwhelming impact of the session on their lives.
67. "Lego man" is frequently used in team building exercises. In this exercise, the participants are shown but not allowed to touch a "human-like" figure constructed from different colors of Lego blocks. Teams are then given bags of Legos with the
es from paper, and wilderness rock climbing or paint ball experiences.

A classic feature of both of these venues of training is that they are rather isolated events with a dramatic point. Certainly such a point may be useful for engaging the attention of a potential student or driving home a point, but true education is a much more complicated process. The famous developmental psychologist Piaget explained the educational process as to educate is "to change the individual's psychobiological constitution in terms of the totality of the collective realities to which the community consciously attributes a certain value." Thus, education in Piaget's view has two components: (1) the developing individual and (2) the social, intellectual and moral values that the educator initiates in the individual. A one day activity may be a constructive tool, but for true learning to occur the process must be ongoing with a variety of experiences which relate the lecture or model activity to day-to-day reality. Typically these "new corporate culture" training sessions do little to relate the dramatic speech or demonstration to pragmatic job related tasks or problems, and follow up activities are limited to non-existent.

Implicit in Piaget's view of learning is the use of learning tools and devices appropriate to the level of development of the student. Introductory team building exercises like "Lego-man" and building paper bridges may have their place, but for the

---

68. Paint Ball is a wilderness experience based on military war games.
69. Corporate culture typically uses the word "training," not education. This choice of words is revealing in and of itself.
71. See id.
technically skilled worker such as the engineer or scientist, such an activity approaches the absurd. Scientists and engineers work together in groups in laboratories on a daily basis building molecules never before created, designing new instrumentation, and redesigning factory processes. A requisite for success in technical areas is the ability to work with others to resolve complex technical challenges. Group problem solving is not a new concept to such workers, it is a well developed skill. Forcing technically skilled employees to participate in simplistic introductory exercises is highly inappropriate to their level of development and may well reinforce and foster the worker's feeling of alienation, lack of respect and loss of self esteem.

3. Emphasis of Process Over Substance

In the current environment, corporate managers need to improve the "rapid and sustained introduction of high-quality, innovative, cost effective new products." To accomplish this, they resort frequently to emphasizing consideration of processes for implementation and management of technology over consideration of substantive issues. This most likely occurs because of the "gap between the worlds of R&D and the company's general management, two worlds with often disparate cultures and different outlooks." Top management more likely comes from the areas of marketing and finance rather than engineering or scientific research. Since the managers understand little of the substance of technology, they compensate by developing processes for managing technology. For example, the popular Arthur D. Little, Inc., text, Third Generation R&D, suggests the following strategy for building the "R&D portfolio" (e.g., selecting the projects to which the company will devote resources).

Individual projects are evaluated in terms of four key elements:

74. Id. at 9.
75. See id. at 94.
76. See id.
Technological competitive strength (i.e., how strong in R&D is a company relative to competitors believed to be pursuing the same objective?)

Technology maturity (i.e., how likely is technical advance in the key or pacing technologies embodied in the R&D project?)

Competitive impact of technologies (base, key and pacing)

R&D project attractiveness.

When implemented, this corporate planning becomes primarily a process whereby existing R&D projects are classified according to the proper terminology, arranged on charts to show projects in various stages of development, and time lines are set for completion of projects. Typically, little of the substantive value and description of the projects or true issues related to their development are incorporated into the process.

The problem is further complicated by the fact that science is not a happenstance thing. Good science progresses in an orderly fashion by the scientific method. A widely used general chemistry text describes the method as follows: the scientist initially makes observations and forms a hypothesis (a tentative explanation of the observations); he or she then designs, plans, and conducts experiments to test the hypothesis. Usually, the new observations derived from the experiments raise additional questions which lead to further hypothesis and experimentation.

The two linchpins of the scientific method are the thought which initiates the process and the fact that it is a continual process of testing, re-evaluating and further testing. The pro-

77. Id.
78. Id. at 61. Technological maturity does incorporate some of the uncertainty associated with developing new scientific concepts as it classifies technology as having a life cycle with stages. See id. at 94.
79. Id. at 64. The base, key, and pacing classification ranks technologies not on the basis of technical feasibility but rather on their competitive impact. See id. at 94.
80. Id.
82. See id.
cess for managing technology described supra is not particularly compatible with the scientific process because it gives little attention to these two important concepts of the scientific method. Thus, in addition to incorporating little technically substantive information, the processes typically used for managing R&D inherently conflict with scientific methodology.

The "new corporate culture" introduced into corporate America in recent years in both substance and process of implementation fails to address the demoralization of the technical work force. In part, this failure may be attributed to desires to find quick and/or universal solutions to problems. The generic glowing terminology of the "new culture," combined with the allure of consultants' promises that a few hours of their services could effect miraculous change, seemed to provide simple solutions mutually agreeable and beneficial to the corporation and employees. At best, this is shortsighted, because complex problems rarely have quick simplistic solutions.

Wishful thinking combined with shortsightedness most likely motivated corporate America's espousing new culture, but a much darker possibility looms. The high-tech corporation would stand to profit even more than the corporation in the age of mass production if the cost of human capital were reduced to minimum value. The technically skilled worker is critical to the corporation of the future not just as a pair of hands to do work, but also as a source of ideas and mental ingenuity to develop the technology of the future. This makes the worker's role markedly different from the worker in the past. In the era of Fordism and Taylorism, tasks were divided on the assembly line so that a worker did only one specific simple task. The worker did not need any particular skill or mental capacity to perform the task and workers were essentially just as interchangeable as the parts on the products manufactured. In the technology based corporation of the future, the skilled worker is both the labor and the raw product for producing new technology. Thus, minimizing expenditures related to workers maximizes profit in two ways: it reduces the cost of labor and the cost of raw materials.

83. See O'Connor, supra note 39 and accompanying text.
A method which, in effect, "strip mines" the intellectual capability of workers could, in the short term, minimize the cost of raw materials. This occurs if all the costs for training and retraining workers in new technologies could be externalized to society in general by employing persons skilled in a technology only short term and then dismissing them and hiring new workers to meet new technology challenges. Certainly a demoralized technical work force with high anxiety regarding employment and feelings of alienation and detachment would facilitate the prospects of "strip mining" the talents of workers while keeping the cost of their services minimized.

Conditions that lead to beliefs of inadequacy keep the employee from raising her expectations and subsequently asserting demands for enhanced respect, participation, and compensation from her employer in what would otherwise be a very favorable and competitive market for her services. As Bandura explains, there is a significant correlation between an individual's belief in her vocational efficacy and her ability to achieve success in pursuits in an occupation.84 Granted, in this dark scenario the workers would be operating at suboptimal productivity, but the savings in cost of labor and "raw materials" could more than offset the lower productivity; providing an over all advantage in the short term. The mobility of workers might further facilitate this arrangement by masking true shortages of workers to some degree.

While it is highly unlikely that any corporation is deliberately following a plan to demoralize workers and enhance company profits at their expense, decisions driven solely by the motivation of maximizing profits in the near term may in fact yield such a result. For example, many companies are identifying and structuring their organizations around a "core labor" force which is maintained with a high level of job security and supplemented with a force of contingent or contract workers.85

84. See Albert Bandura, Exercise of Personal and Collective Efficacy in Changing Societies, in SELF-EFFICACY IN CHANGING SOCIETIES 1, 6, 24 (Albert Bandura ed., 1995).
85. See Marc Weinstein & Thomas Kochan, The Limits of Diffusion, in EMPLOYMENT RELATIONS IN A CHANGING WORLD ECONOMY 1, 6 (Richard Locke et al. eds., 1995).
The use of contingent workers can be expediently varied. Individuals with vital skills and expertise in computer technology are frequently in this contingent group. Replacing these workers at regular intervals with new, young entry level contract workers not only brings in expertise in the latest generation of computers and software but also minimizes cost for obtaining such capability. It is difficult to see how exploitation can be beneficial in the long term as it provides no incentive for the pursuit of technical careers, underutilizes already scarce technical resources, and externalizes costs to society as a whole. Nevertheless, the double contribution of labor and raw materials does create a temptation for exploitation which conscientiously and actively must be addressed.

Maintaining a competent, technically skilled work force is a vital component for corporate existence into the twenty-first century. Yet, despite attempts to infuse "new culture" into the present corporate system, the quality of life, job satisfaction and most likely the productivity of the skilled technical worker has not seemed to improve over the last few years. Dilbert and the technically skilled workers are demoralized. The rhetoric and implementation procedures of the "new corporate culture" only seem to exacerbate the problem. For a productive and profitable long term future for both the technically skilled workers and the corporation, the increasingly valuable resource of the technically skilled worker must be effectively and meaningfully integrated in the corporation.

III. SOLUTIONS TO DILBERT'S DILEMMA

Dilbert and the other skilled workers' dilemma can be resolved in a manner which both brings much needed relief to Dilbert and provides long term benefits to the corporation by focusing on two key elements: (1) effective substantive communications and (2) integration of technical expertise in corporate planning and decision making. The employee needs effective substantive communication to overcome the problems identified above as (a) superficial communications which focus on inventing new vocabularies and generic procedures in lieu of substantive information, and (b) lack of suitable feedback so that the employee has direction for taking an initiative in making con-
tributions to the corporation. Meaningful opportunity for participation in corporate decision making and leadership alleviates the problems of isolation and counteracts the dehumanization prevalent in today's corporate setting.

Although current corporate leaders may feel challenged by sharing some of their information and power,\textsuperscript{86} in the long term the corporate entity stands to benefit from addressing these key issues. First, by enhancing the job satisfaction of technically skilled workers, productivity is increased. In the case where the product is either new high-tech developments or competitiveness based on high-tech methods, the contribution of the skilled worker is the rate limiting factor in accomplishing the task. Optimizing her productivity is essential. Second, addressing these elements benefits the corporation because a management lacking in understanding of technology,\textsuperscript{87} which only communicates with the technically skilled in directly vague generalities, is ill equipped to make intelligent, informed decisions regarding either successfully producing new high-tech products or effectively using high-tech to improve quality and competitiveness of existing products. Third, the National Science Foundation predicts that by the year 2006 the United States will have a shortfall of 675,000 science and engineering graduates with a demand for 24,000 new engineering and science Ph.D.s per year but only 10,000 degrees awarded.\textsuperscript{88} The corporation of the future faces the serious prospect of major shortages of the essential, technically skilled worker. Thus, it is in the corporation's best interest to take steps now to insure a supply of such workers by improving job satisfaction to retain current workers at optimum productivity and create an environment that encourages pursuit of technical careers.

\textsuperscript{86} See Peter Kizilos, Crazy About Empowerment?, \textit{TRAINING}, Dec. 1990, at 47-52.

\textsuperscript{87} Many have viewed management skills to be generic, "meaning that a talented management team could effectively direct the operations of any business." Ronald J. Gilson, \textit{The Political Ecology of Takeovers: Thoughts on Harmonizing the European Corporate Governance Environment}, 61 \textit{FORDHAM L. REV.} 161, 165 (1992) (citing MALCOLM S. SAYLER & WOLF A. WIENHOLD, \textit{Diversification Through Acquisition} 40-41 (1979)). This philosophy de-emphasizes the importance of managers' cognizance of technical realities.

\textsuperscript{88} See ROUSSELL ET AL., \textit{supra} note 73, at 2; see also KOCHAN \& OSTERMAN, \textit{supra} note 3, at 29-35 (discussing the complexities of assessing future skill needs).
Much of the rhetoric of the new culture sounds as if it addresses these issues of communication and participation. The problem is not in the spoken generalities, but in the concrete day-to-day substantive communications and participation opportunities. Thus, pragmatic issues must be addressed.

The most expansive approach to addressing the employees' needs for improved communication and a meaningful role is to implement fundamental changes in the corporate governance system. Traditionally, the primary goal of corporate endeavors has been to maximize the value for shareholders. Nevertheless, a number of scholars view the corporation as a social entity with purpose and responsibility beyond, and equally important to, responsibilities to stockholders. These communitarians consider "the satisfaction of [customer] wants, the provision of meaningful employment opportunities and the making of a contribution to the public life of its communit[y]" as principal examples of such purpose.

[Under this view of corporate governance,] management and boards of directors should understand their jobs to be maximizing the total wealth-creating potential of the enterprises they direct. In doing this, they must consider the effect of important corporate decisions on all of the company's stakeholders. "For this purpose, stakeholders should be defined as all parties who have contributed inputs to the enterprise and who, as a result, have at risk investments that are highly specialized to the enterprise."

Employees in technology intensive firms, where much value is derived from innovation, product customization and specialized services, are prime examples of such stakeholders. Blair suggests that,

[W]here employees or other stakeholders have significant specialized investments at risk, their rights and obliga-

90. Blair does not specifically use the term communitarian. Blair's views are, however, consistent with the communitarian designation as it appears in the literature. See Millon, supra note 38, at 4.
91. BLAIR, supra note 89, at 211 (citation omitted).
92. Id. at 239 (citation omitted).
tions... should be formalized through compensation schemes, organizational forms, or other arrangements that place significant amounts of the company's equity under the control of the at-risk stakeholders and that assign control responsibilities commensurate with their equity stake to this group.\textsuperscript{93}

Formal recognition in corporate governance mechanisms of the stake of the employee as equal with the shareholder would give the employee both access to substantive information and a meaningful role in decision making. This solution could certainly improve the position of the employee, but dramatic changes are often difficult to achieve. Thus, a more practical approach is through accommodation within existing corporate governance framework.

The prevailing view of corporate structure perceives the corporation as a "nexus of contracts" among all suppliers of inputs," including materials, labor, capital, and services.\textsuperscript{94} This "contractarian position rests on an underlying commitment to the sanctity of shareholder property rights."\textsuperscript{95} The shareholders have not only the contract of ownership that under state law typically contains terms favorable to the shareholder, but they are also residual claimants who "subject themselves to the risk that they will earn no return on their investment once all non-shareholders' fixed claims against corporate assets have been paid."\textsuperscript{96} It is for these reasons they are entitled to a unique position within the corporation's nexus of contracts, while "employees, creditors, and other vulnerable nonshareholder constituent groups can protect themselves from such externalities through contract and should do so to the extent that protection is desired."\textsuperscript{97} This view of the corporation relegates the employee to a position in the corporate structure significantly inferior to that of the shareholder; but it does not negate the

\textsuperscript{93} Id. at 240.
\textsuperscript{94} See Millon, supra note 38, at 3.
\textsuperscript{95} Id. at 4.
\textsuperscript{96} Id. at 3.
\textsuperscript{97} Id. at 3-4.
employee's need for, or legitimate right to, substantive communication and a meaningful voice in corporate decisions.

Implicit premises of a valid contract are access to sufficient information for making informed choices and bargaining power. Common law recognized fraud, mistake, and duress as defenses to enforcement of a contract. These reflect the requirement of the need for parties to have reasonable information and an opportunity to legitimately bargain. While the law did not require equal bargaining power of the parties, the concept of adhesion contracts and unconscionability recognized that grossly unequal bargaining power could lead to terms so unfair to the disadvantaged party that it would be inequitable to enforce such a contract. Unconscionability most frequently becomes an issue in the consumer setting where a business takes advantage of the consumer's limited knowledge, lack of resources, and limited alternative options and thus structures an agreement highly favorable to the company and unfavorable to the consumer. Professor Leff proposes that unconscionability has two components: procedural and substantive. The procedural pertains to the manner in which the company goes about structuring and extracting agreements, and the substantive pertains to the terms of the agreement. Both of these elements are necessary.

Since most workers cannot afford the luxury of leisurely job searches and are often in need of a job to maintain their basic existence, their position frequently may be analogous to that of the consumer. The corporation has access to all information regarding the situation and plans of the corporation and is well aware of the worker's need for employment. It has the opportunity for both procedurally and substantively structuring employment agreements highly favorable to the corporation at the employee's expense. Such agreements would be of questionable validity under conventional norms of contract law.

99. See id. at 364-440.
Thus, whether the corporation is viewed in the communitarian or contractarian perspective, the need for substantive, specific information for employees and an employee's voice in decision making (the ability to bargain) are equally important and legitimate. Mechanisms for addressing these needs either within the new framework as proposed by communitarians or the existing concepts of corporate structure is equally appropriate; the latter ultimately more pragmatic than advocating a radical change of corporate governance.

Since either form of corporate governance is compatible with addressing Dilbert's problem, perhaps the more significant question becomes whether the critical issue is the form of corporate governance or how the form applies to the function and operations of the company. Corporations grew in the late 1800s and early 1900s because they provided an effective means for raising the capital necessary to support the heavy industrialization of the Industrial Revolution. Thus, their development is tied directly to pragmatic industrial projects. Thanks to the development of securities markets, investors became increasingly disperse and distant from the day to day operation of the corporation. This necessitated engaging professional managers to run day-to-day operation of the company. Thus, managers were not initially hired for the primary purpose of maximizing shareholder wealth, but rather to carry out the functional aspects of operating the business.

It is self-evident that shareholder wealth is tied to the successful operation of the company, but was not the ultimate purpose initially. The focus on shareholder wealth has eclipsed the true purpose of the corporate governance system, namely to provide a framework for carrying out all the pragmatic functions of a going business concern. From this perspective, the duty to stockholders is a fiduciary obligation associated with the job of managing the affairs of the corporation—an obligation of the position, not the job description. Hence, the solution to

102. The author acknowledges Professor Ronald Gilson whose general comments on the relationship between corporate governance and the function of the corporation stimulated the author's contemplation of this issue. See Ronald Gilson, Remarks at the Allen Chair Seminar Discussions at the University of Richmond School of Law, Richmond, Virginia (Mar. 21, 1997).  
103. See BLAIR, supra note 89, at 28-29.
Dilbert's dilemma is a consideration of priorities in which emphasis is placed on reconnecting corporate governance with the functional aspects of the corporation.\textsuperscript{104} If managers gave a higher priority to their original task, day-to-day operation of the business for distant and disperse stockholders, cognizance of the functional aspects of day-to-day operation would be essential; and thus, communication with, and input from, employees doing day-to-day, hands-on work would become critical.\textsuperscript{105} This does not negate the role that fiduciary duty to stockholders plays in monitoring accountability. Rather, it relegates this role to a regulatory one rather than a driving force.

An examination of three diverse examples, (1) the industry of Silicon Valley, (2) the Japanese industrial system and (3) Merck Pharmaceutical, recognized in recent years for their successes in various areas including productivity, implementation of new technology, efficiency, inventiveness and employee morale, reveals the constructive effect of focusing on the actual functions and functional goals of companies. Once this focus is attained, the technically skilled worker has a meaningful role in supplying information for decision making, and the corporation has a compelling reason for supplying information to enhance worker inventiveness and efficiency.

Nowhere is principal focus on the nature of the business more apparent than in Silicon Valley, a small region principally in Santa Clara County, California, which is home to one-third of the 100 largest technology companies created in the United States since 1965.\textsuperscript{106} Although many individuals have profited

\textsuperscript{104} Katzenback and Smith point out the fallacy of trying to create work teams with their "own" purpose. See \textsc{Katzenback} \textsc{&} \textsc{Smith}, \textit{supra} note 60, at 49. Relating the workers' performance to the company's functional goals and purposes is critical. See \textit{id.} Management under the corporate governance framework should provide guidance for determining and focusing the actual work efforts. See \textit{id.} at 50.

\textsuperscript{105} Too often in recent years, the role of the CEO has been glorified as the key to transformations as CEO's were "visionary leaders who navigated their companies through painful and uncertain waters of the 1970s and early 1980s and transformed their companies into restructured and more effective organizations." \textsc{Kochan} \textsc{&} \textsc{Osterman}, \textit{supra} note 3, at 9. As grand as this may sound, this quote only acknowledges the preservation of an organization, and ignores the functional realities of providing goods and services. This view seems to be directed more towards preserving the corporate entity than towards accomplishing tasks.

\textsuperscript{106} See \textsc{AnnaLee Saxenian}, \textsc{Regional Advantage: Culture and Competition in Silicon Valley and Route 128} (1994).
financially, the primary motivation of the region seems to be the challenge of pursuing new technological opportunities.\textsuperscript{107} This is a function-oriented motivation. The corporate organization, however, is only one of three factors scholars consider in analyzing the success of the Silicon Valley. The other two are (1) local institutions and culture, and (2) industrial structure.\textsuperscript{108} The corporate governance structure retains a role, but it is recognized as only one piece of the overall process of producing high-tech products and developing new technology. The industrial structure, which refers to the social division of labor within the company and the extent and nature of the links between customer, supplier and competitors, is an important key to the success.\textsuperscript{109} It is the efficient interconnection of the functional realities of inventing, producing and marketing high-tech products which provide not only successful cutting edge products but also enable the firms to respond to fast-changing markets and technologies characteristic of global technology competition.

Effective substantive communications are vital. In Silicon Valley, communications patterns differ.

There is far more openness and much less worrying about whether someone goes around you. There's not only a tendency not to follow channels, there is a deliberate attempt to stimulate a wide variety of ideas. Innovations bubble up in unexpected places . . . . This informality allows [all involved] to share consensus and move rapidly.\textsuperscript{110} This informality encourages involvement and generates enthusiasm among the Silicon Valley work force.

Silicon Valley leaders such as Hewlett Packard (HP) and Intel strive to preserve "openness, intensity and a sense of purpose" in an atmosphere of teamwork and employee participation.\textsuperscript{111} This style of management is characterized by trust in individuals, professional autonomy and generous employee

\textsuperscript{107} See id. at 38, 46.
\textsuperscript{108} See id. at 7; see also Gilson, supra note 87.
\textsuperscript{109} See SAXENIAN, supra note 106, at 7.
\textsuperscript{110} Id. at 54.
\textsuperscript{111} Id. at 50.
benefits. Werssowetz and Beer, in a Harvard Business School case study, describe the "HP Way" as: "It includes a participative management style that supports, even demands, individual freedom and initiative while emphasizing commonness of purpose an teamwork . . . . According to this style, the company provides employees direction in the form of well-defined negotiated goals, shared data and the support of necessary resources." Hewlett and Packard, the founders of HP, remained deeply involved in the day-to-day operation of the company even as it grew larger. Noyce and Moore, founders of Intel, believed that the major purpose of organizational structure was to facilitate exchange of ideas and information. Openness and confrontation were encouraged at Intel. Even a beginning engineer was expected to challenge anyone, including Noyce, if he had differing ideas.

Certainly, these Silicon Valley firms exemplify a working environment where the technical workers' needs for substantive communication and participation are met as a routine matter of business practice. This is not to say that all companies should necessarily copy the details of the Silicon Valley model." Emerging empirical research suggests that different economic activities may be best carried out in different organizational forms. For example, cutting edge research and development may be better suited to small entrepreneurial firms, while implementation of such efforts may be best suited to large, mature organizations." What should be emulated is the fact that the firms in the Valley focus on the job to be done—creation of new high-tech products and development of technology. The firms of the Silicon Valley molded their corporate structure and governance to facilitate achieving the identified task.


113. See SAXENIAN, supra note 106, at 53.

114. Indeed, the Silicon Valley approach may be best suited to development of cutting edge, new technologies as it bears many similarities to the structure of major scientific laboratories. The author's own experiences in two internationally recognized academic analytical chemistry laboratories mirror the competition, cooperation, networking and organizational structure of the Silicon Valley work environment.

115. Gilson, supra note 87, at 179.
Japanese industrial success in fields such as electronics and auto making, in addition to a general reputation for adaptability, productivity, and quality, can be traced in large part to organizational and operational practices which focus on the production of the product. The Japanese system has two main features: "(1) the horizontal coordination among operating units based on (2) the sharing of ex post on-site information (learned results)."

In other words, prior planning only sets the framework for operation. As new information becomes available (e.g., customer orders, quality defect problems, engineering problems), the plans are modified. A series of feedback loops operate to refine the product and process as it develops.

A critical feature of the Japanese system is knowledge sharing. Unlike the American system, where knowledge is usually formal documentation often devoid of essential practical detail, the Japanese knowledge sharing is "often informal and based on verbal communication." The efficiency of face-to-face timely communication is further recognized in the fact that the research facilities of Japanese manufacturers are usually located on site. Problem solving is frequently handled on the spot. To facilitate problem solving, job rotation is a matter of common practice. For example:

Engineers [rotating] among different engineering offices as well as between engineering jobs and supervisory jobs at the factory facilitates the knowledge sharing needed for horizontal coordination among different phases of engineering and development processes . . . . [It also] familiarizes workers with various jobs and enhances their ability to process and communicate information needed for the efficient operation.

As in the case of the Silicon Valley, the notable features of the Japanese success are rooted in the focus on accomplishing the functional purposes of the company. In the case of the Japanese

---

117. See id. at 6, 7.
118. Id. at 10.
119. See id.
120. Id. at 11.
firms, this is a development of technology and mass-production of quality goods. Governance systems and financing mechanisms play important and necessary roles, but the recognized success is how the company gets the job done. Furthermore, both the Silicon Valley and Japanese systems emphasize communication with and between employees as an integral necessity to accomplishing pragmatic industry goals.

Merck, an established pharmaceutical corporation, provides a third example of corporate success for consideration. Scholars cite Merck for its ability to introduce new pharmaceuticals in a very short span of time, and its effective, albeit somewhat unique, corporate organization. "Well-educated specialists who direct and discipline their own performance through organized feedback from colleagues, customers, and headquarters" comprise the heart of the organization.

These specialists "are not organized in a formal hierarchy of the traditional industrial model, but instead according to twelve research disciplines and informal cross-discipline project teams. Each project is headed by a leader who must recruit team members from different disciplines to commit their own resources to the project based on its promise."

Not only do the technical workers play a vital role, but communication is essential. The key to Merck's success is not necessarily the system it uses, per se, but rather that the system is appropriate to the nature of the business. Merck arrived at this system under the leadership of CEO Roy Vagelos, a M.D./Ph.D. who came out of Merck's research and development laboratories. Dr. Vagelos knew the functional operation of the business and technical considerations associated with the development and production of pharmaceuticals.

121. See ROUSSEL ET AL., supra note 73, at 35.
122. See BLAIR, supra note 89, at 293.
123. Id.
124. Id.
125. ROUSSEL ET AL., supra note 73, at 35. Another example of the correlation of success of a business endeavor with the leader's knowledge of the technical and functional issues of the business is that of Henry Ford. Although the mass-production assembly line process introduced by Ford may have served its usefulness, it was a highly effective method for mass production of automobiles through most of the present century. Ford's personal experience of having built an automobile himself, coupled
When corporations focus on maximizing shareholder wealth as the end goal, not as guideline for decision making, not only are the stockholders disperse and distant, but also the business of the corporation and the employees are distant and detached. Corporate officers base decisions essentially on bookkeeping numbers, which is only one facet of a going business. This may maximize profits and catch the attention of Wall Street analysts, but it falls short of the purpose intended when states developed laws permitting corporate formation, namely facilitation of business operation. When corporations focus on the functional aspects of operating a business, the skills and talents of employees are recognized as vital resources and the firm is motivated to communicate with the technically skilled employees and use their expertise in decision making. Such a focus would resolve the present disenfranchisement and demoralization of Dilbert and his technically skilled colleagues.

This solution can be obtained through the existing corporate governance system. Roe and Gilson have analogized the development of corporate governance to the mechanisms of Darwinian evolution in nature. Under this view, the corporation maintains considerable capacity for "mutability" and may well change as a function of changes in technology and the market place. The ability to mutate may vary from corporation to corporation, with some corporations possessing considerably more adaptability than others due to differences in the nature of the product of the firm as well as the individual corporate culture. Nevertheless, capacity for change exists and forces are present to shape change. The corporation can, within the present corporate governance system, refocus its priorities on the functional, operational aspects of the company and maintain

with his goal of making automobiles accessible to the common man, formed the basis on which he designed the system.

126. See KOCHAN & OSTERMAN, supra note 3, at 10.
129. Corporate culture includes: management views and perspectives; the degree of bureaucracy; leadership; and the role of innovation. See JOHN P. KOTTER & JAMES L. HESKETT, CORPORATE CULTURE AND PERFORMANCE 44-46 (1992).
its fiduciary duty to stockholder. The fact that the corporate governance system shifted from emphasis on pragmatic business operation to maximizing shareholder wealth demonstrates the capacity for change as well as the fact that shifting emphasis to facilitation of functional operation of the company is well within the scope of the flexibility of current corporate law.

Present market and technology forces for change will have a much greater impact on corporations, which rely heavily on innovation and high-tech products, as they depend heavily on the contributions of the technically skilled worker. Corporations in traditional areas of goods and services may feel less pressure from the markets and technology to make changes. In the absence of compelling product market pressures, what can compel corporate leaders to refocus priority on the operational aspects of the corporation? In the long term, the continued existence of the status and privilege of the corporate form may be the determining factor. Corporations are creatures of the law—formed, nurtured, and protected by legal enactments. If corporations stray too far from their initial purpose, it becomes valid to question their very right to continued existence or at least their existence under the present status of corporate law.

IV. CONCLUSION

The central role of implementation, utilization and development of new technology in both functional activities and production mandates increasing corporate reliance on the intellectual talents of the technically skilled worker. The isolation and demoralization of Dilbert and his soul mates must be addressed not only to alleviate their personal despair but also to integrate and utilize their talents fully in maximizing corporate productivity and competitiveness. The very survival of high-tech enterprises is contingent upon the contribution of these workers while corporations in traditional sectors of goods, which rely on technology to make products more efficiently, need the skills of such workers to maintain their competitive edge.

Devising new forms of corporate governance are not necessarily the solution. The problem can best be resolved by shifting emphasis back to the initial purpose of the corporate governance system and professional managers, namely carrying out
functional operation of the business for distant and disperse owners. Such a focus would mandate both effective, consistent communication with, and participation of, the skilled workers who understand the details of the fundamental functions of the business. The job satisfaction and sense of purpose of Dagwood's era, displaced by the pessimism and demoralization of Dilbert's era, must be reinstated in the technically skilled workers of the twenty-first century to insure that corporations will prosper in the New Age of Informatics.

Nancy J. Jensen