

Cheap Talk:  
Managerial Discourse on Quality Circles  
as an Organizational Innovation

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The contemporary business world appears riven by 'fashionable innovation.' Much organizational change takes the form, not of internally-driven problem solving, but of the importation of recipes. For example, organizations can adopt standardized models of how to manage (management by objectives, 7 habits of highly effective people), how to organize work (job enrichment, business process reengineering), and how to direct the organization as a whole (total quality management, the balanced scorecard). When they do so, they adopt practices whose virtues and vices, successes and failures, and logic and illogic have been widely discussed within the American business community by managers, gurus, consultants, and academics.

Yet relatively little attention has been paid to understanding the social and cultural work that goes into making a practice an innovation, and an innovation fashionable. We have close investigation of what makes an organization generically 'innovative': capable of learning, changing, and solving all kinds of problems (Burns and Stalker 1961; Van de Ven, Angle and Poole 1989; Brown and Eisenhardt 1997). But we don't know as much about the converse---what turns a practice into a solution for all kinds of organizations.

The most developed line of related inquiry may be that of 'diffusion analysis.' Here, spread is modeled as a 'point-to-point' or contagion process, where adoption rates are functions of prior adoptions by socially proximate others (Strang and Tuma 1993). The focus is on elaborating what sort of linkages channel the spread of novel behavior. For example, Davis (1991) demonstrates that poison pill strategies for avoiding hostile takeovers diffused via director interlocks, while Haunschild (1993) shows that firms follow the merger and acquisition strategy of firms whose members sit on their boards. And Haveman (1993) finds that following deregulation, thrifts chose which new markets to enter by following their large, financially successful fellows.

These analyses tell us much about who adopts when, and what sorts of inter-organizational networks channel information and influence within the business community. But they tell us little about how and why some practices become fashionable innovations that managers are obliged to take seriously. And behaviorally, point-to-point diffusion analyses act as though the only sort of meaningful information that organizations receive is information about who has previously adopted. This presumption ignores the large volume of communication that is broadcast rather than relational. (For work in the diffusion tradition that examines media reporting, see Burns and Wholey (1993), who show that business periodical coverage of matrix management contributed to its spread in hospitals.)

This paper examines the structure of discourse on a particular innovation, the 'quality circle.' Often described as the hot innovation of the early 1980s (Lawler and Mohrman 1985), quality circles were widely explicated, touted, and attacked in the literature. This discourse provides a rich context for exploratory investigation of how fashionable innovations are broadcast, and what this tells us about both the bases of diffusion and the implicit models of organization prevalent within the business community.

Following Lasswell, I ask *who* said *what*, *when*, and *where* about quality circles (Lasswell's further orienting question, *with what consequences?*, is omitted from consideration here.). The paper is thus more cartographic than explanatory. It seeks to provide a description of the structure and

evolution of talk about quality circles that can inform more targeted studies and the development of models of discourse.

Even a descriptive effort of this type is theoretically oriented, however implicitly this appears in the presentation. Most plainly, the work here is informed by an institutional analysis of organizations as powerfully shaped by rationalized understandings and models of effective action (Meyer and Rowan 1977; DiMaggio and Powell 1983; Meyer and Scott 1983). Strang and Meyer (1993) and Abrahamson (1996) make use of these ideas to begin to develop a cultural analysis of diffusion processes (rather than of institutionalized sources of structure), and this paper brings their ideas to bear for the case of quality circles.

The paper is also oriented to two striking analyses of managerial discourse: Barley, Meyer and Gash's (1988) demonstration that over time the way academics talked about culture became more like the way practitioners talked about culture, and Barley and Kunda's (1992) depiction of managerial discourse as swinging between rational and normative models of control. These two papers offer insights into communities of discourse and conceptions of the organization that are explored here.

### **Quality Circles: Historical Background**

*'The QC Circle is a small group to voluntarily perform quality control activities within the workshop to which they belong.'*  
(QC Circle Koryu, 1980.)

*'A problem-solving technique involving a group of employees who meet regularly to solve workplace problems. Quality circles are established on a permanent basis and are not ad hoc bodies created to solve specific problems. Circle members decide the problem areas to be studied, which may include productivity, cost, safety, and product quality. Recommendations are presented to management, and circle members assist in implementing recommendations accepted by management.'*  
(Roberts' Dictionary of Industrial Relations, 1986.)

Quality control circles were developed in Japan to involve foremen and workers in quality control. They can be dated to 1962, when the Union of Japanese Scientists and Engineers first published *Genba-to-QC* ( *Quality Control for the Foreman*) and launched a drive to encourage the formation of quality control circles in Japanese industry. The first quality control circle was registered in May 1962 (the Matsuyama Carrier Equipment Circle of Japan Telephone and Telegraph). Circles spread widely through Japanese industry, though little outside the manufacturing sector. By 1970 30,000

circles were registered with JUSE, and by 1980 more than 100,000 were registered, For a detailed analysis of Japanese quality control circles, see Lillrank and Kano [1989]).

Information about quality circles was disseminated from Japan to the United States and other countries in a variety of ways. Leading quality control experts like Joseph Juran returned from trips to Japan with news of how ordinary workers were solving manufacturing problems in quality control circles (Juran 1968). (The American literature often credited Juran and fellow quality guru W. Edwards Deming with introducing the quality control circle to Japan. This view exaggerates a grain of truth. Deming and Juran's lectures on quality control had been greeted with enthusiasm in Japan, and their ideas (about statistical quality control and company-wide quality efforts) are compatible with the QC Circle. But neither man envisaged the concrete organizational practice of the QC Circle.) Japanese quality circles also toured American and European businesses describing their approach.

As circles spread to the United States, they did so in the guise of 'quality circles,' (though the term 'quality control circle' also had some currency). The American 'quality circle' model builds on its Japanese parent, but it also differs from it in crucial respects.

Three features shared by Japanese and American circles may be of fundamental importance. First, both are structurally organized as small groups of workers, with little formal differentiation within the group other than a leader. Second, circles have the generic purpose of improving work processes (rather than being centered on broader issues of management-labor communication and the human dimensions of work). Third, circles are culturally organized around motifs of voluntarism and autonomy from formal organizational structures. This translates into some choice about forming circles and/or joining them (with management in a supportive rather than commanding role), identification by the circle of what issues to attack and how to do so, and self-regulation by the circle of its group process. It also involves the absence of a defined responsibility and authority of the circle over corporate decisions or resources.

Two differences between Japanese QC circles and American quality circles stand out. First, Japanese circles focus on quality control, while American quality circles were understood as appropriate vehicles for addressing almost any workplace problem or issue. Second, Japanese QC Circles formulate and carry out workplace improvements, while American quality circles center on making recommendations to management. While both are differences of degree rather than kind, they nevertheless go to the heart of circle activities.

These differences were not random 'copying errors,' but instead modifications produced by the concerns, interpretive framework, and structural conditions of American business. A short list includes an overriding concern with flagging productivity, the unattractive connotations of 'control' for a practice advertised as participatory, the existence of a professionalized quality control engineering function that fit awkwardly with decentralized shopfloor efforts, and a brittleness of management-labor relations that pushed circles into a rather passive role (see Cole (1989) for an extensive and insightful analysis.)

Much of the diffusion story into the United States is embedded in this redefinition of the quality control circle as a quality circle. Although a study of how this reinvention was accomplished would

be of much interest, in this paper I largely treat the definition of the quality circle as a given and examine how it was motivated.

### **Some Analytic Issues**

While this paper provides a largely descriptive overview of the quality circle discourse, it addresses several analytic issues in a preliminary way. These center on questions about the relative timing of discourse and action, and on how the innovation is theorized.

Communications about innovations are forced to build on prior action, in two senses. First, they nearly always provide accounts of prior experience with the innovation, describing an organization's use of the innovation, its motives, the issues that arose, and the consequences. Second, accounts of an innovation require an audience, and audiences are larger when they have already been exposed to and made interested in an innovation (via other articles, but via personal or second-hand exposure as well). Because of this reliance of discourse on past action, discourses may trail behavior, recording what has already happened.

On the other hand, it is probably easier to write an article about quality circles than to implement them, and it is certainly easier to read the article. Communications about an innovative practice may thus outstrip most action. The relative ease of talking relative to doing may allow discourse to effectively promote little-tried innovations, and to pronounce the demise of practices that are still at the experimental stage in many settings.

This paper seeks to develop some insight into the temporal relation between innovation discourse and innovation use. Empirically, this largely takes the form of comparing when articles were written on quality circles with the sketchier data available on when quality circles were adopted and abandoned by American companies. Some additional perspective is provided by content analysis of the literature.

A second, somewhat parallel concern is to explore how the discourse on quality circles interpreted circles for an American audience. I start here from the assumption that quality circles did not simply seize the business community's imagination in a self-evident, automatic way. Instead, quality circles had to be framed in ways that linked them to understandings of what was wrong with American business, and what could be made right.

Such framing is necessary because the organizational world is opaque and complicated. Even if we grant that it was inevitable that American managers would look to Japan in the 1980s, it is not clear what lesson they could extract from Japan's competitive success. Should American workers sing songs in the morning and do calisthenics? Should American managers become more self-deprecating and thoughtful? Should Fortune 500 companies build dense ties to banks and suppliers? Should the federal government work to limit imports and shed its role as global policeman?

I approach the cultural work promoting quality circles as a form of 'theorization' (Strang and Meyer 1993). A theory---that is, an abstract and general model of functional or causal relationships---provides a basis for identifying a practice as consequential and separable from a rich context of

other practices and conditioning factors. It also suggests which elements of existing practice are essential and which can be omitted or improved upon. I thus expect that the spread of quality circles was propelled in part by its theorization, that this theorization also reshaped what quality circles did, and that this theorization shows up in the quality circle discourse. (A number of arguments about diffusion are consonant with this notion of theorization---consider, for example, Lillrank's (1995) model of diffusion as requiring the generation of a 'high voltage' abstraction. An example of a quite different conception of the cultural work that promotes diffusion is a model of quackery.)

Two interpretive logics seem both *a priori* sensible and to have actually appeared in both Japanese and American QC discourse. I will call these the *problem solving* and the *human relations* interpretations of quality circles. They can be described in terms of their background assumptions about people and organizations, the outcomes they anticipate, the implications they suggest for effective action, and the critiques of the innovation that they privilege.

A problem solving interpretation views quality circles as a vehicle for line workers to develop and/or implement better production methods. Background assumptions of this interpretation see workers as creative and intelligent, value concrete experience and practical know-how as well as theoretical sophistication, and regard production processes as susceptible to incremental improvement. Implications include an emphasis on directing quality circle efforts at manageable, analysable work processes; investment in technical training; efforts to bring circles under or in liaison to engineering and technical experts; interest in developing bottom-line measures of circle effectiveness; and attention to coordinating circle activities with quality or productivity initiatives of other types. Critiques include concerns that line workers lack sufficient technical skills, that specialized task forces can bring greater expertise to bear, and that circles should be provided with expert guidance and direction.

A human relations interpretation, by contrast, views quality circles as a motivational program intended to change individual attitudes and transform organizational cultures. Background assumptions of this interpretation see workers as complex individuals with needs for autonomy and meaning, and emphasize the strength of informal social controls. Implications include an emphasis on permitting circles to identify and analyse problems in their own way; a focus on interpersonal and leadership training; efforts to place circles under or in liaison with human resources departments; opposition to bottom-line measures (or any measures) of circle effectiveness; and emphasis on promoting principles of circle functioning in other organizational contexts. Critiques include concern that quality circles have too few resources and too little responsibility to generate meaningful autonomy; and concern that circles are a manipulative effort by management to elicit worker ideas.

The opposition between these interpretive models of quality circles embodies a larger tension in theories of formal organization. Much analysis of the traditions of organizational research posits an opposition between views of organizations driven by technical efficiencies versus views of organizations as complex social collectivities (Bendix 1963; Scott 1987; Barley and Kunda 1992). Problem-solving interpretations of quality circles fit within the first, 'rational' family of models, while a human relations version is a classic instance of a 'natural' (in Scott's terms) or 'normative' (in Barley and Kunda's) model of organization.

The distinction is of particular interest here in light of Barley and Kunda's (1992) important argument that rational models of organization flourish in long waves of economic expansion associated with major technological innovation, while normative discourses dominate the downturns of these waves. Barley and Kunda's periodization suggests that quality circles should be largely interpreted within a human relations framework.

### *Locating Discourse*

A first concern is to locate discourse on quality circles appearing in the business periodical literature. While no source or retrieval technique covers the entire business literature, the ABINFORM bibliographic database provides access to a broad subset. ABINFORM's holdings stretch back to 1971 (prior to the development of the quality circle discourse in the business literature per se) and provide full coverage of some 800 general, trade, professional, and academic business journals. (The scope of ABINFORM's coverage has broadened over time, due to the increasing size of the managerial literature and ABINFORM's own expansion. Earlier years are thus likely to be relatively under-represented. I have not sought to adjust for the impact of this expansion in the coverage of the database.) In addition to full citations, ABINFORM abstracts journal articles and codes the subjects covered, the industry, geographic location, type of treatment, and other features of each article.

Quality circle discourse in ABINFORM is located through searches on the identifier 'quality circle' and its variants ('quality control circle,' 'QCC,' and 'QC Circle') as text strings within the citation record. The robustness of this approach is a function of the extent to which the presence of the search string is a satisfactory indicator that the article discusses quality circles in a meaningful way. Searches can generate both false positives (where the search string is present although the article does not provide much discussion of quality circles) and false negatives (where the search string is absent although the article does in fact discuss quality circles).

I should note that only a trivial number of false positives arise because authors use the term 'quality circle' to denote something other than the innovation as it is generally defined. As an example of this sort of rare error, the search process retrieved several accounts of happenings at the 'QCC'----the Queensland Cricket Club. Examination of usage failed to identify cases where culturally obtuse authors were unaware of or misunderstood standard meanings ('Quality circles the wagons'; 'Tim Johnson, intrapreneur of the month, was awarded a gold quality circle'). While important here as a technical matter, the distinctive usage accorded a generic phrase like 'quality circle' seems a notable linguistic achievement that suggests how well integrated the business world is. (Organizations often called their quality circles by distinctive names---Honeywell's 'productivity improvement teams,' Hughes Corporation's 'Hughes circles'---but accounts of these groups identify them as part of the larger quality circle movement.)

The identifier 'quality circle' and its variants can be usefully searched in two fields in an ABINFORM citation record: the title and the abstract. (I omit searches on the subject codes assigned in ABINFORM itself, since their measurement characteristics are not known.) Title searches generate few false positives---a term appearing in the title is likely to be central to the

article. But they produce many false negatives, since articles that discuss quality circles often omit the term in their title (for example, one article discussing nothing but quality circles is entitled 'Borrowing back from the Japanese').

Searches of the article abstract are much less subject to false negatives. But they are conversely prone to false positives, since the token may appear in the abstract although the article gives quality circles very little emphasis. For example, the abstract of a paper on just-in-time production might refer in passing to alternative innovations like quality circles.

As a result, almost all articles retrieved via a title search are also retrieved via an abstract search, while the converse is not true. In a sample of years (1981-5) examined, 93% of articles with quality circles in the title include the term 'quality circles' in the abstract as well. Only 38% (199/519) of articles where 'quality circle' appear in the abstract also feature the term in the title.

Of course, what we most want to know is the relationship between articles retrieved via the above strategies and levels of attention to quality circles in the body of the article. While full text retrieval is not available for much of the period when quality circles are actively discussed, an examination of these relationships after 1993 (when full text had become generally available) is possible. Table 1 gives the frequency of ABINFORM-source articles written between 1994 and 1997 that refer to quality circles in the title, the article abstract, and the article body. It also provides the mean number of references to quality circles in the body of each set of articles.

Table 0 about here

Table 0 confirms that the level of attention to quality circles diminishes sharply as we move from title to abstract references as the search criteria. Sampled articles that include 'quality circle' in the title generally focus on quality circles, and always discuss them as a major topic. These pieces average more than 12 mentions of quality circles in the body of the article itself. Abstract-based searches locate articles whose contents range from focused treatments of quality circles to peripheral references. Mean references to the innovation are slightly more than 6 per article, but six of the sixteen sampled pieces mention quality circles only once.

The table also makes clear that articles focusing on an innovation like quality circles are in some sense just the tip of the iceberg. During the 1994-7 period (when the quality circle movement is moribund), the term 'quality circle' appeared in the body of fully 749 articles! This is fourteen times more than the number of articles retrieved by an abstract-based search, and seventy-five times more than the number of articles retrieved by a title-search.

These 700 plus articles do not comment on quality circles in much detail. In roughly two-thirds (38 of 56 sampled), the term 'quality circle' was mentioned a single time, and the average number of mentions was less than two. But the context of these references is striking (and is suggestive of a more dramaturgical approach to the study of discourse---see Hirsch (1986) for an exemplary analysis). The great majority of references in the 1994-7 period described quality circles to illustrate past failures at organizational innovation---'do you remember quality circles?' This gambit was then typically followed by rhetorical moves like '...X is no different!'; 'X is different, because...'; or 'they're back...but now we call them X!'



Since title and abstract-based search contexts provide different and complementary measures of the volume of articles on quality circles, both are presented below. An examination of the two also helps identify trends having to do with differing levels of emphasis. For example, the volume of articles that focus directly on quality circles may move in different ways over time than the volume of articles that treat the innovation less centrally.

*When?*

Table 1 reports the number of articles in ABINFORM where 'quality circles' and its variants appear. If we focus initially on articles retrieved through a title-based search, talk about quality circles first appears in the ABINFORM-abstracted business periodical literature in 1977. The number of articles rises rapidly in the early 1980s, reaching a peak of 56 in 1982. It then declines at a slower pace through the decade. In the early 1990s the volume of discourse hovers around ten articles annually before going to almost zero in 1994.

Table 1 about here

A search for articles where 'quality circle' appears in the ABINFORM abstract reveals a roughly similar trajectory over time. Once again there are a small handful of pieces appearing in the late 1970s, a quick rise to a peak in 1982, and then an overall downward trend. Most notable is the slower drop-off in this series compared to the title-based search. In fact, numbers of articles rise over the period 1983-6 to a second peak in 1987 that is nearly as high as output in 1982. The series then diminishes sharply, with a drop to just two articles in 1996.

The slower dropoff in articles that treat quality circles less centrally arises from the way a term becomes part of a larger vocabulary, and a practice becomes part of a larger organizational arsenal. In the late 1980s, quality circles are often described as supportive of other, newer innovative efforts. They become one employee involvement tactic among many, facilitate the organization of just-in-time production schedules, and play roles within larger TQM initiatives. (One of the most telling signs of this diminishing role was the 1987 decision of the International Association of Quality Circles to change its name to the Association for Quality and Participation.) A further step along this road is the one displayed in Table 1, where quality circles no longer make the abstract but are mentioned in the article body.

The volume of talk about quality circles thus has a fairly clearcut trajectory over time. Discourse on quality circles built up very quickly, rising from insignificant numbers of pieces to the historical peak in just two years. The decline from this peak was much slower, but had concluded rather decisively by the mid 1990s.

This portrait is consistent with the views of the quality circles literature in monograph and compiled bibliographies. Here too citations are clustered in the early 1980s. Alternative sources also confirm that much of the quality circle literature is identifiable by the above search strategy. For example, 118 of the 160 entries in a Vance bibliography of the quality circle literature (Dworacek 1984) included a title reference to quality circles.

Perhaps the most important omission in ABINFORM's holdings is its lack of coverage of the quality control profession's 'internal' discussion of circles. This literature began in 1968 with Joseph Juran's introduction to Japanese practice in 'The QC Circle Phenomenon.' Through the 1970s a small stream of articles on quality control circle techniques and single company practices appeared in the annual *Transactions of the American Society for Quality Control*. But this literature did not penetrate the business community as a whole, which was introduced to the quality circle by sources like *Industry Week* in the late 1970s.

While the literature remained substantial throughout the 1980s, it forecast its own demise considerably earlier. The most influential single article in the social scientific literature was Lawler and Mohrman's 'Quality Circles After the Fad' (1985 *Harvard Business Review*) which portrayed quality circles as limited at best. The year 1986 saw a heated debate on 'beyond quality circles' (i.e., self-managing work groups) in the quality circle consultant and practitioner communities.

### *When Did Firms Adopt?*

A central question about discourse on innovation is its relationship to patterns of use by organizations. Does talk in the periodical literature precede and help to motivate business decisions? Or does it mainly record what organizations have already done?

Unfortunately, empirical spread is harder to trace than discourse. This is particularly true in the early period of discussion and use of an innovation, when systematic assessment of adoption patterns does not arise. From 1982 on, a series of 'snapshot' organizational surveys provide a spotty outline of dynamics of adoption and abandonment. Table 2 lists the major surveys and their findings.

Table 2 about here

Sporadic reports suggest that small numbers of companies experimented with quality circles through the 1970s, though perhaps not before. These experiments may have been influenced by the quality control engineering literature, the consulting and lecturing activities of quality control experts like Juran and the Amsdens, and direct contact with Japanese circles. The fact that no substantial wave of efforts was excavated after the practice became 'hot' suggests that their numbers were very limited.

The most historically important of these early circles were started in 1974 at Lockheed's Aeronautics division in Santa Clara, California. Lockheed's circles were the product of contact by a touring quality circle party from Japan, followed by a visit to Japan in 1973. They enjoyed considerable success, with stylised results including a cost savings of \$3 million, tenfold reduction in defects, 6:1 ROI, and participant endorsement. Lockheed manufacturing manager Wayne Rieker, QC coordinator Donald Dewar, and QC training manager Jeff Beardsley advertised their success widely, preparing presentations at the ASQC and suggesting the idea to Lockheed suppliers like Honeywell. The three ultimately left to become organizational consultants setting up circles elsewhere (which led to the demise of the initiative at Lockheed).

To my knowledge, systematic organizational surveys of quality circle activity were not performed until 1982. Before this, however, estimates provided by central participants in the movement suggest that very small numbers of companies were involved in quality circles. For example, in 1979 Robert Cole listed 20 US companies using quality circles. In 1980, Don Dewar (then President of the International Quality Circles Association) estimated that over 100 companies had started a total of between 2000 to 3000 circles, and described this as a 7 to 10 fold increase over the previous year. A year later, Dewar estimated more than 200 companies had started quality circles.

In 1982, the New York Stock Exchange conducted a survey of human resource practices among a sample of corporations with more than 100 employees. It found that 14 percent had quality circles. Among very large firms comparable to the Fortune 1000 later surveyed by Lawler and associates, 22 percent had circles. The widest use of quality circles was in manufacturing companies with over 10,000 employees (43 percent).

The NYSE survey also confirms the youth of quality circle efforts in 1982. 45% of companies with circles had started them within a year of the survey (by spring 1981) and 74% within two years of the survey. This places a lower bound of 7.7 percent of firms with quality circles in 1981, and 3.6 percent in 1980. (These figures are lower bounds since they are constructed under the assumption that no firms abandoned quality circles between 1980 and 1982.)

The most comparable survey series was conducted by Lawler and colleagues at the Center for Effective Organizations in 1987, 1990, and 1993. These surveys of Fortune 1000 firms indicated that roughly two-thirds of the nation's largest firms were employing quality circles in the late 1980s and early 1990s, with a slight increase from 1987 to 1990 and a slight decrease in 1993. Lawler et al. also found that less than half of these organizations had more than 20 percent of their workforce in quality circles, indicating that quality circle use was partial and selective within firms.

Paul Osterman's (1992) national probability survey of firm utilization of 'high involvement' practices indicates that quality circles were widely used across a broad range of firms in the early 1990s. Osterman reports that 40 percent of firms of all sizes and in all industry locations made use of quality circles, and that 27 percent had more than half of their employees in quality circles. The Osterman study points to considerably broader use of quality circles across and within American businesses than extrapolation from the Lawler series might suggest.

While considerable noise enters into the survey series in Table 2 due to shifting target populations, survey non-response, variation in questions and in who responds to them within the corporation, a plausible trajectory of quality circle use does emerge. It suggests that quality circles 'took off' in the early 1980s and reached a peak sometime considerably after 1982. Quality circles continued to be used at high levels through the early 1990s.

The latency and take off periods of discourse and use are thus very similar. Quality circles are discussed sporadically and in isolated ways (generally unreported in ABINFORM) through the 1970s, and then begin to appear in sharply rising numbers in 1980 and 1981. Similarly, it appears that few companies were using quality circles during this time, and that adoptions rose sharply in

1980-81. (In this paper I avoid the temptation to discuss the timing of this latency period and take off. Suffice it to say that the most obvious exogenous driver is the gap between Japanese and American economic growth, which was strikingly large in 1980-82. See Cole (1989) for an excellent treatment of the spread of quality circles.)

Discourse and use series then go out of phase as talk outstrips behavior. The quality circle discourse reaches its peak in 1982, a period when quality circle use is still gathering momentum. Quality circle use probably reaches a peak in the mid-1980s, while the discourse declines. By the early 1990s, quality circles remain a fairly common practice in both small and large firms. But virtually nothing is written about them.

It is quite possible, of course, that more refined measurement of actual circle use would amend this portrait. For example, the number of companies using quality circles could be stable as the number of circles in firms declines (though Lawler et al.'s survey evidence stands against this hypothesis). Or the quality circles reported in more recent surveys could be hybrid initiatives. Or most strongly, circles might remain 'on the books' though they have disappeared in practice. It is unlikely, however, that these qualifications would challenge the basic conclusion that quality circles persisted in considerable numbers after the quality circle discourse had subsided.

### *Who?*

Who wrote about quality circles? To provide a preliminary answer, texts were collected from samples of 20 title-search based articles in each of four periods: 1977-early 1981, late 1982, 1987, and 1992-3. These time periods were selected to capture some of the distinctive inflection points of quality circle discourse. In particular, they contrast the upswing of the discourse (the earliest years and also the peak year of 1982) with its downswing (1987 as a late but still active period, and 1992-3 as a terminal point in American discussion of quality circles). Fifty of the eighty articles in the sample were obtained.

The professional affiliation of authors was derived from biographic information provided in the article. This was supplemented by references within the article and elsewhere when available. Identifying information was located for 65% of the authors.

Author affiliations were grouped into four categories: academics, consultants, managers, and journalists. Academics indicated a faculty position or other affiliation with a college of university. Consultants gave an affiliation with a consulting firm or professional identity as a business consultant. Managers indicated a position in an organization that was a present or potential site of quality circle activity. (These individuals were thus not necessarily in managerial positions per se--- they might also be human resources professionals, engineers, or executives.) Journalists were editors or staff writers for the publication in which the article appeared. (A residual category included one individual, whose stated affiliation was the city of Gary, Indiana.)

Of course, individual careers cut across these categories in various ways. For example, a number of authors stating an academic affiliation also noted that they had acted as business consultants. Individuals further described careers moving from consulting to academia, from academia to

consulting, and from management to consulting (most famously in the Lockheed case). I coded the present given affiliation of the author rather than his or her multiple past or other present roles.

Table 3 gives the distribution of authors across these four professional affiliations for each of the four periods. A glance at the table marginals indicates that academics, consultants, and journalists all play a substantial role in talking about quality circles. Academics are the most prominent with 34 authors (although since academics are most likely to participate in co- and multiple-authorships, this figure somewhat overstates the numbers of articles they write.) Consultants and journalists each appear about half as often as authors of articles on quality circles.

Table 3 about here

More telling than the marginals, however, is the dramatic shift over time in who talks about quality circles. Journalists and consultants dominate samples of the early periods. Journalists are especially prominent in 1977-81, appearing as 9 of the 16 authors located in this period. Consultants appear more frequently in the peak year of 1982. But in both periods, academics are hardly present at all (two in 1977-81, none in 1982).

The situation reverses in 1987 and 1992-3. 32 authors, making up 72% of the sample during these periods, note professorial appointments in colleges and universities. In these periods, the consultants and journalists so prominent in the early years of the quality circle virtually disappear. There are only 4 consultants, and no journalists, among the authors of pieces sampled in 1987 and 1992-3.

A number of the academic authors indicated the school or department where an appointment was held. Of these, about half were drawn from schools of management and business administration. Others came from departments of psychology, sociology, Japanese studies, statistics, and nursing. Notable for their absence, however, were academics drawn from schools of engineering. This bears on the theoretical perspectives that Americans brought to bear on quality circles, a topic discussed in the next section.

I would also emphasize the other dog that didn't bark: managers, professionals, and executives affiliated to the organizations that considered, adopted, or terminated quality circles. These kinds of actors, so critical to the actual fortunes of quality circles, hardly appear as voices in the literature on quality circles. A few do: in 1981 Elaine Rendall, a QC facilitator, touts quality circles as a 'third wave' innovation while Manager Sud Ingle (later consultant Sud Ingle) describes his experience with quality circles at Mercury Marine. But it would be quite wrong to think of managerial discourse on quality circles as discourse by managers.

*Where?*

A systematic examination of the outlets for quality circle discourse has yet to be performed. Some preliminary impressions may be informative, however.

The literature on quality circles got its start in general audience, high circulation journals. The most prominent of these was *Industry Week*, a business news magazine with a circulation of some 300,000 readers. It is likely that many managers first heard about quality circles in short pieces like "Talking in Circles Improves Quality" (IW, 1977) and "IW Study Team Visits Japan: Quality Control Circles Pay Off Big" (Anonymous, 1979). Another important early outlet was *Across the Board*, which reviews articles of interest to managers.

Major business magazines left the topic of quality circles early. For example, *Industry Week* published the last of its six articles on quality circles in 1982. Journals directed to managers continue to discuss quality circles, but the literature is increasingly comprised of more specialized, small circulation outlets.

These more specialized journals fall into several categories. One are journals on quality circles *per se*. These are represented in the ABINFORM database by *Quality Circles Journal*, the official journal of the International Association of Quality Circles (first published in 1978, and first abstracted in ABINFORM in 1984). QCJ is the single largest source of the quality circles talk analysed here, contributing some 36 articles to the title-search corpus. But discussion of quality circles subsided even in this outlet---in 1987 the journal name changed to the *Journal for Quality and Participation*, and the last article referring to quality circles in the title, a description of Chinese QC Circles, was published in 1991.

A second category of journals are written for professions whose activities are related to but broader than quality circles. Prominent such outlets like *Training and Development Journal*, *Training, Personnel Journal*, and *Quality Progress*. These journals were quick to note and advertise the quality circle phenomenon, and provided a base from which consultants and related practitioners could discuss issues of quality circle philosophy, implementation strategies, and organizational readiness. They appear from the beginning of the literature until the late 1980s.

A third category of journals are oriented to specific industries or lines of work. Examples include journals like *Hospital & Health Services Administration*, *Library Management*, or *Internal Auditing*. These outlets generally provide descriptions of how quality circles could be employed in a novel setting, like an emergency room or a credit management function. Such journals are unlikely to publish more than one article on quality circles, and such pieces emerge in the literature at or after the peak year of 1982 through the 1990s. (Articles appearing in this class of journals can induce a sudden sense of being caught in a time warp, as one reads in the late eighties of a new practice that is sweeping the nation: quality circles!)

A fourth and final set of journals are academic outlets: journals published by and for academics, and often organized as the official publications of scholarly societies. Among the most common such journals are outlets that apply scientific methods to topical issues: *Journal of Applied Behavioral Science*, *Public Administration Quarterly*, *National Productivity Review*. As one would expect from the previous analysis of article authors, these journals appear late but comprise a substantial share of the twilight years of quality circle discourse. Relative to academic authors, however, academic journals appear later (not before 1982) and dominate the late discourse less. This occurs because academics writing on quality circles tended to write for professionals and managers as well as other academics.

*What?*

To examine the content of discourse about quality circles, a content analysis was performed of the ABINFORM abstracts of the title-search corpus of articles. Abstracts should not, of course, be regarded as capturing the full message of the piece. However, a comparison of abstracts with the full text of the article suggests that abstracts are both consistent with articles (statements in the abstract jibe with statements in the body of the article) and that the abstract covers central rather than peripheral features of the article.

To be cast as a managerial innovation implies that a practice should enhance organizational outcomes. Much of the quality circle discourse is thus about what quality circles do for the organization, what conditions or approaches increase the prospects of success, and what goals organizations are seeking when they initiate quality circles. Even behavioral science discussions of quality circles are dominated by an effort to provide helpful assessments of their effectiveness.

Content analysis of quality circle abstracts followed a two-step coding procedure. First, segments of text (ranging from phrases to multiple sentences) were coded when they played particular argumentative or rhetorical roles. The major such roles were statements of (a) results produced by quality circles, (b) motives for adopting quality circles, and (c) mechanisms that generate quality circle success (these included behavioral processes and organizational contexts facilitating success, which were separately coded but are combined here for convenience). Second, the content of each text segment playing these roles was coded along several dimensions, as described below. (All abstracts were coded by the author. A test-retest trial indicated high levels of within-coder reliability.)

### *Efficacy*

A first concern is with the valence of quality circle discourse: to what extent does talk about quality circles promote, question, or challenge the innovation? Much general commentary and some reflection suggests that the literature will be highly positive in tone. A general bias towards the reporting of positive results has been noted in scientific journals, stemming from author self-interest and the greater notability and potential importance of positive findings. Pressures to report positively are presumably stronger in the literature on a business innovation, where audiences expectations of success are even greater and the protective canons of science are weaker. A natural hypothesis is that the literature will be thoroughly favorable in its assessment of quality circles.

An alternative hypothesis is that evaluations move with the general standing of the innovation. As quality circles rise in popularity, authors and editors jump onto the bandwagon with strong positive reports. After the bubble is pierced, they jump to get off the bandwagon (and onto a new one). We would then expect highly positive evaluations during the early buildup and high point of the discourse (the 1970s to early 1980s) and a trend to negative evaluations in the late 1980s and the 1990s.

While evaluations can be conveyed in many ways, one of the most direct are statements about the results that quality circles produce. Statements of quality circle results appearing in article abstracts

were coded into three categories: positive (quality circles benefit the organization), negative (quality circles harm the organization), and neutral (quality circles have a mixed, unclear, or no impact on the organization). For example, a statement that quality circles 'saved the company \$100,000 in one project alone' would be coded as positive, 'cost the organization 21%---the price of lost time' as negative, and 'have not proved universally effective' as neutral.

Assessments of the efficacy of quality circles are strongly favorable in the quality circle discourse. Of a total of 205 coded statements, 168 (81 percent) are positive. These include statements of specific outcomes experienced by particular organizations, types of outcomes experienced by classes of firms, and expected future benefits. Only 31 (15 percent) of statements of results convey neutral evaluations, while overtly negative evaluations are voiced in a paltry number of cases. (However, neutral statements about the impact of an organizational innovation can damn with the faintest of praise, and may imply a return on investment of less than one. For example, a finding that quality circles have no effect on productivity (coded here as neutral) suggests they are a net loss due to the unrecovered costs of lost time, administrative overhead, and training.)

The temporal pattern is one of a honeymoon followed by a shift to more guarded but still largely positive assessments. Quality circles could do no wrong during the initial upswing. Between 1977 and 1981, 48 positive results are reported and no negative or neutral evaluations. But in 1982 neutral and negative evaluations appear, with a frequency of about one for every six positive evaluations. Non-positive findings then increase in relative frequency over the remainder of the decade, albeit modestly. The nadir of enthusiasm is reached in 1988, where only slightly more than half of all assessments are positive. This is followed by a rebound in the 1990s, though here so few articles are written that judgements based on relative frequency are highly unreliable. (By the 1990s, quality circles are widely viewed as having fallen short and been rejected as a fad in American business as a whole. In this context, the dwindling literature that directly addresses quality circles often seeks to revive the concept, describing situations where quality circles have been resuscitated as organizations learned better how to approach them, the excesses of the peak of the fad were repaired, and the like. During this period, it becomes newsworthy to have something good to say about quality circles.)

The overall pattern thus combines the two hypotheses suggested above. The periodical literature clearly boosts quality circles on the whole, with four-fifths of all results clearly positive and an insignificant number of unambiguously negative assessments. But it moves to a guarded evaluation, as the exuberance of early reports is replaced by an emphasis that quality circles will only succeed under the right conditions, and then by concern that the quality circle may be an inherently limited practice.

### Substantive Logic?

Inquiry into the substantive logics applied to quality circles is framed by the distinction between the problem solving and the human relations models described above. Statements of results, motives, and mechanisms were coded for their application of these interpretive schemes.



Statements of results were coded as 'problem solving' when they referred to bottom-line organizational effects on productivity, quality, and efficiency, or when they described improvements to a production process or due to circle suggestions. Examples include 'quality circles increase productivity' and 'Paul Revere QCs provided 7109 separate quality ideas, 4135 of which were implemented with an annualized savings value of \$3,250,000.' (It is perhaps too generous to view references to abstract outcomes like productivity as embodying a problem-solving logic. I thus also coded a narrower definition that required an explicit link to a production process or QC suggestion. This definition would accept Paul Revere's remarkable success story in the example above, but not the generic 'increase productivity.') 'Problem solving' motives described anticipation of these sorts of outcomes, or description of competitive pressures ('In the race with the Japanese...'). Finally, mechanisms coded as employing a problem-solving logic included statements about worker aptitude and knowledge, the virtues of statistical or other decision tools, and the importance of focusing on well-defined problems or production processes amenable to rational analysis.

By contrast, 'human relations' results and motives referred to the (realized or anticipated) impact of quality circles on participant attitudes and social relations. These include morale, job satisfaction, organizational commitment, social cohesion, management-labor communication and relations, and the enhancement of personal or leadership skills. 'Human relations' mechanisms included reasoning about attitudinal change produced by greater autonomy and responsibility, effects on informal social relations in the workplace, and arguments that an open, participatory organizational culture was necessary for quality circle success. An article might thus claim that quality circles improved morale (a result), that organizations adopt quality circles because they are concerned about morale (a motive), or that quality circles 'work' (i.e., achieve some ultimate objective, like higher productivity) because they raise morale (a mechanism).

Table 4 gives the frequencies of problem-solving and human relations logics appearing in the quality circle literature. Both logics figure heavily in statements about the results of quality circle use. Quality circles are widely credited with increasing organizational productivity, improving product quality, and cutting costs. (The bulk of these couch outcomes at a very high level of abstraction. Only a quarter (25) describe savings due to circle suggestions or improvements to work processes addressed by quality circles.) Just as often, however, they are portrayed as increasing interest and pride in work, aiding industrial relations, and strengthening work groups.

Table 4 about here

Problem-solving logics figure more centrally as motives for quality circle adoption than do human relations logics. Almost two thirds of statements of adopter goals and rationales refer to productivity and quality enhancement. But concern with human relations is by no means absent: firms are said to adopt circles 'to improve communication,' 'to create a new management style,' or 'due to concern about absenteeism and turnover.'

The situation is reversed when we consider the mechanisms viewed as generating quality circle success. 67 (81 percent) are related to a human relations logic, while only 15 are linked to problem-solving. Why this marked difference?

The domination of human relations logics does not stem from elaborate discussion of individual psychology and capacities. In this sphere, in fact, the discourse is well balanced. Quality circles are tied to attitude change and group dynamics, most grandly through invocation of the behavioral science of Maslow and Herzberg. But they are as commonly motivated by an appeal to the intelligence and creativity of the average worker, and to the worker's close knowledge of concrete production processes.

Instead, human relations mechanisms predominate due to much attention to organizational climate and culture. Over 40 articles discuss the need for quality circles to be embedded in participatory organizational cultures, for managers to eschew autocracy for facilitation, and to adopt warm rather than cold management styles. By contrast, there is virtually no parallel attention to the dependence of quality circles on larger problem-solving or quality control strategies or cultures. (The later innovation of total quality management does embody such an analysis, but it is not one that surfaces in the quality circle literature proper.)

The third row of Table 5 gives the number of ABINFORM abstracts that make use of both problem-solving and human relations logics. For all three rhetorical roles, the two logics are combined considerably more often than would occur by chance. For example, if use of the two logics were independently distributed, we would expect  $102/359 * 97/359 * 359 = 27.7$  abstracts to refer to them jointly. But in fact this conjunction arises 54 times.

Use of the two logics in tandem are striking in the abstracts themselves, and also in the articles I have examined. We see quality circle results described as '1. improvement in performance produced by higher quality and productivity, and 2. an improvement in worker attitude toward the job.' Motives for adoption include 'to improve productivity and enhance employee job satisfaction,' and mechanisms take forms such as 'quality circles provide the tools, training, and opportunity to solve problems....In addition, they are a longer lasting source of motivation.'

Frequent use of both logics might suggest that it is wrong to insist on a distinction between the two. However, the two tend to be combined self-consciously rather than blended together. For example, many pieces separate the 'short and long term implications' (or tangible versus intangible benefits) of quality circles to contend that while remarkable costs savings may be achieved quickly, the real advantage of quality circles is in promoting larger cultural change. Other articles see the two logics as mutually active but in conflict, arguing that the Holy Grail of cultural change will be lost if managers 'use' circles.

Frequencies of problem solving and human relations logics shift little over time. There is a slight tendency for problem solving logics to appear more frequently in the earliest and latest stages of the quality circle discourse---before 1982 and after 1987. This is suggestive of greater attention to 'hard outcomes' when the innovation is not yet widespread or under attack. There is also a slight tendency for the two logics to be more often conjoined in earlier rather than later articles. But these trends are sufficiently faint that it may be more appropriate to view the uses of the two logics as a stable feature of the way quality circles are constructed in the American business community.

## Evidence?

Finally, I examine the sorts of evidence that support statements of the impact of quality circle. Statements of *results* were coded into four categories. The *Case Study* refers to events occurring in a single firm or small set of enumerated firms ('Lockheed's success demonstrates...'). The *Aggregate Trend* base conclusions on the behavior of large numbers of organizations taken in the aggregate ('Quality circles have worked in Japan; Japanese supremacy in industrial production is testimony to that'). The *Experimental/Comparative Study* supports conclusions with explicit comparisons of multiple organizations, or multiple sub-units or individuals within organizations ('A longitudinal analysis of differences in job satisfaction of 317 laundrymen before and after quality circle participation showed...'). Finally, *No Evidence Given* is coded where statements about results are made unconditionally, or when the author's opinion or the opinion of some other authority stands as evidence for the purported effect.

The most common kind of evidence in the quality circle discourse refers to outcomes in specific companies. Among the 53 uses of a case study logic are many references to exemplary initiatives at Lockheed, Honeywell, and the Norfolk Naval Shipyard. Even more common are single article 'success stories' of quality circle usage. By contrast, 28 results refer to aggregate trends, 23 base conclusions on experimental/comparative studies, and 36 results are given without reference to supporting evidence.

Fluctuation over time in the four evidence types is considerable. The earliest years are dominated by claims about results unsupported by evidence, and by evidence based on aggregate trends. For example, in 1979 eighty percent of quality circle results were not supported with evidence, and twenty percent were supported by references to aggregate trends. This is the period when undocumented assertions of quality circle efficacy are rife, and when the most expansive kinds of reasoning are heard. The most important of these is the common claim is that the quality circle is largely responsible for the Japanese miracle.

Case studies are the most consistently utilized form of evidence. Early articles cite the success of early adopters like Lockheed and Honeywell to emphasize that quality circles can work in the U.S. as well as in Japan. In the eighties, there is no shortage of companies whose success (and seldom, failure) with quality circles can be reported. And in the 1990s, newsworthy cases of companies that resuscitate their circles are promulgated for the lessons they provide.

Finally, and most dramatically, experimental/comparative studies arrive late on the scene to dominate the final years of the quality circle literature. No explicitly experimental or comparative studies of quality circle effects appear before 1982, and there are just a tiny handful of experimental studies in the mid-eighties when circles are a hot innovation. But these kinds of studies become dominant after 1988, paralleling the rise of academics as authors of articles on quality circles discussed above. (Statements without explicit backing virtually disappear during this last phase of the discourse. This may make sense in terms of the disappearance of journalists in the discourse, but may have more to do with the shifting burden of proof applied to quality circles.)

### Whose Support Counts?

I note one final feature of the content of quality circle arguments: statements about whose support within the organization is critical to quality circle success. This topic forms one of the most consistent themes of the quality circle literature, raising issues of organizational politics that are crucial but quite separate from the interpretive logics and evidence types described above. Classes of actors whose support of quality circles is pointed out as crucial for success include managers, employees, and unions.

Table 5 lists the number of times that the support (often phrased as the commitment) of each group is described as crucial, and additionally the number of times each group is described as a source of opposition or problems for quality circles.

Table 5 about here

Clearly, it is management whose stance is treated as most important for quality circle success. The literature is full of warnings that quality circles need, first and foremost, the commitment (often the unconditional commitment and support) of management. And the higher the better---top management is pointed to more often than twice as often as middle management, and middle management three times as often as line management. Middle managers stand out, however, as most threatened by and likely to be in opposition to quality circles.

By contrast, levels of support from labor (as circle participants or more generally) appears as having little significance. In part, this may occur because a number of authors view employees as naturally interested and supportive of quality circles---but note the relatively large number of times workers are described as in opposition. More importantly, I believe, employees are simply not seen as playing a critical, active role in determining the scope, strength, or direction of the quality circle effort. Labor unions are seen as more important actors, and considerable attention is paid to bringing them on board.

This view of whose support counts is striking given the participatory, bottom-up understandings of how quality circles work. But it is a realistic view, given the status of quality circles as a 'managerial' innovation. If we consider the problem from the consultant's point of view, for example, the most important thing one can possibly have is top management's unconditional commitment to the quality circle process.

### **Discussion**

I briefly summarize main findings from the above investigation of quality circle discourse, and note some possible implications.

The quality circle discourse tended to run ahead of trends in quality circle use. It peaked very rapidly in 1982, a time when quality circles had just begun to spread widely in American business. And as quality circles continued to spread across corporate America, the discourse on quality

circles went into decline. The discourse had disappeared by the early 1990s even though large numbers of corporations continued to report their use of quality circles.

An important implication is that discourse on an innovation like quality circles is well placed to influence what managers do. Much information was available through the business press before managers were likely to experience quality circles at first or even second hand. The early, exuberant literature on the multiple benefits of quality circles probably encouraged many companies to give circles a try.

A model of the trajectory of quality circle discourse is not attempted here, though the examination of discourse content, authors, and outlets suggests a number of possible elements of a model. As one example, the above analysis emphasizes that the quality circle discourse was not the product of a single unified community, but instead of a composite of many communities whose clocks run at different speeds.

The most marked division is between practitioners and academics. The early discourse is carried by centrally placed journalists and consultants writing for a general business audience and for the human resources profession. These sorts of writers and outlets move on 'after the fad,' but their place is taken (to some degree) by academics writing for mixed academic-practitioner audiences. This shift had large effects on what sorts of evidence were brought to bear in discussions of quality circle efficacy. (Other 'succession dynamics' in the discourse involve movement from manufacturing settings to the service sector, and from the United States to a more international base for quality circle discourse.

Dramatic shifts in 'who talks to whom' make it all the more remarkable that the logic of quality circle discourse do not change so much over time. I have approached this logic by examining the roles of two interpretive frameworks---'problem solving' and 'human relations' models of quality circles.

In many ways, what is most striking is the easy way the discourse combines these two frameworks. Much of the discourse implies that quality circles could do it all---raise productivity, lower defects, inspire worker commitment, strengthen work groups, develop worker skills and career options, even make managers better people. Authors recount instances of remarkable cost savings attributable to circle suggestions, but then warn managers that the greatest benefits are intangible.

There may be an important lesson here. Analysis (organizational or otherwise) aims at breaking down causal processes, behavioral practices, and cultural systems into their component parts. But the problem for action is finding ways of bringing together the many things one wants to do. (And in a way that permits maneuver later, when things go wrong – see Eccles and Nohria (1992) for an excellent discussion.) Innovations may become popular not so much because they seem to solve one problem, but because they seem to speak to many problems simultaneously.

When we look at the lines of argument used to support conclusions about quality circles, however, the discourse is strongly oriented to a human relations interpretation. Authors point to cash savings due to circle suggestions, but they conceptualize and explain circles in terms of worker needs for

autonomy, the value of group solidarity, and the importance of the larger organizational culture. And they criticize circles, not as technically inadequate, but as insufficiently emancipatory.

This theorization of quality circles as motivational devices played an important role, I think, in turning Japanese quality control circles into American quality circles. It had implications for who would oversee circles, what circles would do, and what sort of agenda would stand behind a circle initiative. The disappointment of this agenda, in turn, provided fuel to fire the innovations that succeeded quality circles, like self-managing work teams and total quality management.

Table 0. Density of coverage of quality circles for articles drawn from ABINFORM by different search strategies.

	Reference to 'quality circle' found in article:		
	Title	Abstract	Body
-----			
Mean QC References in Body of Text	12.8	3.6	1.7
Article Frequencies			
1994	1	23	298
1995	5	19	283
1996	1	7	131
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Table 1. Counts of articles on quality circles appearing in the periodical literature.

	ABINFORM		SSCI	
	QC Title	QC Abstract	QC Title Article	All Types
1971	0	0		
1972	0	0		
1973	0	0		
1974	0	0		
1975	0	0		
1976	0	0		
1977	0	2		
1978	0	1		
1979	6	6		
1980	7	16		
1981	27	58	4	5
1982	56	96	11	17
1983	27	60	14	20
1984	42	74	24	36
1985	37	68	16	36
1986	32	86	12	18
1987	24	89	12	14
1988	20	81	6	9
1989	17	68	5	7
1990	9	52	3	3
1991	13	42	4	4
1992	10	29	1	3
1993	10	33	1	3
1994	1	18	0	1
1995	4	17	1	1
1996	1	2	2	2



Table 2. Level of Quality Circle activity in the United States, various years and surveys.

Year	% Firms with QCs	Survey Frame	Source
1982	14%	100+ employees	NYSE
	22%	5000+ employees	
1987	61%	Fortune 1000	Lawler(1)
	10%	( > 40% Workforce)	
1990	66%	Fortune 1000	Lawler(2)
	13%	( > 40% Workforce)	
1992	40%	50+ employees	Osterman
	27%	( > 50% Workforce)	
1993	65%	Fortune 1000	Lawler(3)
	15%	( > 40% Workforce)	

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1982: Freund, William C. and Eugene Epstein, People and Productivity: The New York Stock Exchange Guide to Financial Incentives and the Quality of Work Life. Homewood, IL: Dow Jones-Irwin, 1984.

1987: Lawler, Edward E. III, Ledford Gerald E., Jr., and Susan A. Mohrman, Susan A. Employment Involvement in America: A Study of Contemporary Practice. Houston: American Productivity and Quality Center, 1989.

1990: Lawler, Edward E. III, Mohrman, Susan A. and Gerald E. Ledford, Jr. Employee Involvement and Total Quality Management: Practices and Results in Fortune 1000 Companies. San Francisco: Jossey-Bass, 1992.

1992: Osterman, Paul. "How Common Is Workplace Transformation and Who Adopts It?" Individual and Labor Relations 47 (1994): 173-88.

1993: Lawler, Edward E. III, Mohrman, Susan A. and Gerald E. Ledford, Jr. Creating High Performance Organizations: Practices and Results of Employee Involvement and Total Quality Management in Fortune 1000 Companies. San Francisco: Jossey-Bass, 1995.

Table 3. Professional affiliations of authors  
of ABINFORM-abstracted articles on quality circles, various years.

	Academic	Consultant	Journalist	Manager	Other
All Years	34	18	18	6	1
1977-81	2	4	9	1	0
1982	0	10	9	0	0
1987	16	3	0	4	1
1992-93	16	1	0	1	0

Table 4. Interpretive logics appearing in ABINFORM-abstracted articles on quality circles.

	Rhetorical Roles		
	Results	Motives	Mechanisms
-----			
Interpretive Models			
Problem-Solving	102	58	15
Human Relations	97	32	67
Problem-Solving & Human Relations	54	18	9
(Expected count by independence)	27.7	9.3	2.7
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Table 5. Frequency of claims the support of various groups are critical to quality circle success, ABINFORM-abstracted articles on quality circles.

	Support Critical	Opposition Problematic
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Organization as a whole	8	3
Top Managers	35	5
Middle Managers	15	13
Line Managers	5	3
Management (level not specified)	45	12
QC Participants & Employees	5	8
Labor Unions	15	5
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