
Sustainable Change in the Public Sector: The Longitudinal Benefits of Organization Development

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Abstract

This article examines the impact over a 30-year period of a 4-year organization development project in the Metro County Sheriff's Department. Interventions included confrontation team-building sessions, management training, process consultation, survey feedback, third-party consultation, technological interventions, implementation of methods for increasing accountability, and changes in the organization structure, the physical setting, and the policy formulation procedures. Results include improved organization climate and leader effectiveness; decreased employee turnover, jail breaks, and citizen complaints; increased resources allocated to the organization; and improved organizational effectiveness, as measured by criminal justice leaders in the community. This research becomes the longest longitudinal study of the effects of organization development interventions in the behavioral science literature.

Keywords

longitudinal change, organization development, sustainability

In an increasingly competitive and cost-conscious business environment, managers investing resources in organization development (OD) projects are being held progressively more accountable for bottom-line results (Cummings & Worley, 2009). Consequently,

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one of the fundamental challenges confronting OD researchers and practitioners alike is the task of demonstrating that organizational change interventions can and do have long-lasting effects. Managers considering costly OD projects need compelling evidence that their investments will yield long-term dividends. Woodman, Bingham, and Yuan (2008) recently observed that

A classic problem in OD interventions has been the distressingly common phenomenon of some change target variable returning to its original state after assessment occurs but having this fact unknown to the evaluators who have already drawn their conclusions regarding the efficacy of some change effort based upon a measurement made in the warm afterglow of the intervention. (p. 8)

Yet reviews of the OD literature indicate that inadequate attention has been paid to the long-term effects of change interventions. Indeed, the field of OD has been criticized for being both atemporal and ahistorical (Pettigrew, Woodman, & Cameron, 2001). Critics have argued that researchers have relied too heavily on short-term, cross-sectional designs that fail to account for historical effects and provide only a snapshot view of the processes by which things change over long periods (Avital, 2000).

Very few studies have been able to substantiate the persistence of OD effects (Bruce, 1992; Golembiewski & Kiepper, 1988; Howard & Bray, 1988). There simply have not been that many successful change projects that have spanned 15 years or more (Baum & Locke, 2004); and some successful ones may have gone unpublished. In the absence of longitudinal data, it is very difficult to demonstrate that OD interventions have significant long-lasting effects on individual and organizational outcomes (Cummings & Worley, 2009; Lawler, Nadler, & Mirvis, 1983; Woodman et al., 2008). In response to these concerns, we present a study of the impact over a 30-year period of a 4-year organization development project in the Metro County Sheriff's Department. Spanning three decades, this research becomes the longest longitudinal study of the effects of OD interventions in the behavioral science literature.

The purpose of this study is not only to evaluate the long-term effects of an OD project but also to examine it in detail and describe the factors that may have contributed to its success. OD practitioners have "a substantial knowledge base from which it is valuable for academics to draw" (Austin & Bartunek, 2003, p. 309), and relatively little of that knowledge is being tapped; the challenge is to overcome the "great divide" between practitioners and academics in organizational research (Rynes, Bartunek, & Daft, 2001) and encourage those who have access to longitudinal data to work collaboratively to report the results of their OD efforts.

A Theoretical Framework of Planned Organizational Change

For insights on how OD interventions can affect long-term organizational effectiveness, we draw on Porras and Robertson's model of planned organizational change (Porras, 1987; Porras & Robertson, 1992), which has been well established in the literature and

supported by empirical research (Robertson, Roberts, & Porras, 1993). This theoretical framework holds that organizations comprise four distinct but interrelated subsystems called *work settings* (Porras & Robertson, 1992): (a) organizational arrangements such as reward systems and organization structure provide control and facilitate coordination of efforts, (b) social factors such as patterns of social interaction between employees and groups make up the organization's culture, (c) technological factors such as work flows and job designs determine how inputs are translated to organizational outputs, and (d) physical facilities such as buildings and work spaces affect how organizational activities are carried out. These four work settings shape employee behavior and therefore represent the "manipulable" variables that can be used to change organizations (Porras & Robertson, 1992).

Alleviating problems with work settings, such as social factors and organization structure, is believed to improve employee attitudes and behavior, which in turn drive sustained improvement in organizational performance (Robertson et al., 1993). It is critical for OD interventions to ensure that all four work settings are in alignment with each other to ensure that employees receive consistent signals about the behaviors that are desired by the organization (Robertson et al., 1993). As the following description notes, the organization providing the data for this study had suffered from numerous problems with each of the four work settings.

Background

In 1973, the Metro County Sheriff's Department¹ (hereafter referred to as Metro County) faced an epic internal crisis, manifest by numerous problems.² Annual turnover varied between 40% and 60%. Unionization was imminent. Replacement costs for recruitment and training had run from \$150,000 to \$250,000 a year. For three straight years, the department had overspent its funds, and the sheriff had decided not to run for reelection the following year. Toward the end of 1973, the sheriff retained the services of an OD consultant to put an end to the crisis. The consultant began a comprehensive investigation of the problems at Metro County by conducting an organization-wide employee survey, followed by a series of interviews with key personnel over a period of several weeks.

These interviews identified the sheriff's management style as a primary cause of this crisis. The sheriff and the undersheriff were seen as authoritarian and arbitrary, prone to make decisions without consultation and announce them at staff meetings or, even more impersonally, by memo. Division heads resented being taken by surprise, especially when subordinates heard of the latest policy change from the local newspaper before they themselves had been informed. Furthermore, the departmental atmosphere was markedly hierarchical; officers who had known each other for years still used each other's titles, and communication was limited by a status-conscious self-defensiveness. The sheriff's absence was also physical; as an elected official, he was often away from the department headquarters, attending meetings and public activities that were not directly related to departmental activities. Subordinates perceived this as

politicking. As a division head argued, "I think the sheriff ought to forget about politics and get back to work as the sheriff. If we do a good job, it will speak for itself."

The consultant's investigation also uncovered a host of operational problems. Since the sheriff had been in office, division heads had had no control over their own budgets, and decisions on expenditures for "extras" (travel, training, additional personnel) were made by the sheriff and undersheriff, apparently with no coherent rationale. Mainly as a result of the budgetary mismanagement, the press, the public, and the county commissioners were beginning to question the department's credibility, despite its reputation for professional innovation. In light of these problems, a multidimensional OD intervention was developed and implemented to improve the overall effectiveness of the Metro County Sheriff's Department.

The Interventions

The Confrontation Team-Building Meeting

In a context of great suspicion and hostility throughout the organization, the seven top administrators of the Sheriff's Department began a 6-day confrontation team-building meeting (Beckhard, 1967) at Peaceful Valley. Cummings and Worley (2009) note that this type of intervention "can be used at any time but is particularly useful when the organization is under stress and when there is a gap between the top and the rest of the organization" (p. 276). As explained in the Background section, this was certainly the case with Metro County. Since the roots of the departmental problems were clearly personal rather than structural, the aim of the meeting was to give these seven people a chance to work through their interpersonal problems out of the view of subordinates and beyond interruption by day-to-day law-enforcement operations. The design for the meeting, described in detail elsewhere (Boss, 1979), focused on building skills, sharing data, confronting interpersonal issues, and problem solving through interpersonal contracting. Realizing that no one participant could change his or her own behavior unilaterally, the group compiled, for each person, two lists in response to the following questions: "What will I do to help the organization function more effectively?" and "What will the rest of the group do to help me?" By setting up moral support from others for individual changes in behavior, the double commitment ensured that action would be taken on the issues raised by the confrontations. All the contracts were photocopied and distributed to all participants. After the behavioral issues had been addressed through interpersonal contracting, the remainder of the team-building session was spent dealing with other departmental problems: communication, decision-making procedures, and control processes, including an open-door policy (McCabe, 1988).

Action Planning

Immediately after Metro County's top staff returned from Peaceful Valley, they thoroughly analyzed the quantitative and qualitative results from the survey and interviews.

They then developed a detailed action plan that included the specific interventions they determined would resolve the short and long-term problems facing the organization, along with timelines and ways of measuring progress (for a thorough review of action planning, see Hughes, 1995). The sheriff presented this detailed plan to department employees when he and the consultant fed back the survey results. These action items included the following interventions.

Organizational Restructuring

A major complaint at Peaceful Valley was a dissatisfaction with many of the top staff's specific duties and responsibilities. Therefore, a major effort of the team upon returning to Metro County was to reorganize departmental responsibilities into four separate components: (a) the organizational structure, (b) the number of personnel assigned to each division and the assignment of people to specific jobs, (c) allocation of space, and (d) the method to be used to notify all departmental personnel of the proposed changes.

Decision making followed the same process for the first three components. Each division commander submitted suggestions to the sheriff and undersheriff, who then developed alternative solutions and presented them to the staff in meetings designated for those purposes. For example, in changing the organization structure, each person submitted to the sheriff and undersheriff a list of specific responsibilities he wanted and the areas in which he preferred to work. The sheriff and undersheriff then examined the requests and made their recommendations, adhering as closely as possible to the individual requests.

Stevenson, Bartunek, and Borgatti (2003) found that successful organizational restructuring involved both a frontstage (or coordination) process as well as a backstage (or networking) process. Metro County explicitly used the frontstage process through changes in official reporting relationships. They also employed a backstage process, as the top staff acted as brokers, who ensured that all members of the organization had influence in the change process. The new organization chart was drawn up, posted on large sheets of newsprint, and shared with the division commanders at a special staff meeting. It was made clear that the new organizational structure was tentative, subject to the input and approval of the entire staff. The undersheriff explained the organizational structure, the reasons for assigning specific responsibilities to a particular person, and the reasons for not honoring some requests.

The top staff agreed in advance to a unanimous decision-making process, and each person had veto power. Furthermore, they agreed to take as much time as they needed to make the "right" decision and one that satisfied all parties. In contrast to their pre-Peaceful Valley dysfunctional behavior, the decision-making process proceeded surprisingly smoothly, and quickly. The organizational restructuring meeting took 4 hours; the personnel decisions took 2 hours, and the space allocation was decided in 30 minutes.

Since the proposed changes would directly affect 85% of the employees, presenting them to the entire department was a critical step in the change process. Before Peaceful

Valley, the changes would have been announced by the usual “bolt from the blue.” Expected results would be an increase in employee resentment and hostility, as well as a rise in the already substantial turnover rate. Furthermore, the action would likely add fuel to the movement toward unionization. Therefore, the staff agreed to follow Golembiewski’s (1968) steps for implementing change, which subsequently served as the model for all future departmental changes: (a) move slowly, (b) implement one innovation at a time, (c) precede each step with ample warning, (d) accompany each step by a statement of reasons and benefits, (e) offer maximum opportunities to participate, and (f) provide outlets for inevitable hostilities.

Specifically, the top staff adopted the following strategies for implementing the proposed changes. Each employee, the new division commander, and either the sheriff or the undersheriff met together in a private, 10-minute meeting. During the meetings, the employees were (a) shown the new organization structure chart; (b) told where they would fit into the organization; (c) informed as to who would be their superiors, peers, and subordinates; (d) asked how they felt about the changes; and (e) told that if they had any objections to the proposed changes, they should state them and feel free to discuss them privately with either the sheriff or undersheriff the following day. Each employee was also told that any objections to the proposed changes would receive serious consideration and, where possible, people would be reassigned. If reassignment was not then possible, the person was promised the desired position as soon as it became vacant. This change procedure took 2 days. Of the 84 people interviewed, only one person expressed dissatisfaction with the change. The entire organizational change had taken place within 3 weeks after the staff returned from Peaceful Valley.

Additional Interventions

During the following 4 years, the OD process included the following interventions.

Team-building sessions. During the first year after Peaceful Valley, the administrative staff participated in additional off-site retreats. Although the formats for the meetings varied, the general purpose was to follow-up on previous commitments, resolve current interpersonal and departmental problems, and engage in team-building activities (Boss, 1989; French & Bell, 1978). Following the first year, the problems had been sufficiently resolved and the skill level attained by staff members was sufficiently high that OD efforts were begun at lower organizational levels, as suggested by Boss and McConkie (2008). Thus, each division commander, in turn, met with his immediate subordinates in a series of confrontation team-building meetings. The major focus of each was on solving interpersonal and organizational problems that were blocking effective work relationships. Data collection and problem diagnosis by the consultant preceded all retreats.

Intergroup confrontation meetings. Given the highly interdependent nature of the Sheriff’s Department, the success of one work group often depended on the quality of services provided by others. Therefore, once problems got resolved within each of the department’s work units, meetings were held to address issues that existed between

interdependent work groups. All of these sessions included the confrontation and resolution of both interpersonal and organizational problems and resulted in detailed action plans to ensure accountability (Beckhard, 1967; Cummings & Worley, 2009).

Management training. Training and development programs can improve employee knowledge and skills (Cummings & Worley, 2009; Nicholas, 1982), consequently training in effective managerial skills was also an integral part of the intervention. Major areas of emphasis included employee participation in university classes, national conferences, and department-sponsored management training programs that emphasized skill development in change management, group process, and effective leadership, communication, decision making, goal setting, budgeting, and financial management. The ultimate goal was to develop a cadre of internal change agents with skills to manage and reinforce the change process begun at Peaceful Valley.

Process consultation. The consultant regularly attended meetings and helped staff members diagnose and manage the process events that occurred during those meetings. Emphasis was placed on how the problems were resolved, rather than on the content of the problems (Lambrechts, Grieten, Bouwen, & Corthouts, 2009; Schein, 1988).

Survey feedback. Central to the success of this project were the semi-annual questionnaire surveys of the total organization that took place during each of the following 4 years. In a longitudinal study of 23 organizations with more than 14,000 respondents, Bowers (1973) found that survey feedback was associated with statistically significant improvement in organizational functioning. Similarly, at Metro County, survey data were collected and analyzed, problem areas were then identified by the administrative staff, and action plans were developed to deal with problems that related to the total organization. All data were then shared with department personnel in division meetings, and specific action plans were formulated for problems that related to the separate divisions.

Third-party consultation. When two or more people were unable to resolve problems regarding either interpersonal or substantive issues, a skilled third party was asked to help resolve their differences and deal effectively with their conflict (Nugent, 2002; Walton, 1987).

Sociotechnical interventions. Cummings and Worley (2009) report that designing work so that social and technical aspects of a job work well together helps produce high levels of employee satisfaction and increases organization effectiveness. Changes in technology during the 4-year period at Metro County included the acquisition of sophisticated investigative equipment, the development of a centralized regional communications center with dispatch responsibilities for 47 agencies, the introduction of computer technology, and the development of computer models for budget formulation.

Changes in physical facilities and environment. Oldham and colleagues (Oldham & Fried, 1987; Oldham & Rotchford, 1983) found that workspace characteristics have an effect on both job satisfaction and voluntary turnover. Approximately 2 years after Peaceful Valley, the Sheriff's Department moved into a new criminal justice facility. Substantial coordination took place between the department personnel and both the architect

and the contractor to ensure that the office arrangements, traffic patterns, and other environmental factors would contribute, as much as possible, to efficiency and organizational effectiveness (Steele, 1973).

Policy formulation procedures. Procedures for formulating departmental policy were revised during the first year after Peaceful Valley, moving Metro County toward a participative decision making model (Harrison, 1985; Smith & Brannick, 1990). As a result, departmental staff could initiate a policy change at any time, provided they followed agreed-on procedures.

Coaching and counseling. The consultant met individually with the top staff and other leaders to help them gain interpersonal and management skills, learn how to give and receive feedback effectively, and explore alternative ways of addressing issues (cf., Liu & Batt, 2010).

Methods of increasing accountability. Budgetary responsibility was decentralized during the first year following Peaceful Valley. The sheriff assigned each division commander a budget and then held him responsible to stay within his allocation. Further accountability was ensured by implementing Personal Management Interviews (Boss, 1983), where superiors met regularly with subordinates to resolve problems, share information, and follow up on assignments. Except for two follow-up surveys, the consultant conducted no additional interventions after 1977.

Application of the Model of Planned Organizational Change

In summary, the OD intervention undertaken at Metro County was multifaceted and was designed to solve a complex set of problems. The model of planned organizational change (Porras, 1987; Porras & Robertson, 1992; Robertson et al., 1993) provides a theoretical framework for understanding how the OD interventions could lead to sustained improvements in organizational effectiveness.

The OD interventions addressed each of the problems constraining the four work settings identified in the planned organizational change framework (Porras & Robertson, 1992; Robertson et al., 1993). First, the OD interventions improved organizational arrangements by making the structure of the department more flexible and by sharing decision-making authority with employees. Second, the OD interventions improved social factors at Metro County by reducing interpersonal conflict, building trust between employees and managers, and eliminating barriers to communication. These efforts eliminated the hostile organizational culture and improved the flow of knowledge between groups. Third, the OD interventions improved the technology (i.e., transformation of inputs to outputs) at Metro County by expanding the scope of job responsibilities, reallocating assignments, and facilitating the flow of work. Fourth, the OD interventions initially eliminated problems with the physical setting at Metro County by reallocating office space, which facilitated cooperation between employees and reduced hostility. The top staff and other key personnel also successfully managed the transition into the new jail and department accommodations 2 years after Peaceful Valley.

As noted above, the model of planned organizational change (Porrás & Robertson, 1992; Robertson et al., 1993) identifies the organizational work setting (composed of organizational arrangements, social factors, technology, and the physical settings) as the primary determinant of sustained organizational change. The model holds that when the various components of the organizational work setting are in alignment, individual behaviors are fundamentally changed, leading to sustained improvements in the organization's effectiveness. Within this framework, we examine the long-term effects of OD interventions and attempt to explain the long-term improvement in organizational effectiveness at Metro County.

Method

Sample and Procedures

The design for this study is shown in Figure 1. Our study was based on survey and archival data collected at multiple time intervals. In addition, we collected qualitative data from peer organizations to evaluate the effectiveness of the OD interventions.

Survey data. Survey data for this study were collected from Metro County's total employee population at seven different times (see Figure 1, Part A): before the change effort began, at the 1-, 2-, 3- and 4-year-after intervals, and 10 and 29 years after. Following each of the first five data collections, the consultant conducted 30- to 60-minute interviews with approximately 30% of the Metro County employees to clarify the questionnaire data and to provide additional information about strengths and areas needing improvement. All subjects in this study filled out the questionnaires while at work, and participation was voluntary. All data were analyzed via one-way analysis of variance (ANOVA; Winer, 1991).³ Data from Comparison Group 1 were collected before, 2 years after, 10 years after, and 25 years after, and data from Comparison Group 4 (see Figure 1, Part D) were collected before and 30 years after.

Figure 1 (see Part B) shows the design for the Metro County top staff and the top administrative staff of Comparison Group 1. Data were collected from the Metro County top staff at eight different times during the 29-year period. Similar data were collected from the comparison group on six different occasions during a 25-year period.

Survey Measures

Two instruments were used to measure the effectiveness of the confrontation team-building meeting and the subsequent interventions: Likert's (1967) Profile of Organization and Performance Characteristics (Likert Profile), and Friedlander's (1968) Group Behavior Inventory. The Likert Profile used here is an 18-item questionnaire designed to measure organizational climate along six dimensions: leadership, motivation, communication, decision making, goal setting, and control processes. Possible scores on each question range from 0 to 20 and define four different typologies of organizations

Part	Groups	Pre Intervention	Immediately Following	1 Year	2 Year	3 Year	4 Year	10 Year	20 Year	25 Year	29 Year	30 Year
A	Metro County Total Population	$O_p X_c$		$O_1 X_1$	$O_2 X_2$	$O_3 X_3$	O_4	O_{10}			O_{25}	
	Comparison Group 1	O_p			O_2			O_{10}			O_{25}	
B	Metro County Top Staff	$O_p X_c$	O_0	$O_1 X_1$	$O_2 X_2$		O_4	O_{10}	O_{20}		O_{29}	
	Comparison Group 2	O_p		O_1			O_4	O_{10}	O_{20}		O_{25}	
C	Metro County Peer Evaluation	$O_p X_c$										O_{30}
	Comparison Group 3	O_p										O_{30}
D	Metro County Total Population											O_{30}
	Comparison Group 4	O_p										O_{30}
E	Metro County Staff Turnover	$O_{1971} - O_{1972} - O_{1973} X_c - O_{1974} X_1 - O_{1975} X_2 - O_{1976} X_3 - O_{1977} - O_0$										O_{2002}
	Comparison Group 5	$O_{1971} - O_{1972} - O_{1973} - O_{1974} - O_{1975} - O_{1976} - O_{1977} - O_0$										O_{2002}
F	Metro County Jail Breaks	$O_{1971} - O_{1972} - O_{1973} X_c - O_{1974} X_1 - O_{1975} X_2 - O_{1976} X_3 - O_{1977} - O_0$										O_{2002}
	Comparison Group 6	$O_{1971} - O_{1972} - O_{1973} - O_{1974} - O_{1975} - O_{1976} - O_{1977} - O_0$										O_{2002}
G	Metro County Citizen Complaints	$O_{1971} - O_{1972} - O_{1973} X_c - O_{1974} X_1 - O_{1975} X_2 - O_{1976} X_3 - O_{1977} - O_0$										O_{2002}

Figure 1. Study design summary for interventions and data collection: Survey data
 Note. OD = organization development; X_c = confrontation team-building meeting; X_1 = additional OD interventions; X_2 = additional OD interventions; X_3 = additional OD interventions; O = measurement (at various times).

*Staff turnover, jail breaks, and citizen complaints data were measured at the end of each year from 1971 to 2002. Comparison group data were available in the same years for staff turnover and jail breaks. Comparison group data were not available for citizen complaints.

(Likert, 1967, pp. 14-25): System 1—Exploitative Authoritative (scores with a range of 0-4.99), System 2—Benevolent Authoritative (5.00-9.99), System 3—Consultative (10.00-14.99), and System 4—Participative (15.00-20.00).

The Group Behavior Inventory (GBI) measures group performance and group interaction in an organizational setting. The six dimensions include group effectiveness, leader approachability, mutual influence, personal involvement and participation, intergroup trust, and worth of meetings (Friedlander, 1968). The alpha coefficients for the Likert Profile and the GBI ranged from .71 to .89. Details of the GBI’s factor definitions may be found in Friedlander’s earlier study (1966).

Leaders in the criminal justice system also answered seven questions (Peer Evaluations) designed to measure various aspects of effectiveness, including productivity, technical competence, satisfactoriness of services provided, health of organizational culture, leadership effectiveness, cooperation with other criminal justice agencies, and overall level of effectiveness. Questions used a 7-point scale on which 1 was *low* and 7 *high*. These peer evaluations were administered in 1973 and 2003.

Archival data. In addition to the survey data, we collected information about staff turnover, jailbreaks, and citizen complaints at Metro County and a control group (note that

no comparison group data were available for citizen complaints) from county archives at the end of each year between 1971 and 2002. Figure 1 (Parts E-G) graphically depicts the time intervals at which these data were measured. Staff turnover was calculated as the percentage of departmental full-time employees who had been terminated each year. Jailbreaks were the absolute number of prisoner escapes each year. Citizen complaints were the number of legitimate citizen complaints per full-time employee.

Qualitative data from peer organizations. Peer Evaluations were also collected to measure Metro County's effectiveness in 1973 ($n = 13$) and 2003 ($n = 15$). Respondents included officials in the criminal justice system who worked daily with Sheriff's Department personnel—leaders of the District Attorney's Office, the Probation Department, the local police departments, and judges (see Figure 1, Part C). Private interviews were also held with each person to explore the reasons for specific responses and to determine ongoing levels of effectiveness for Metro County and the comparison group.

Comparison groups. Five comparison groups were used in this study.⁴ Four were criminal justice agencies in Metro County, and the fifth came from a neighboring county. Comparison Groups 1 and 4 provided the total organization data for the study. Comparison Group 1 employees completed questionnaires on four different occasions: before, 2 years after, 10 years after, and 25 years after the Metro County project began. Comparison Group 4 completed questionnaires before and 30 years after. Employees in both Metro County and Comparison Groups 1 and 4 completed their questionnaires on-site during their normal workday. In almost all cases, data from the total populations of each group were collected during a 24-hour period. Comparison Group 2 included the senior administrative team of a criminal justice agency in Metro County. Comparison Group 3, the Metro City Police Department, provided turnover data for this study and also served as the frame of reference for the peer evaluations. Comparison Group 5 provided the data on average daily inmate population and prisoner escapes.

Results

We begin with the results of our analysis of survey data. Tables 1 to 4 report the results⁵ for the Metro County Sheriff's Department and Comparison Groups 1 and 4 during the 30-year period. Tables 1 and 2 show the average combined group scores for each organization on all six of the Likert Profile and GBI variables, respectively. The scores on the six Likert Profile variables were added together and then averaged for each of the data collections. The data were computed in this manner to simplify the presentation of the results to the reader; in no instance did the trend for any of the three organizations differ from the group trend reported here. The data for the individual Likert Profile and GBI subscales were also analyzed. In no cases were the individual subscale scores different from the general results shown in Tables 1 to 5.

Table 1 contains the Likert Profile scores for the three groups. Metro County reported statistically significant improvement during the first year, and continued to evidence statistically significant differences for the subsequent 28 years, as compared with the Before measures.⁶ Comparison Group 1 scores showed a statistically significant increase

Table I. Total Organization Results on the Likert Profile

Before (T _p) and 1 Year After (T ₁)						
	Mean T _p	Mean T ₁	Sum of Squares	df	F	Significance
Metro County	8.18 (n = 87)	12.90 (n = 100)	1033.745	1	163.663	.000
Before (T _p) and 2 Years After (T ₂)						
	Mean T _p	Mean T ₂	Sum of Squares	df	F	Significance
Metro County	8.18 (n = 87)	13.74 (n = 133)	1626.359	1	280.767	.000
Comparison Group 1	15.89 (n = 20)	16.55 (n = 20)	4.398	1	4.905	.033
Before (T _p) and 3 Years After (T ₃)						
	Mean T _p	Mean T ₃	Sum of Squares	df	F	Significance
Metro County	8.18 (n = 87)	13.14 (n = 147)	1344.174	1	215.958	.000
Before (T _p) and 4 Years After (T ₄)						
	Mean T _p	Mean T ₄	Sum of Squares	df	F	Significance
Metro County	8.18 (n = 87)	11.77 (n = 135)	682.354	1	94.608	.000
Before (T _p) and 10 Years After (T ₁₀)						
	Mean T _p	Mean T ₁₀	Sum of Squares	df	F	Significance
Metro County	8.18 (n = 87)	11.39 (n = 222)	622.156	1	72.175	.000
Comparison Group 1	15.89 (n = 20)	14.21 (n = 20)	27.521	1	6.166	.018
Before (T _p) and 25 Years After (T ₂₅)						
	Mean T _p	Mean T ₂₅	Sum of Squares	df	F	Significance
Comparison Organization	15.89 (n = 20)	14.58 (n = 29)	15.099	1	2.412	.130
Before (T _p) and 29 Years After (T ₂₉)						
	Mean T _p	Mean T ₂₉	Sum of Squares	df	F	Significance
Metro County	8.18 (n = 87)	11.76 (n = 231)	806.592	1	90.519	.000
Before (T _p) and 30 Years After (T ₃₀)						
	Mean T _p	Mean T ₃₀	Sum of Squares	df	F	Significance
Comparison Group 4	9.31 (n = 55)	7.96 (n = 48)	46.885	1	4.260	.042

Table 2. Total Organization Results on the Group Behavior Inventory

Before (T_p) and 1 Year After (T_1)						
	Mean T_p	Mean T_1	Sum of Squares	df	F	Significance
Metro County	2.22 ($n = 87$)	2.53 ($n = 100$)	4.581	1	76.906	.000
Before (T_p) and 2 Years After (T_2)						
	Mean T_p	Mean T_2	Sum of Squares	df	F	Significance
Metro County	2.22 ($n = 87$)	3.49 ($n = 133$)	85.139	1	1011.294	.000
Comparison Group 1	3.92 ($n = 20$)	3.85 ($n = 20$)	0.049	1	1.153	.290
Before (T_p) and 3 Years After (T_3)						
	Mean T_p	Mean T_3	Sum of Squares	df	F	Significance
Metro County	2.22 ($n = 87$)	3.52 ($n = 147$)	92.015	1	1629.198	.000
Before (T_p) and 4 Years After (T_4)						
	Mean T_p	Mean T_4	Sum of Squares	df	F	Significance
Metro County	2.22 ($n = 87$)	3.51 ($n = 135$)	87.719	1	1156.440	.000
Before (T_p) and 10 Years After (T_{10})						
	Mean T_p	Mean T_{10}	Sum of Squares	df	F	Significance
Metro County	2.22 ($n = 87$)	3.42 ($n = 222$)	87.399	1	434.366	.000
Comparison Group 1	3.92 ($n = 20$)	3.94 ($n = 20$)	0.003	1	.030	.863
Before (T_p) and 25 Years After (T_{25})						
	Mean T_p	Mean T_{25}	Sum of Squares	df	F	Significance
Comparison Group 1	3.92 ($n = 20$)	3.68 ($n = 29$)	0.614	1	1.935	.172
Before (T_p) and 29 Years After (T_{29})						
	Mean T_p	Mean T_{29}	Sum of Squares	df	F	Significance
Metro County	2.22 ($n = 87$)	3.47 ($n = 231$)	96.665	1	474.726	.000
Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Comparison Group 4	3.13 ($n = 55$)	2.93 ($n = 48$)	1.009	1	2.537	.114

Table 3. Top Staff Results on the Likert Profile

Before (T_p) and Immediately After (T_0)						
	Mean T_p	Mean T_0	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	14.99 ($n = 7$)	121.131	1	20.167	.001
Before (T_p) and 1 Year After (T_1)						
	Mean T_p	Mean T_1	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	15.48 ($n = 7$)	141.977	1	31.859	.000
Comparison Group 2	17.39 ($n = 5$)	16.86 ($n = 5$)	0.711	1	0.635	.449
Before (T_p) and 2 Years After (T_2)						
	Mean T_p	Mean T_2	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	16.34 ($n = 7$)	182.963	1	39.444	.000
Before (T_p) and 4 Years After (T_4)						
	Mean T_p	Mean T_4	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	16.07 ($n = 7$)	169.368	1	47.907	.000
Comparison Group 2	17.39 ($n = 5$)	15.01 ($n = 5$)	14.234	1	2.657	.142
Before (T_p) and 10 Years After (T_{10})						
	Mean T_p	Mean T_{10}	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	13.63 ($n = 8$)	76.067	1	14.091	.002
Comparison Group 2	17.39 ($n = 5$)	16.09 ($n = 6$)	4.639	1	2.888	.123
Before (T_p) and 20 Years After (T_{20})						
	Mean T_p	Mean T_{20}	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	14.88 ($n = 6$)	107.506	1	26.323	.000
Comparison Group 2	17.39 ($n = 5$)	15.78 ($n = 6$)	7.087	1	2.520	.147
Before (T_p) and 25 Years After (T_{25})						
	Mean T_p	Mean T_{25}	Sum of Squares	df	F	Significance
Comparison Group 2	17.39 ($n = 5$)	11.03 ($n = 7$)	76.002	1	13.343	.011
Before (T_p) and 29 Years After (T_{29})						
	Mean T_p	Mean T_{29}	Sum of Squares	df	F	Significance
Metro County Top Staff	9.11 ($n = 7$)	15.14 ($n = 5$)	105.974	1	26.648	.000

Table 4. Top Staff Results on the Group Behavior Inventory

Before (T_p) and Immediately After (T_0)						
	Mean T_p	Mean T_0	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	3.82 ($n = 7$)	3.263	1	22.033	.001
Before (T_p) and 1 Year After (T_1)						
	Mean T_p	Mean T_1	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	3.85 ($n = 7$)	3.427	1	56.284	.000
Comparison Group 2	3.77 ($n = 5$)	3.89 ($n = 5$)	0.039	1	0.531	.487
Before (T_p) and 2 Years After (T_2)						
	Mean T_p	Mean T_2	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	3.79 ($n = 7$)	3.061	1	42.173	.000
Before (T_p) and 4 Years After (T_4)						
	Mean T_p	Mean T_4	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	3.99 ($n = 7$)	4.500	1	71.738	.000
Comparison Group 2	3.77 ($n = 5$)	4.22 ($n = 5$)	0.520	1	2.634	.143
Before (T_p) and 10 Years After (T_{10})						
	Mean T_p	Mean T_{10}	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	3.55 ($n = 8$)	1.682	1	15.970	.002
Comparison Group 2	3.77 ($n = 5$)	4.15 ($n = 6$)	0.410	1	2.554	.144
Before (T_p) and 20 Years After (T_{20})						
	Mean T_p	Mean T_{20}	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	4.19 ($n = 6$)	5.719	1	26.323	.000
Comparison Group 2	3.77 ($n = 5$)	3.94 ($n = 6$)	0.082	1	0.630	.448
Before (T_p) and 25 Years After (T_{25})						
	Mean T_p	Mean T_{25}	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Comparison Group 2	3.77 ($n = 5$)	3.16 ($n = 7$)	0.913	1	3.517	.098
Before (T_p) and 29 Years After (T_{29})						
	Mean T_p	Mean T_{29}	Sum of Squares	<i>df</i>	<i>F</i>	Significance
Metro County Top Staff	2.86 ($n = 7$)	4.11 ($n = 5$)	4.544	1	44.795	.000

Table 5. Eight Matched Paired Results on the Likert Profile and Group Behavior Inventory

Likert Profile: Before (T_p) and 29 Years After (T_{29})						
	Mean T_p	Mean T_{29}	Sum of Squares	df	F	Significance
Eight matched paired staff	7.30 ($n = 8$)	14.30 ($n = 8$)	196.000	1	34.667	.000
Group Behavior Inventory: Before (T_p) and 29 Years After (T_{29})						
	Mean T_p	Mean T_{29}	Sum of Squares	df	F	Significance
Eight matched paired staff	2.86 ($n = 8$)	4.06 ($n = 8$)	5.735	1	30.018	.000

from the Before scores on the 2-years-after measure, but decreased on each of the other two administrations. Scores for Comparison Group 4 decreased between measures.

Table 2 contains the GBI results for the 29-year period. Metro County reported continuous improvement on all administrations, as compared to the Before scores, while scores for Comparison Group 1 either remained the same or decreased. Scores for Comparison Group 4 decreased between measures.⁷

Tables 3 and 4 show the results for the top administrative teams of both Metro County and Comparison Group 2. The Metro County top staff improved significantly on both measures as a result of the confrontation team-building meeting, and those improvements were generally maintained during the subsequent 29 years, whereas scores for Comparison Group 2 either stayed the same or decreased during the 25 years in which data were collected.⁸

Table 5 shows the Likert Profile and GBI matched-pair before and 29-years-after total organization scores for the eight people who were employees in the Sheriff’s Department for the entire 29-year period. The data show a significant difference between the two sets of scores, and this difference is more profound than that for the total organization.

Table 6 presents the Peer Evaluations of Metro County and Comparison Group 3. The Metro County scores increased significantly between 1973 and 2003, whereas the comparison group scores showed no statistically significant changes during the same time.

Archival Data Analysis

In addition to the survey-based GBI and Likert Profile variables, we collected data on a number of department-level outcomes to evaluate the effectiveness of the OD interventions. Figures 2, 3, and 4, respectively, show employee turnover rates, jailbreaks, and

Table 6. Peer Evaluation Scores for Metro County and the Comparison Group for a 30-Year Period, 1973-2003

Performance: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	1.77 (n = 13)	6.00 (n = 15)	124.657	1	133.335	.000
Comparison Group 3	5.31 (n = 13)	4.87 (n = 15)	1.355	1	0.870	.360
Technical Competence: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	5.23 (n = 13)	6.20 (n = 15)	6.542	1	9.093	.006
Comparison Group 3	5.00 (n = 13)	5.27 (n = 15)	0.495	1	0.274	.605
Satisfaction With Services: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	1.85 (n = 13)	5.87 (n = 15)	112.574	1	106.723	.000
Comparison Group 3	5.38 (n = 13)	4.53 (n = 15)	5.047	1	2.928	.099
Health of Organization Culture: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	1.62 (n = 13)	5.93 (n = 15)	129.847	1	140.647	.000
Comparison Group 3	4.92 (n = 13)	4.07 (n = 15)	5.108	1	2.775	.108
Leadership Effectiveness: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	2.31 (n = 13)	6.13 (n = 15)	101.926	1	45.298	.000
Comparison Group 3	4.85 (n = 13)	4.67 (n = 15)	0.224	1	0.130	.722
Cooperation With Other Criminal Justice Agencies: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	2.08 (n = 13)	6.60 (n = 15)	142.477	1	121.364	.000
Comparison Group 3	5.08 (n = 13)	4.73 (n = 15)	0.822	1	0.511	.481
Overall Level of Effectiveness: Before (T_p) and 30 Years After (T_{30})						
	Mean T_p	Mean T_{30}	Sum of Squares	df	F	Significance
Metro County Top Staff	1.92 (n = 13)	5.93 (n = 15)	112.001	1	104.537	.000
Comparison Group 3	5.23 (n = 13)	4.80 (n = 15)	1.292	1	0.915	.348

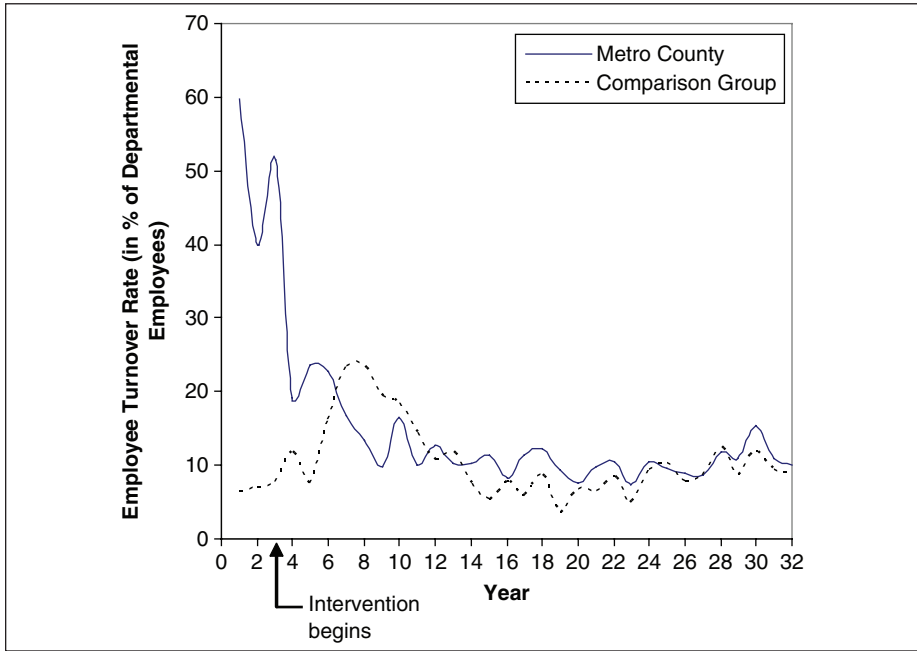


Figure 2. Employee turnover at Metro County Sheriff’s Department before and after the intervention

citizen complaints for the Metro County Sheriff’s Department over a 32-year period covering the period 1971-2002. The figures also show turnover rates and jail breaks at comparable law enforcement agencies over the same period. The major difference between Metro County and Comparison Group 3 is the exclusive custodial responsibility of the Sheriff’s Department, since its jail handles inmates and suspects from all law enforcement agencies in the county.⁹ As Figures 2 to 4 indicate, all three of these department-level outcomes decreased sharply after 1973, when the OD effort began.

First, the turnover rate in the Metro County Sheriff’s Department (see Figure 2) decreased significantly from almost 60% in 1971 to slightly less than 20% in 1974, remained near 20% for 1975-1977, and then (with two exceptions), remained below 14% for the following 25 years. In 1980 and 2000 the county offered early retirement to long-term employees. This resulted in the retirement of 9 people in 1980 and 16 people in 2000 who otherwise would have remained at Metro County. Had it not been for the early retirement offer, the turnover rates would have been 10.9% in 1980 and 10.4% in 2000.

The Comparison Group turnover rates fluctuated between 4.8% and 23.3% for the entire 29 years. Metro County employees attributed the lower turnover rate to the fact that the organization became a more enjoyable, comfortable, and prestigious place to work. This is particularly significant because Metro County personnel were paid approximately 70% as much from 1971 through 1980 and 90% as much from 1981 through 2002 as their counterparts in the Metro area.

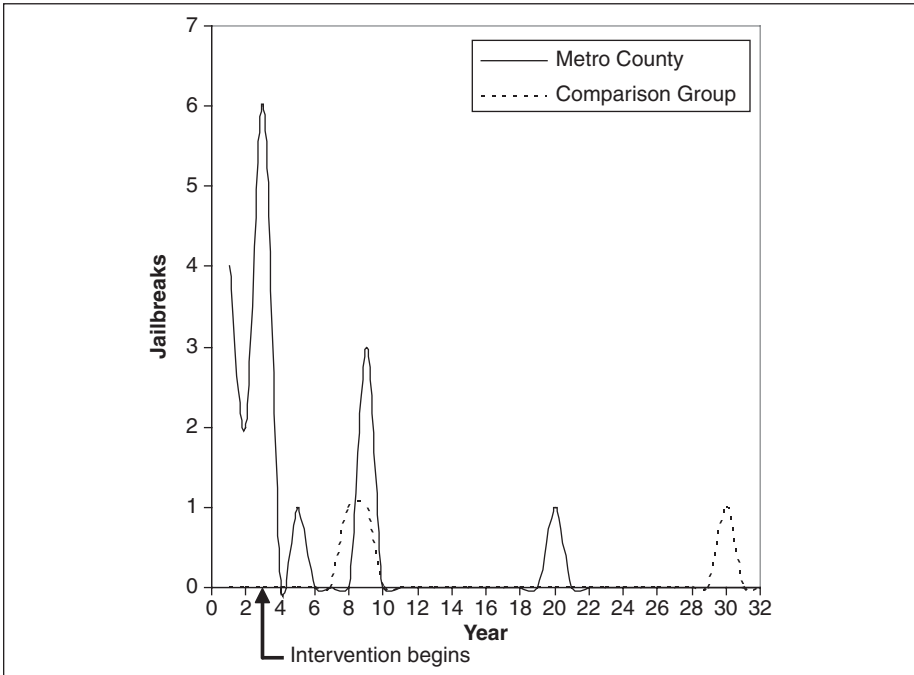


Figure 3. Jailbreaks at Metro County Sheriff's Department before and after the intervention

Second, prisoner escapes from the Metro County Jail, a division of the Sheriff's Department, drastically decreased, as shown in Figure 3—even though the average jail population increased from 24 in 1971 to a high of 537 in 2002.¹⁰ The comparison group results remained constant during the 32-year period.

Third, legitimate citizen complaints about officers, shown in Figure 4, decreased from 0.763 per employee in 1973 to a high of fewer than 0.15 for the following 29 years. Legitimate citizen complaints refers to the total number of citizen complaints, less the number of cleared cases. Cleared cases are the complaints that were found to be unfounded, the employee's actions were justified and/or in compliance with policy, or the investigation was inconclusive.

Longitudinal regression analysis. Following procedures used by Schuster et al. (1997), we tested the efficacy of the OD interventions on our objective¹¹ outcome variables using OLS time series regression analysis. Specifically, we assessed whether or not there was a significant difference in the average levels of employee turnover rates, jail breaks, and citizen complaints in the years before and after the OD interventions. We regressed each of these outcome variables on a model containing a dummy variable for the intervention and an indicator for the year. The equation for the time series analysis was as follows:

$$\text{Turnover, Jailbreaks, or Complaints} = b_0 + b_1 (\text{year}) + b_2 (\text{intervention dummy})$$

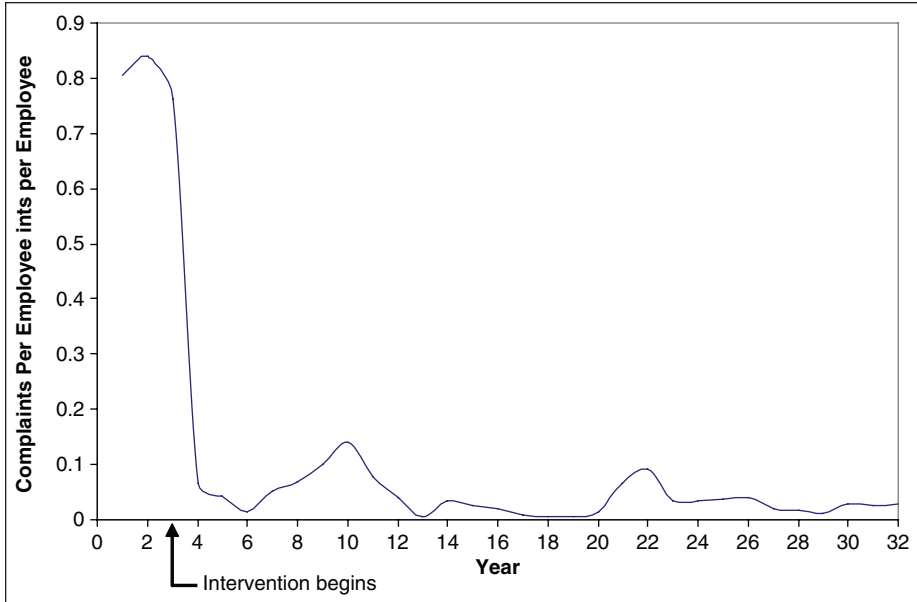


Figure 4. Citizen complaints per employee at Metro County Sheriff’s Department before and after the intervention (no comparison group available)

where:

- Time = 1 in 1971, 2 in 1972, . . . , 32 in 2002
- Intervention = 0 if Time ≤ 3; 1 if Time > 3.

We were not able to use more sophisticated time series techniques such as ARIMA models because we had fewer than the 50 observations recommended for this procedure (Cook & Campbell, 1979; Holden, Peel, & Thompson, 1990). Diagnostic tests applied to the residuals showed significant Durban Watson statistics, indicating autocorrelation in the data. To correct for this autocorrelation, we transformed the turnover, jail break, and complaints data using the Prais-Winsten method,¹² which transforms the original data into a new series that has independent disturbances (Dielman, 1996).

Table 7 shows the results of our time series analyses, with a separate panel for each outcome variable (Panel A for turnover rates, Panel B for jailbreaks, and Panel C for complaints). We ran separate regression analyses on comparison group outcomes where available (i.e., for the turnover and jailbreaks). In our analysis of the turnover rate at Metro County we found that staff turnover was negatively correlated with time, indicating a significant decrease in turnover over the 32-year period (see Table 7, Panel A). Moreover, the regression coefficient for our intervention dummy variable indicates that there was a significant difference in the average turnover rate before and after the intervention took place in 1973 ($\beta = -34.07, p < .01$). Regression analysis of

Table 7. Longitudinal Regression Results for Metro County and Comparison Groups

	Panel A		Panel B		Panel C
	Metro County Turnover	Comparison Group Turnover	Metro County Jailbreaks	Comparison Group Jailbreaks	Metro County Complaints ^a
Year	-0.29*** (0.10)	-0.19 (0.18)	-0.02* (0.01)	-0.00 (0.00)	-0.01* (.00)
Pre/post 1973 dummy	-34.07*** (3.19)	5.42 (3.35)	-3.25*** (0.39)	0.13 (0.24)	-0.73*** (0.03)
Constant	51.34*** (2.65)	8.61** (3.67)	3.84*** (0.32)	0.02 (0.20)	0.80*** (0.02)
Rho	.13	.69	-.40	.24	.38
R ²	.88	.07	.80	.01	.97
Adjusted R ²	.87	.01	.78	.00	.97
F	105.53***	1.13	58.14***	0.14	717.95***

Note. $N = 32$. Estimates are based on panel corrected standard errors using Prais–Winsten regression assuming first-order autocorrelation. Values reported are unstandardized beta coefficients. Standard errors are given in parentheses.

a. No comparison group available for this variable.

* $p < .10$. ** $p < .05$. *** $p < .01$.

the turnover rate at our comparison group (again, see Table 7, panel A) reveals neither any relationship between time and turnover nor any significant change in turnover before and after 1973, providing evidence that the reduction in turnover among Metro County staff was related to the intervention ($\beta = 5.42, p > .05$). Our analysis of the jailbreaks data produced similar results (see Table 7, panel B). We found a significant difference in jailbreaks before and after 1973 at Metro County ($\beta = -3.25, p < .01$) but no significant difference for the comparison group ($\beta = 0.13, p > .05$). Finally, as Table 7, Panel C indicates, we found that citizen complaints at Metro County were significantly lower following 1973 ($\beta = -0.73, p < .01$). These regression results are consistent with the results of our survey-based data, indicating that the OD interventions had a strong effect on organizational effectiveness over a long period of time.

Qualitative Evidence of Improved Organizational Effectiveness

In addition to the ANOVA analysis of survey data, and longitudinal regression analysis of archival data, we report qualitative evidence of improved organizational effectiveness at Metro County following the OD interventions. This additional evidence is based on historical facts relating to the department and on interview data obtained from discussions with officials at peer law enforcement agencies.

First, the strong movement toward unionization was almost unanimously defeated in a supervised secret ballot during late spring 1974. The reason for this defeat was that the purpose of the union movement—to provide a mechanism for dealing with the uncooperative administrative personnel—no longer existed. Since the department leadership was responding to the needs of the employees, the department personnel

perceived no additional need for a union. Furthermore, serious efforts toward unionization have not existed since that time. Department personnel attribute this change in employee attitudes to both the increased participation of personnel in the departmental policy-making process and the administration's improved ability to resolve problems and cooperate with employees.

Second, the perceived effectiveness of the Metro County Sheriff's Department during the first year after Peaceful Valley is evidenced by the results of the 1974 general election, in which the sheriff overwhelmingly defeated his three opponents, receiving over two-thirds of the total votes. The victory holds a special significance, as before Peaceful Valley the sheriff had decided not to seek reelection. In addition, the sheriff ran unopposed in the 1978, 1982, and 1986 general elections. When he retired in 1990, one of his captains (who had been a detective in 1973) was elected in his stead by 95% of the popular vote and was subsequently reelected in 1994 and 1998. The polls indicated that had he run for office in 2002, he would have been reelected. Because of term limits that were imposed on all county officials, he did not run for reelection in 2002.

Third, the managerial ability of department administrators substantially improved during the 29-year period. Not only did department personnel stay within their budget, but they turned back monies to the county commissioners during each of the last 28 years. In 1977, four years after Peaceful Valley, the county commissioners hired an independent auditor/consultant to evaluate the effectiveness of various county agencies. The auditor's final report for the Sheriff's Department indicated its level of technical competence and managerial ability to be not only far better than that of any other agency in the county, but one of the highest among law enforcement agencies in the state. Additional reports from state and national-level officials have consistently supported this conclusion.

Fourth, the increased credibility of the department with the county commissioners and the public played a significant role in the acquisition of additional resources during the 29-year period. The number of departmental personnel rose from 93 in 1973, the year the OD effort started, to 155 in 1977, and the annual budget increased almost 400% during the same period of time. Over the years, resources have continued to flow into the organization in a variety of different ways. For example, in 1978 the Sheriff's Department built a new jail that more than doubled its potential inmate population. It subsequently built another jail in 1990 that increased the capacity more than 10-fold.

Finally, the interpersonal behavior of the top staff significantly improved over the next decade. As we noted above, the sheriff served for 20 years before retiring. The undersheriff became a police chief in a major metropolitan city and now owns a national consulting firm. The captain of the detective bureau later became the undersheriff and is now a university professor of criminal justice. The captain of the patrol division is now a county commissioner in another community, and the division commander of the staff services division went to law school, served as an assistant district attorney for a decade, and is now a senior partner in a major law firm. The other two

participants in the Peaceful Valley team-building meeting have passed away. As of 2002, all members of the Metro County top staff had begun their careers in the Sheriff's Department and had been promoted from within. Furthermore, they were evaluated by their peers as one of the most effective law enforcement teams in the state.

Interview data. Qualitative data from interviews periodically conducted with leaders of other Metro County agencies provide additional insight into the effectiveness of the OD interventions. For example, shortly after he left office, the district attorney, whose term in office spanned 1973–2002, evaluated Metro County's level of effectiveness:

In 1973, the Sheriff's Department was on the verge of "going south" on us. When they first started the OD project, I was more than a little bit skeptical. It sounded like a gimmick to me, a passing fad. But I saw the results on a first-hand basis. They turned the organization completely around, and then they kept it that way. For years [both sheriffs] have had the ability to hire and keep very good people, and that only happens in healthy organizations. Over and over again, when I got difficult cases, I called on their people for help, and they always delivered—every time. The department became a magnet and attracted some of the best cops in the state. My deputies knew that it was a great department; and we were in a better position than anybody to know that, because the success of our department depended on the quality of material the cops brought to us. They work hard. They are creative. They are honest. They are smart, and they tell us the truth. It is a great department.

Similar comments were made by the other Metro County criminal justice leaders. For example, the assistant district attorney said,

I joined the DA's office in 1972, so I watched the demise of the Sheriff's Department in the early 70s and then witnessed the turnaround between 1973 and 1977. It amazed me to see the changes that took place. Before Peaceful Valley they were the joke of the county. By 1976 they were one of the best in the state. It remains a highly professional organization, and the people have great depth in investigative knowledge. The staff are well educated, highly trained, and not afraid to step outside the box in using their heads on investigations. And the place is healthy enough that people can use their talents and skills. As an observer of the organization for 33 years, I can definitely see the long-term impact of what took place after Peaceful Valley. In 1973, I would have given them a D-. Since 1976 I'd say that the Department is an A- organization; and the only reason I give them a minus is that nobody in this field deserves an A, not even the FBI.

Comments¹³ from 10 other Metro County criminal justice officials corroborate the empirical findings reported here. By all accounts, area criminal justice leaders acknowledged that the OD interventions implemented at Metro County had long-lasting effects.

Discussion

Because of an overreliance on cross-sectional designs, OD research has been largely unable to empirically substantiate sustained positive effects of organizational change interventions (Pettigrew et al., 2001). In the absence of follow-up data drawn at repeated intervals before and several years after the intervention took place, it is difficult to rule out the possibility that effectiveness indicators return to the status quo shortly following the change effort (Woodman et al., 2008). Our quasi-experimental design supported by qualitative data enabled this study to address that problem and provide evidence that OD interventions can generate positive, lasting changes in an organization.

This study also provides additional support for conceptual models of organizational change. Our results are consistent with Porras and colleagues' model of planned organizational change (Porras, 1987; Porras & Robertson, 1992; Robertson et al., 1993), which asserts that organizations comprise four interrelated work settings or subsystems (organizational arrangements, social factors, technological factors, and physical facilities). Our findings support this model's predictions that when inconsistencies among these structures are removed through OD initiatives, employee attitudes, and behaviors toward the organization are improved.

Keys to Long-Term Change at Metro County

Accomplishments during the first 4 years indicate that the effort was successful in resolving problems within the department. Given the length of time involved and the complexity of the design, it is virtually impossible to isolate the impact of the various interventions during the 4-year period. However, a number of significant factors stand out as contributing to the success of the effort, and these variables are consistent with the expanding longitudinal research on variables essential to successful OD efforts (see Boss, Goodman, McConkie, & Golembiewski, 2006).

First, the sheriff was committed to the change effort, and the importance of that commitment cannot be overemphasized (Boss & Golembiewski, 1995). Never in the entire 4-year period was there any doubt about either his support for the program or his expectations of his staff and employees; and that commitment continued until he retired in 1990. His successor also had the same level of commitment to fostering a healthy organization climate.

Second, personnel in the organization were experiencing a great deal of tension and pain before Peaceful Valley. As a result, there was a felt need for change among those who were in positions of power. And when the opportunity for appropriate changes became available, those at the top of the power structure were highly receptive (Dalton, 1976).

Third, the sheriff and the consultant developed a clear psychological contract (Boss, 1985) regarding all aspects of the client–consultant relationship before the consultant's entry into the system. This included a discussion and subsequent agreement regarding (a) the client's expectations of the OD effort and the consultant, and the consultant's

expectations of the client; (b) the definition of the problems (as the sheriff perceived them); (c) the various phases of the OD effort; and (d) the parameters within which the consultant would work. This contracting process continued on a regular basis throughout the entire project.

Fourth, the change effort began with the top-level administrators (Boss & Golembiewski, 1995), who had the power to manage the change process and who, for the most part, continued to lead the organization for the next 17 years. Once problems were resolved with the top staff, issues at the next organizational level were systematically addressed. Thus, change efforts at the lower levels were assured full support by those in more powerful positions in the organization.

Fifth, the sheriff and consultant took steps to limit unrealistic expectations about the potential success of the project. At the outset, personnel understood that the OD project would be a long-range effort and that it would require a substantial investment of time and energy by all employees and supervisors, if it was to succeed. Therefore, the unrealistic expectations, anxiety, frustration, and tension associated with most change efforts were avoided.

Sixth, the technical competence of the top staff was beyond question. They were considered by peers inside and outside the department, to be some of the most technically competent officers in the state. For example, cases the undersheriff solved have been used as case studies in many local and national law enforcement training academies. Thus, top staff members' technical ability earned them the trust of their employees, in spite of their inability as managers. This is particularly important, since trust is the most critical variable among police officers. When they "put their lives in other people's hands," as they often do, the technical competence of their colleagues is absolutely essential.

Seventh, the Peaceful Valley meeting was the single most critical incident in the entire OD effort.¹⁴ It had an immediate rippling effect throughout the department. For example, the top staff insisted that all formal titles be dropped (except in public, on formal occasions) and that they be called by their first names. They also began to deal more effectively with each other and with other department personnel. Since all the interpersonal issues among the top staff had been addressed at Peaceful Valley, energies were directed toward resolving problems in the organization, rather than toward fighting each other. Finally, the degree to which they sought input from each other and other employees, and then used that input to develop a detailed action plan of OD interventions to be implemented during the next 8 years, provided evidence of their commitment to resolve the numerous problems that had plagued the organization since the sheriff first took office.

Eighth, implicit in all interventions dealing with interpersonal behavior was the development of support systems to help foster the desired changes. Individuals could commit to changing those aspects of their behavior that they and others perceived to be dysfunctional because emphasis was placed on creating a supportive and trusting environment in which skills could be developed, mistakes could be made, and cooperation among team members could take place. Staff members were

mutually encouraging and supportive as each learned to function more effectively in the work environment.

Ninth, mechanisms were developed for holding personnel accountable. A few months after Peaceful Valley, Personal Management Interviews were instituted within the department. Explained in detail elsewhere (Boss, 1983), these regular meetings between the supervisor and immediate subordinates provided opportunities for sharing information, training, dealing with interpersonal issues, and accountability. Written notes were kept of each meeting, and all action items were reviewed during the subsequent meeting to ensure their completion.

Finally, the sheriff agreed at the outset of the project to invest departmental resources in training internal people to assume responsibility for the change effort. Indeed, this ongoing educational intervention was a central part of the action plan the sheriff and his team developed after they returned from Peaceful Valley. Members of the top staff and other key people in the organization attended training conferences, enrolled in graduate-level classes in organization development and consultation skills, and were exposed to theories of organizational change, group dynamics, and organizational behavior. The result was the development of six highly competent internal change agents within the first 3 years of the project. Dependence on the consultant decreased to the point where his regular involvement with the top staff virtually stopped after the first 2 years and completely ceased throughout the organization by the end of the fourth year.

Study Limitations

The above evidence suggests that the 4-year OD project was successful and that the level of organizational effectiveness was sustained for the subsequent 26 years. However, a number of factors should be considered in evaluating these results.

First, perhaps the greatest problem confronting any intervention study is the difficult task of ruling out alternative explanations for the observed results. Organization development initiatives take place within a multilayered organizational context (Pettigrew et al., 2001). Moreover, organizational outcomes are always multi-determined, and any set of OD interventions—or any other improvement effort—is ultimately only a piece of the antecedents, actors, and situations that bring the organization to any particular point (Woodman et al., 2008). Thus it is extremely difficult, if not impossible, to demonstrate that a set of OD interventions is the *sole cause* of improvements in organizational effectiveness. This challenge is even greater when researchers attempt to evaluate the *long-term* effects of an intervention. As Cummings and Worley (2009) note, “The longer the time period of the change program, the greater are the chances that other factors, such as technology improvements, will emerge to affect the results” (p. 198). Given the 30-year time frame of this study, there are alternative explanations that call into question the attribution of the outcomes observed in 2002 are attributable to interventions implemented in 1973.

For example, it is conceivable that changes in the political or cultural environment produced the positive Likert Profile and GBI results that took place in Metro County. However, if that had been the case, then one could reasonably expect similar changes in the comparison groups, given that they were located in the same geographical, political, and cultural area. Because only the experimental groups evidenced statistically significant changes during the period years covered in this study, the likelihood that something happened in the community to cause the changes reported here appears slim. Similarly, the periodic effect plagues all longitudinal research. Since the data were collected at different times in history, significant events could have influenced behavior and attitudes, which could have materially affected the results reported here. For example, one could argue that after September 11, 2001, U.S. citizens became more cooperative and nationalistic. If that were the case, measures taken on October 1, 2000 and October 1, 2001 might have yielded very different responses, when in reality nothing had changed in the organization under study. Given the constructs of the Likert Profile and GBI, this is not a likely conclusion.

Although there are many potential alternative explanations for the effects observed in this study, it has a number of characteristics that strengthen its internal validity. First, this study used repeated measures of outcomes before and at several intervals of time up to 26 years after the OD intervention (Woodman et al., 2008). Second, the data on the control groups suggest that the effects were because of the OD interventions and not other factors (Cook & Campbell, 1979; Cummings & Worley, 2009). Finally, this study reflects a “combined paradigm” (Woodman et al., 2008) approach, as our quantitative results were substantiated by our qualitative research findings. A true experimental design would have maximized the internal validity of our findings (Woodman et al., 2008), but requires random assignment to treatment groups. As is the case in most studies of OD initiatives, random assignment was not possible in this study for practical and ethical reasons (Bullock & Svyantek, 1987; Taris, 2000).

Second, the individual Before measures on the Likert Profile and the GBI for the three organizations and the two administrative staffs in this study were different, indicating that the groups were not in equivalent positions before the team-building sessions. How much these differences influenced the results is difficult to determine empirically.

Third, the changes in Metro County came about as a result of a broad range of OD interventions. Thus, the results of this study may be peculiar to that design only. If another design had been used, the results might have differed substantially from those reported. However, as Porras and Robertson (1992) note, sustained organization change is not likely to occur unless change interventions span the various subsystems of the organization. Therefore, multidimensional OD interventions that are tailored to alleviate problems in each organizational subsystem are often necessary to produce sustained changes.

Fourth, the positive results shown here may be because of the skill, personality, or style of the consultant, rather than the alleged benefits of OD interventions (Woodman

et al., 2008). Indeed, the consultant's impact cannot be completely ruled out as a significant factor in determining the success of this project. Certainly the argument would be stronger if a variety of consultants had been involved. However, researchers have noted that the use of multiple change agents in an OD intervention can also be problematic as their different paradigms, terminology and skills may result in an inconsistent application of the intervention (Woodman et. al, 2008).

Fifth, our study was based on a single organization. The absence of longitudinal data from multiple organizations limits the generalizability of the findings.

Sixth, the results reported in Tables 1 to 4 are plagued by the common problems associated with self-report methods to measure change before and after interventions (Campbell & Stanley, 1966). With self-report measures, it is difficult to rule out the possibility that observed changes took place because pre- and posttest survey instruments were incompatible (Bedeian, Armenakis, & Gibson, 1980). For example, observed changes may have occurred because respondents recalibrated the measurement scale (beta change), or because respondents redefined their perceptions of the construct being measured (gamma change) between assessments (Golembiewski, Billingsley, & Yeager, 1976). Unfortunately, we did not have the opportunity to collect "then" data or "ideal conditions" data that would have enabled us to empirically assess the degree of beta and gamma change in the measures using established techniques (Armenakis, 1988; Bedeian et al., 1980; Terborg, Howard, & Maxwell, 1980; Thompson & Hunt, 1996). We acknowledge that beta and gamma changes are possible alternative explanations for our results. However, these alternative explanations are unlikely for two reasons. First, both self-report measures used to assess employee attitudes, namely the Likert Profile and GBI instruments, were psychometrically sound, with high reliability and validity, limiting the likelihood of beta and gamma changes (Lindell & Drexler, 1979). Second, our analysis was not limited to self-report measures, but included objective measures of turnover, prisoner escapes, and citizen complaints that are not vulnerable to beta and gamma changes. If the observed changes at Metro County were merely measurement artifacts, it is unlikely that we would have seen significant results with the objectively measured dependent variables.

Seventh, the composition of respondents at Metro County changed significantly over time, and this poses a real problem in defending the results of the analyses. Since the respondents differed between the surveys, there is no way to completely disentangle whether the treatment caused the results or whether the change in respondents caused the results (Cook & Campbell, 1979). In order to address this concern, Cook and Campbell suggest running the results with the "pure" sample of employees who did not change to see how the results differ from the analysis with the broader sample. We performed this analysis for the eight people who were present at T_1 and T_{29} , and their results are shown in Table 5. In each case the T_1 scores were lower and the T_{29} scores were higher on the Likert Profile and the GBI than the average scores for the total organization, but the direction of change was the same—a finding that supports the notion that organizational improvement took place between measures. Our primary rationale for using the whole sample was that we needed the perspective of all

respondents (and not just “long-timers”) to get an accurate profile of the organizational culture as it unfolded over the evaluation period.

We acknowledge that employee churn (happy employees replacing unhappy employees) is a possibility, but argue that it is an unlikely explanation for the consistent, overall pattern of our results across survey and objective outcomes. If it were, we would have likely seen similar responses in the comparison groups.

Eighth, the changes in technology and physical facilities could have had an impact on the reported outcomes over and above those of the OD interventions. However, it is important to note that each of our comparison groups experienced similar changes in facilities and technology during the period covered by our study. The comparison groups in Metro County moved into the new criminal justice center at the same time, worked together in the same facility, used the same physical facilities, took calls from the same dispatch center, and had access to the same technology for most of the 30 years covered in this study. Had technology and physical facilities been pivotal in changing the organization culture in Metro County, one could reasonably expect comparable changes in the comparison groups. However, the data suggest no such changes.

Ninth, in describing this study, we are treating the “OD intervention” in its totality as we describe the independent variables in our analysis and arguments. This is a version of the “multiple treatment interference” problem identified by Campbell & Stanley (1966) and Cook and Campbell (1979), wherein they describe the confounding effects of one intervention may well be caused by previous treatments. This means, of course, that we cannot draw any detailed conclusions about specific parts of the overall intervention. For example, we do not know specifically what role team building, confrontation meetings, management training, process consultation, etc. played in the overall efficacy of the broader OD intervention.

Tenth, at a broader level, it may be that the results reported here actually suggest spurious relationships, and the authors take credit for some improvements, based on significant differences between 1973 and measurements at later times, for which other explanations are not convincingly ruled out. One could also argue that it is counterintuitive to assume that a 4-year project would have an impact for 26 additional years. Clearly, there is no precedent for this assertion anywhere in the organizational literature. If the organization had improved during the 4-year period and then regressed to the preintervention level, then the enduring impact of OD would be suspect. However, this did not happen. Turnover, prisoner escape, and officer complaint data showed drastic improvement during the 4-year OD project and that improvement was maintained through 2002. In addition, as noted earlier, numerous statements from Metro County’s peers in the criminal justice system confirmed that significant changes took place during the 30-year period. When pushed to account for these changes, the nearly universal response among peer criminal justice leaders was to attribute them to the set of interventions that took place between 1973 and 1977. In short, as an attorney would say, the records speak for themselves.

It is also highly unusual to have such a stable employee population, particularly at the leadership level, for almost three decades. Indeed, one could argue that this

characteristic alone would discredit any claims that the OD interventions caused the changes described above. In today's society, it is extremely atypical for any workgroup to stay together that long. However, in Metro County, at the same time the first sheriff (who served for 20 years) and the second sheriff (who served for 12 years) were in office, the district attorney served for 24 years, the chief probation officer for 26 years, and the two chiefs of the University Police Department for 26 and 20 years, respectively—all in the same county. Furthermore, the average tenure of a sheriff in the United States is approximately 20 years.

By way of reminder, before the outset of the OD project, the Sheriff's Department was anything but stable. The turnover rate in the organization fluctuated between 40 and 60 percent. The five division commanders intended to resign, the sheriff had decided not to run for reelection, and the unionization of employees appeared certain. Once the top staff returned from Peaceful Valley and began to address the problems facing the department, the environment significantly improved, to the point that people no longer wanted to leave. Indeed, interviews with Metro County employees provide evidence that the stability in the organization resulted from the improvement, and not the other way around.

Conclusion

The results presented above are subject, of course, to the usual cautionary notes: One can never be completely sure that one's findings, especially in human subject research, have not been affected by conditions unique to the participants. Any intervention technique should be carefully evaluated every time it is used, and additional evaluation data are needed on the longitudinal impact of OD interventions. Indeed, the results reported here raise a number of research questions—such as the long-term impact of OD interventions in organizations that have multiple leaders (rather than only two), in organizations in both the public and private sectors, as well as various industries, and in organizations of different sizes, to name a few. Still, we can be reasonably confident that the interventions described here can have a positive, long-term impact on various aspects of organizational effectiveness. The participants in and observers of this project have repeatedly confirmed, over substantial periods of time, that OD interventions can help employees maintain a clear focus on their goals, confront and resolve interpersonal problems in a proactive, preventive way, and make significant organizational changes without sacrificing participatory management or interpersonal trust.

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Notes

1. Metro County is a disguised name to ensure anonymity.
2. For a more extensive treatment of the underlying problems at Metro County, see Boss (1979).
3. All data in this study were analyzed by a researcher not involved in any consultant activities.
4. We used five comparison groups because, unfortunately, we did not have access to any single organization that was in a position to offer us comparison data on all of the same outcome variables over the 30-year time period. This study takes place in a county sheriff's department, and there is only one such organization in each county. Therefore, we had to choose between going to a county sheriff's department in another geographical area and getting our comparison data from other criminal justice agencies in the same city. We chose the latter because of their similarities to the quasi-experimental group in size, culture, geography, and type of work. All of these agencies are located in the same city, work under the same roof in a large criminal justice center, use the same technical facilities, take calls from the same dispatch center, do similar kinds of work, and have similar employee populations that interact with one another regularly. Precisely because they had so much in common, we chose to err on the side of providing more, rather than fewer comparison groups.

Please note that we obtained survey data from two comparison groups: Groups 1 and 4. Since the Before data from Comparison Group 1 were significantly more positive than those for Metro County, in choosing Comparison Group 4 we selected an organization whose Before data more closely resembled those from the experimental group. Because neither of these comparison groups—one on a par with Metro County, and one significantly healthier—showed any improvement between the Before and After measures, we believe that the additional data further strengthen the case that the improvement in Metro County did not take place by happenstance.

5. The authors understand that the data reported in Tables 1 to 4 may appear overwhelming and could well be collapsed. An alternative way to present the results would be to use a graphical format. Given the unique nature of this longitudinal study, the authors chose to show the statistical differences between the baseline measures (O_p) and each of the subsequent measures.
6. We believe that the preintervention (T_p) results reported here understate the seriousness of the problems and, therefore, only approximate the degenerative climate that existed in Metro County. The overwhelming majority of the postsurvey interviewees admitted that they had inflated their survey scores because of distrust of the process and the fear that what they reported would not remain confidential and result in disciplinary actions and

possible termination. Had honest perceptions been collected and reported, the department's Before scores would likely have been lower.

7. Similar scores are reported for trust for leaders, trust for colleagues, group members' effectiveness as a team, honest communication, comfort discussing personal problems, and comfort discussing organizational problems. In all cases, Metro County reported improvement during the first year and sustained improvement during the subsequent 28 years, as compared to the Before scores, while scores for Comparison Groups 1 and 4 either remained the same (in that no statistically significant improvement took place) or decreased during the time between the first and last data collections.
8. Please note that for Metro County, the Likert Profile dramatically decreases between T_3 and T_4 and then levels off. For the top staff, this change occurs between T_4 and T_{10} . We have no clear explanation for these results at the organizational level, particularly given that the GBI results remained constant between T_3 and T_4 .

One explanation for the changes in Likert Profile and GBI scores for the top staff between T_4 and T_{10} could be that six of the eight members of the group were relatively new to the leadership team and had neither participated, as a team, in the Peaceful Valley team-building meeting nor in the subsequent interventions that took place between T_p and T_4 . Four of the six had held staff positions in the department at the time of the Peaceful Valley meeting; the remaining two joined the organization at T_8 . However, the focus of our study is on the relationships between T_p and subsequent measures, and each of those differences is statistically significant.

9. State law requires that each county with a population more than 2,000 maintains a jail. The jail in this county is housed in the Metro County Sheriff's Department. Historically, the Jail Division typically employs about one third of Metro County's employees and makes up approximately 40% of the budget. Since Metro County is charged with the responsibility of providing a safe and secure environment for those being confined, an important measure of organizational effectiveness is the success of the incarceration process.
10. The three escapes in 1979 resulted from the fact that a brother of an escapee had worked on the ventilation system of the new jail when it was constructed in 1975 and had given his sibling information about a weakness in the system. As a result, he and two fellow-inmates escaped. Two were caught within two blocks of the jail. The third fled to a small southern community and was apprehended when the mayor there did a background check on him after he got engaged to the mayor's daughter. The person who escaped in 1990 was apprehended within 5 minutes.
11. We could not use time series regression analysis to test the impact of the intervention on our survey-based variables because of sample size restrictions.
12. We used the "prais" command in STATA to execute this transformation.
13. For example, the second sheriff in this study said,

I came on board shortly after (the first sheriff) took office, so I saw the department deteriorate, participated in the turnaround as a patrol officer and a detective, and then watched us succeed for the next quarter of a century. When I took office in 1990 as the sheriff, I tried to continue what (the first sheriff) had built. It has been a great place to work, and we never could have accomplished what we have as a department without

the change project that took place in the 1970s. That provided the foundation for what we are today. We just continued to apply what we learned during those early years. It pays to listen to your people and, at the same time, keep your standards high. I would never go so far as to say that the OD project changed the department forever, because we have done a lot of good things since that time to build upon what we learned and to maintain what (the first sheriff) accomplished. But it is clear to me that we could never have accomplished what we have without the foundation that was laid for us and what we learned from it.

14. Observers may understandably find it hard to believe that a sheriff and undersheriff, who were authoritarian and arbitrary, changed their behaviors so rapidly after a 6-day confrontation team building meeting. Quite frankly, we acknowledge that it is impossible to know all of the reasons for such changes in their behavior. The available evidence suggests that—in addition to the effects of the intervention itself, which were extremely painful for both the sheriff and the undersheriff—the rapid behavior changes observed in the sheriff and undersheriff reflected their intellectual capabilities, the strength of their interpersonal relationship, and their commitment to help one another succeed. They clearly had the intellectual capital to resolve problems; one of the cases the undersheriff solved, when he was a detective in the Metro City Police Department, was used for years as a case study in the FBI Academy. Furthermore, the two had been close friends since high school.

There was also an element of personal pride. They knew they were the laughing stock of the community, and before Peaceful Valley they saw no other alternative than to give up. Hence the sheriff's decision not to run for reelection after his first term. At the end of the Peaceful Valley meeting the sheriff, in effect, said the following:

When I ran for election, I promised the citizens [of this county] that I would turn this agency into a top-flight organization. I spent the last three years of my life trying to do that, and I failed miserably . . . Now that I have the support [of the top staff], I am convinced that we can make this happen. I want the people in this county to know that they can trust me, and that I will keep my word.

In addition, all of the members of the senior staff publicly committed to help one another. They clearly understood that none of them were faultless victims. Each had contributed to the mess in which the group members found themselves, and each put plans in place to increase his effectiveness. When they made mistakes (which happened frequently at first), their colleagues held them accountable, provided support and encouragement, and fostered a safe environment that helped each person respond positively to constructive feedback.

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