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EFFECT OF SMALL GROUP INCENTIVES ON SALES
PRODUCTIVITY IN TWO RETAIL
SHOPS: A CASE STUDY

THESIS

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To meet global competition many companies have reorganized work process systems, eliminated management levels, formed employee work groups and implemented variable compensation systems. This study investigated the effect of group incentives on individual sales performance in two specialty shops located in a large metropolitan hotel. Two questions were addressed: What effect would adding a group bonus plan have on individual employee's sales performance who had previously received hourly wages in one shop; and, what effect would changing an individual incentive plan to a group plan have on the individual employee's sales performance in the other shop.

In one shop 5 of 7 employees' productivity increased; in the other, 1 of 3 subjects' productivity increased. Contingencies in both shops are analyzed and suggestions offered for future research.

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INTRODUCTION

In 1983, following a decade of dismal economic reports (i.e., rising unemployment, stagnant productivity and decreasing market share) the White House assembled leaders from industry, labor, government, and academia to analyze the U.S. productivity problems and to make recommendations for solutions to these problems facing American business. According to O'Dell (1987) one recommendation was that organizations use their reward systems (e.g., compensation, benefits, safe and comfortable working conditions, recognition) as incentives to increase productivity.

In 1976, The American Productivity Center conducted a survey to determine how organizations were managing their reward systems to improve productivity. Of the 1598 respondents, 75% were already using or planning to adopt new, non-traditional reward systems that would: 1) link pay to performance, quality and productivity, 2) decrease fixed labor costs, 3) increase employee commitment and involvement, and 4) increase teamwork. Further, the survey revealed that goods-producing companies and those pressured by competition were more likely to convert from traditional pay plans (e.g., fixed wages, salaries, merit increases) to non-traditional systems (O'Dell, 1986).

Using pay to motivate work behavior is not a new concept in the work place. Peach and Wren (1992) traced the use of incentives from 604 B. C. to 1950, citing numerous examples of individual and group incentive pay plans. Individual incentives

such as piece-work and commission pay have been used by employers to improve the link between performance and pay.

Individual Incentives. By contrast, skill-based pay or pay-for-knowledge incentive systems are relatively new forms of compensation plans. Under a skill-based system, employees are paid for skills that they can perform rather than by job title or what they know about the job. Ideally, employees paid for skills become proficient in many of the skills in the work area and within the company, thus increasing administrative flexibility and decreasing fixed labor costs (Ledford, 1991). On the other hand, pay-for-knowledge compensates employees for what they know about the job they are to perform (e.g., information on safety regulations, company services, product knowledge). To determine employee baseline knowledge, employers administer tests. Subsequent testing is then used to measure employee progress and to promote and increase employee pay. Federal Express reported implementing a pay-for-knowledge system in 1986. They attributed their success with this program as one reason for winning the Malcolm Baldrige National Quality Award in 1990 (Wilson, 1991).

Individual incentives can be particularly powerful because they provide the most direct connection between performance and pay (Lawler, 1987). Laboratory studies (Farr, 1976; Frisch & Dickinson, 1990; Terbourg & Miller, 1978) have demonstrated the efficacy of individual monetary incentives relative to hourly wages. In a small machine shop, Gaetani, Hoxeng, and Austin (1985) observed a dramatic increase in employee performances when pay conditions changed from hourly wages

to piece-work rates. Although there are proven advantages to individual incentives there are also some problems associated with them.

Individualized incentive systems are often complicated and costly to develop because: 1) employees' work behavior must be measured, 2) standards for each job must be developed, and 3) established rates and incentives must be monitored to accommodate technological changes and new products (Lawler, 1987; Patten, 1977; Stoneman & Dickinson, 1989). Individualized incentive programs are expensive to administer due to continuing cost of estimating wages relative to the quantity, quality, and the type of work completed during a particular time period (Lawler, 1987).

Furthermore, employees on individual incentive systems may exhibit counter-productive behaviors. For instance, when a company is setting individual standards, employees might work slower and/or hide new work methods or procedures to maximize gains. In addition, employees may compete with co-workers for resources or sabotage their work efforts (Lawler, 1987).

Group Incentives. Profit-sharing and small group plans are the most common types of group incentives. These plans distribute financial rewards based on the performance of the group. The size of the group may vary from the whole organization to designated divisions or departments within the organization. Frequency of payments, amount of employee involvement, calculation of formulas and degree of management participation also vary with group incentive plans (O'Dell, 1987).

Organizations with profit-sharing plans distribute a portion of net profits to employees annually, and payments to employees generally range from 10-15% of the profit pool (Patten, 1977). Many companies implemented profit-sharing plans because they believed such plans would increase interactions between management and employees and ultimately improve employee productivity. But, according to Doyle (1983) many employees and managers consider profit sharing a fringe benefit rather than a reliable measure of work performance or improvement.

Gainsharing plans represent another type of group incentive system. Although gainsharing plans differ from one another in many aspects (e.g., inclusion of employees, formula, computation of bonus, frequency of payment), they also share many common characteristics. Unlike profit-sharing plans, gainsharing increases the contingency between performance and pay, suggesting a close link between gainsharing and operant principles. All gainsharing plans distribute bonuses more frequently (e.g., weekly, monthly, or quarterly) than do profit-sharing plans, and many report increased employee suggestions and management participation (Doherty, Nord, & McAdams, 1989).

Gainsharing bonuses are accrued when the groups' performance results in savings and/or increased revenues for the company; bonuses are estimated by a predetermined formula that varies with each plan. Scanlon Plan bonuses, for instance, are accrued when labor costs decrease below baseline levels and a savings has been realized. These reduced costs then reduce the overall cost of goods sold, increasing profit margins within the company. All other factors being equal, improvements in

productivity (i.e., decreased labor costs) under a Scanlon Plan generate a surplus or bonus pool. The distribution of the pool, also, varies with each plan. For example, Scanlon Plans distribute 75% of gains to employees and 25% to the company, while Improshare plans split 50%-50% (Gowen, 1991).

From 1980 to 1985 more organizations implemented non-traditional pay plans than had done so over the previous two decades. In 1986, 23% of American organizations reported using gainsharing plans (Perry, 1988), and 73% of those plans had been implemented after 1980. The use of another non-traditional pay plan, small group incentives, had almost equaled the growth of gainsharing plans over the past decade. Gainsharing plans incorporate whole sections or departments of an organization, but small-group incentives target small groups of employees within departments or units of corporation, and, thus, bridge the gap between individual incentives and gainsharing (O'Dell, 1987).

Small-group incentives are implemented with groups, teams, units, or departments of an organization. Similar to organization-wide plans, gains and/or savings accrued under small group incentive plans are determined by a preset formula. According to Abernathy (1990), these savings are not based on net gains to the company as are gainsharing plans. Under small group plans, distribution of the bonus is restricted to employees in the designated unit or group. This bonus is made contingent on group goals. Thus, successful small group incentive plans depend on cooperative interaction among individuals comprising the group. This is in direct

contrast to gainsharing plans that depend on strong interdependence between groups within the organization (Nickel & O'Neal, 1990).

O'Dell (1987) pointed out that many American organizations, particularly those in goods-producing industries (e.g., manufacturing) have adopted non-traditional incentive plans. This trend has not been as widespread in the service sector, although there are service industries that would benefit from innovative incentive systems. Samiec (1990) reported that retailing, while a major contributor to the national economy, has been responsible for the productivity decline in the U. S. during the past decade. Since 1982, net profit margins for the industry have only increased from 2.6% to 3.3% and are not expected to increase during the next decade. In recent years, the success of Nordstrom's (a department store chain) commissioned sales force and increased buy-out pressure have prompted some large retailers to switch employees from hourly wages to commission sales (Colletti & Murray, 1990). Apparently, retailers believed that commissioned sales systems would improve productivity, attract better salespeople, enhance customer service, and decrease fixed labor costs (i.e., wages and salaries). Although commissioned sales decrease fixed labor costs, Smarr (1989) indicated that there was little empirical evidence to substantiate claims that commissioned salespeople increase their productivity or provide better customer service because of the way they are paid.

Currently, retailers are opting for individual incentives as a solution to financial problems. But, as previously noted, Colletti and Murray (1990) warned that individual incentives may also produce negative side effects. Salespeople may pressure

customers to over buy, ignore customers interested in inexpensive items, and compete with or sabotage co-workers. To avoid these negative side effects retailers might consider group incentives, but little research evidence exists indicating that group incentives are as effective in improving employee productivity as individual incentives, especially in the retail setting.

Group Incentive Laboratory Research Studies. Laboratory studies comparing effectiveness of individual and group incentives on performance demonstrated no appreciable difference between the two. Farr (1976) compared group and individual pay plans across four pay conditions: 1) hourly pay, 2) individual incentives (i.e., piece-work rates), 3) group incentives-equal distribution, and 4) group incentives-differential distribution. Pay in the equal distribution group was divided equally among the members. Money was made contingent on performance in the differential distribution group: the highest performer receiving one-half of the pool, the second highest performer, one-third, and the lowest, the last third. Groups receiving incentive pay increased their rate and out-performed those receiving hourly pay. The results of this study suggested that group incentives may be as effective as individual incentives while avoiding the problems associated with individual incentives.

London and Oldham (1977) studied the effects of group incentives versus individual incentives in a laboratory setting. For three group incentive conditions rates of pay varied according to the high, average and low performers in each group. There were two individual incentive conditions: piece-work and fixed wages. Subjects paid

piece-work rates and subjects in the high performance group produced the highest performance rates. The results of this study suggested that if a group incentive plan is well-designed, it can be as effective as an individual incentive plan.

In a simulated work setting Stoneman and Dickinson (1989) compared individual performances of subjects receiving either individual or group incentives. In the first condition, subjects were paid a base wage plus piece-work for an assembly task. They were guaranteed a base wage for attending the 45-minute sessions and could earn additional pay after correctly assembling 50 parts. In the second condition, subjects worked in groups ranging from two to nine people. During the group condition, subjects continued to earn a base wage plus an incentive. The incentive was calculated based on each group's average performance, and the bonus was divided equally among the members. In the final phase, subjects were returned to the original individual incentive condition. Results indicated little difference in individual performance as a function of either changes in incentive plans or group size.

Much of the behavior analytic research comparing effectiveness of group and individual incentives has been conducted in laboratory settings that simulate work place conditions. These analog studies have been useful in identifying and isolating independent variables; however, no applied behavior analytic research comparing effectiveness of group incentives versus individual incentives in a small retail sales setting has been reported. Such research could provide an analysis of the contingencies operating on the behavior of employees working under group incentive conditions.

If a small group plan were successful in such a setting, both employees and company would profit in that 1) employees would benefit directly by increasing their incomes while working with their colleagues as a team instead of as competitors, and 2) the company (or shop owner) would benefit from increased sales, decreased operating expenses and improved employee productivity. The present study was undertaken for two reasons: 1) the lack of behavior analytic studies of group incentive plans in small retail settings, and 2) the availability of two retail shops interested in implementing a group incentive plan.

This study investigated the effect of group incentive plans on individual employee sales performance. Salespeople in the study were employed by a company whose two small specialty shops were located in the lobby of a large metropolitan hotel. The company in this project was interested in ways to increase sales that would not generate competition among employees or create a contentious working atmosphere.

All of the employees in this study were paid an hourly wage and all were entitled to purchase merchandise at a 25% discount from any of the hotel shops. During 1992 the manager of one of the shops had introduced a two-tiered incentive plan. The first tier was an individual incentive system in which employees earned cash payments for individual sales. The second tier was a group plan that enabled employees in that shop to purchase merchandise at an additional discount (an increase from the general 25% to 35% on all merchandise in that shop) when monthly shop goals were met or exceeded. Although the manager indicated that the individual

incentive system was successful and shop sales had been high throughout 1992, there were reports of employee dissention due to competition over customers' purchases. Also, the manager had complained about the extra time involved in accounting for the individual incentive earnings. The second shop had reported a net sales loss for 1992 and was paying hourly wages only.

The purpose of the present study was to directly compare the effects of a group bonus contingency on sales performance of employees who had never worked under this condition to the effects of such a contingency on the performance of employees who had worked under an individual incentive plan. Specifically, two questions were addressed: 1) what effect would adding a group bonus plan have on individual performance of employees who had previously been receiving only hourly wages; and 2) what effect would changing an individual incentive plan to a group plan have on the individual employee's sales performance.

METHOD

Setting

The study was conducted in two small retail shops, hereafter referred to as Shop A and Shop B, located in the lobby of a large metropolitan hotel. Shop A sold women's apparel and accessories. Shop B was divided by a wall, thus forming two separate shops which sold two types of merchandise. Gift items and jewelry were offered on one side and children's apparel and toys on the other side. These shops

(and six other retail shops) in the hotel were owned and operated by the same company; each shop was individually managed and staffed. The shops were open from 9:30 a.m. to 6:00 p.m. 7 days a week. Although baseline data were collected from January, 1992 through January, 1993, the study was conducted from February through August, 1993.

Subjects

The subjects included part-time employees of Shop A and Shop B. The number of hours each employee worked each month ranged from 8 hours to 120 hours. Shop A employed 4 part-time employees. Of the 4 employees, 2 worked 70-90 hours a month, and 2 worked 35-40 hours a month. Shop B employed 8 to 10 part-time employees, most of whom worked 20-32 hours a month. Only 2 employees in Shop B worked 120 hours a month. None of these employees was asked to sign an informed consent.

Staffing in Shop A. At the end of 1992, there were changes in management and staff in Shop A. As the result of these changes, only two employees who worked in 1992 continued during the months of the study (February-August, 1993). A newly hired employee was included in the incentive plan; she worked in Shop A from February through July, 1993. From 1991-1992 the company had employed a buyer/manager for Shop A. She had purchased shop merchandise and worked on the sales floor with part-time employees. During 1991-1992, the assistant manager had handled day-to-day operations. When the buyer/manager left in December, 1992, the assistant manager was promoted to manage the shop but did not purchase merchandise.

Buying responsibility for Shop A was transferred to an newly hired employee who did not office in the shop.

Staffing in Shop B. Unlike the situation in Shop A, all of Shop B's employees had worked in the shop for over 2 years. Further, the shop's management had been stable for 7 years. Although Shop B's manager participated in some of the buying for the shop, it was not her primary responsibility.

Procedure

Consistent with the joint interests of top management and the researcher, a group incentive plan was introduced in both shops in February, 1993. In the annual 1993 budget top management allotted fixed amounts for each plan: \$2,000.00 was allocated to Shop A and \$1,500.00 to Shop B. These funds were divided into 12 equal portions and assigned to a monthly pool for each shop. Money from the pool was distributed to employees when sales equalled or exceeded monthly sales goals. Goals were determined by top management based on the previous year's net sales, predicted hotel occupancy rates, and the demographics of hotel convention attendees.

Experimental design. Managerial strategies and sales performance differed significantly for the shops. To accommodate these differences, a plan was designed specifically for each shop, and each shop had a different project design. In Shop A, a group plan replaced the existing individual incentive plan. After 3 months, the group plan was replaced with the original incentive plan. Thus, the experimental design for Shop A was an A-B-A, where A, the individual incentive condition, functioned as baseline; B, the group incentive condition, A, return to baseline. In addition to

monetary payments for meeting goals, employees were eligible for an increased discount on merchandise. This condition continued throughout both conditions in 1993. In Shop B, the group plan was added to a salary-only condition, resulting in an A-B design where A, base wage condition, functioned as the baseline, and B was the group incentive condition. Shop B employees were not eligible for increased shop discounts if monthly sales goals were attained, although they did receive money when shop monthly goals were met.

Monthly sales for each shop for the baseline period January, 1992 through January, 1993 were used as baseline data. Individual employee baseline data included daily sales compiled monthly. The incentive phases of this study began in February and continued through August, 1993.

Shop A. In May, 1992, the buyer/manager of Shop A implemented an individual incentive plan--a 1% cash bonus for all sales above \$250.00. In 1992, Shop A's sales exceeded budgeted monthly sales goals 80% of the year; consequently, top management predicted that Shop A would match or exceed the goals set for 1993. Top management budgeted an annual bonus of \$2,000.00, that was to be equally divided over the year to form a monthly pool of \$166.00. Distribution of this money was made contingent on three levels of performance: 1) when monthly sales equaled monthly goals, 50% of the available incentive (\$82.00) was to be distributed; 2) when sales exceeded the predetermined goal by 5%, 75% of the available incentive (\$124.00) was to be distributed; and 3) when sales exceeded the monthly goal by 10% or more, the total available incentive (\$166.00) was to be disbursed. All bonuses were

to be incorporated into weekly paychecks and, thus, were taxable income. When monthly goals were met, pay-outs to employees were based on the number of hours they worked. This was calculated by dividing the number of hours worked by that employee by the number of hours worked by all employees. For example, if the employees in a shop worked 500 hours and Employee A worked 150 of these, Employee A's percentage was 30% of the monthly bonus. This was designed so that everyone received an equal share of the bonus pool adjusted only for the differences in hours worked. Bonuses were to be incorporated in weekly paychecks with a statement indicating that employee's percentage of the pool and the amount of the bonus before taxes.

At the beginning of the study, a meeting was held with all the employees in Shop A to explain the group incentive plan, distribute a short survey and invite employee comments and suggestions. A progressive sales chart was maintained, listing the current monthly sales goal and daily sales throughout the month. Weekly goals were added to the chart after the project began (suggested by Employee C). In addition, a daily sales sheet was posted next to the chart. On this sheet, the shop manager listed each day's sales and the cumulative amount for the month. Both the chart and sales sheet were prominently displayed in the back room, adjacent to the employee sign-in sheet and were posted to provide employees with visual feedback.

The group plan was in effect in Shop A for 3 months. During this period, monthly shop sales failed to meet both 1993 goals and previous 1992 sales. Top management as well as the shop manager were under pressure to make changes to

increase sales. Thus, the individual incentive plan (which had been in effect during 1992) was reinstated. The reason for this was to evaluate the differences in sales between each plan. In Shop A, there were three conditions in effect between January, 1992 and August, 1993. One of the conditions (A) was the 1992 individual incentive that spanned the months of February through October, 1992. In February of 1993, a group incentive plan (B) was implemented and continued through April. From May through August, 1993, an individual incentive condition (A) was in effect again.

Shop B. There were only two conditions in effect in Shop B between January, 1992 and August, 1993. One of the conditions (A) was hourly wages only that continued throughout 1992. The group incentive plan in Shop B that was initiated February, 1993 and continued through August, 1993 was the second condition (B). Historically, Shop B employees had not received bonuses, because the manager said that she did not approve of incentives plans.

In 1992, Shop B's sales exceeded budgeted sales goals only 33% of the time. As a result, top management did not believe that Shop B would match or exceed 1993 goals. The design of the group plan in Shop B emphasized meeting monthly goals. Top management budgeted an annual bonus of \$1,500.00, that was to be equally divided over the year to form a monthly pool of \$125.00. Distribution was made contingent on two levels of performance: 1) when the monthly sales equaled monthly goals, 80% of the available incentive or \$100.00 was distributed; and 2) when sales exceeded the goal by 10% or more, the total available incentive, \$125.00, was disbursed.

When monthly goals were met, the pay-out system to employees was the same as in Shop A. Instead of a group meeting, the investigator met individually with employees to explain the group system, handed out questionnaires and solicited questions and suggestions. A progressive sales chart listing the current monthly goal and daily sales was posted on a counter in the back room of the store to provide employees with visual feedback. As in Shop A, the manager maintained a sales sheet recording daily and cumulative amounts, but the sheet was not displayed in Shop B.

RESULTS

Sales data from February, 1992 to August, 1993 were analyzed. Data for the shops and individual employees were reported in dollars either as monthly net totals (hereafter referred to as sales) or average daily sales by months. Average daily sales figures for individual employees were computed by dividing the employee sales per month by the number of days the employee worked that month; average daily sales for the shops were computed by dividing the shop's total sales per month by the number of days the shop was open that month. Average daily sales was a more reliable measure of sales productivity than a sales total alone because average daily sales took into account the fact that different employees worked different amounts of time per month. For example, one employee might work 10 days a month and sell \$4,000.00 and another employee might only work 5 days and sell \$4,000.00. The second

employee was more productive (i.e., defined as selling more over a shorter time period).

Shop A

In Shop A there were two incentive conditions. Individual incentive conditions were compared to a group incentive condition. Within each condition, trends in sales were identified and comparisons were made between sales and goals. Then, comparisons of incentive conditions were made based on comparable time periods in 1992. For instance, the 1993 group incentive condition that extended from February through April was compared to same months of the 1992 individual incentive condition. These comparisons were first used to discuss the shop's sales data and then for the sales data of individual employees. See Table 1 (Appendix B), for sales data in Shop A; for graphic display of the same data, see Figure 1 (Appendix A). Figures 1-5 are located in Appendix A and Tables 1-5 are located in Appendix B.

Shop A Sales Trends. For the year 1993, Shop A's sales were 29.8% lower than sales during the same time period in 1992. Comparing sales to sales goals, 1993 sales were 29.3% lower than (1993) sales goals (see Table 1). Whereas in 1992, Shop A's sales exceeded goals by 6.5%;, by December, 1992, sales were substantially lower than they had been throughout 1992. This trend continued through January, 1993. Based on 1992's record, management increased 1993 sales goals 5%. From December, 1992 through August, 1993 sales goals were never met.

Shop A incentive condition comparisons. Sales from February through April 1993 were 33.69% lower than sales during the same months in 1992. When the shop

returned to an individual incentive in 1993 (May through August), shop sales improved for the first 3 months but dropped in August to the lowest point of the 20-month data collection period. Because of poor sales in August, Shop A sales for the period were 21.7% lower than sales May through August of 1992.

Individual Employees - Shop A. See Table 3, for sales data on individual employees in Shop A and, Figure 3, for a graphical display of these data. Sales data in Figure 3 represented average daily sales for Shop A and these three employees. The shop's average sales were computed by dividing the net monthly total by the number of days the shop was open. Employee averages were computed by dividing monthly sales by the number of days each employee worked during the month. Sales data for the assistant manager and manager as well as occasional part-time employees were not included. The reason for excluding them was that managers were in a separate bonus plan. Employees A and B were included because they worked throughout most of the data collection interval and the study--January, 1992 to September, 1993. Employee C began work in February, 1993, but she worked regularly for 6 months so her data were included.

Employee A. During the 1992 individual incentive condition, Employee A's average daily sales fluctuated in a range of \$366.00 to \$657.00 (see Table 3 and Figure 3). During the 1993 group incentive, her average daily sales ranged from \$277.00 to \$327.00. Her average daily sales improved during the 1993 individual incentive condition, ranging from \$336.00 to \$514.00. To summarize, Employee A's average daily sales during the group incentive condition were lower than her average

daily sales during both individual incentive conditions. During the group incentive condition Employee A's sales were 45% lower than sales during the 1992 individual incentive condition, and were 29.8% lower compared to the 1993 individual incentive condition. Finally, Employee A's average daily sales were 20.3% lower during the 1993 individual incentive condition (May through August) when compared to the same months of the 1992 individual incentive condition.

Employee B. Employee B's average daily sales fluctuated during 1992, ranging from \$291.00 to \$562.00 (see Table 3 and Figure 3). In 1993 during the group incentive condition, her average daily sales increased, ranging from \$512.00 to \$766.00 (Table 3). But, during the 1993 individual incentive condition, her average daily sales decreased, ranging from \$175.00 to \$563.00. In other words, her sales performance across the 1993 group incentive and the 1993 individual incentive conditions was the opposite of Employee A. During the group incentive condition Employee B's average daily sales were 27.2% higher than her average daily sales during the comparable time period in 1992 and lower when compared to the 1993 individual incentive condition. Employee B's average daily sales during the 1993 individual incentive condition (May through August) were 9.98% lower than sales in the same months of 1992.

To review, Employee B's average daily sales throughout the 20-month data collection period increased more during the group incentive than during any other condition. Her average daily sales during the group incentive condition was \$660.00, contrasted with her average daily sales of \$474.00 during the 1992 individual incentive

condition and her average daily sales of \$370.00 during the 1993 individual incentive condition.

Employee C. Employee C's average daily sales in 1993 ranged from \$367.00 to \$855.00 (see Table 3 and Figure 3). Her average daily sales ranged from \$367.00 to \$659.00 during the group incentive condition. During the individual incentive condition Employee C's average daily sales increased, ranging from \$478.00 to \$855.00.

Shop B

The group incentive condition (February through August, 1993) was compared to corresponding months in 1992 when only hourly wages were paid to individual employees of Shop B. Within each condition, trends in sales were identified and comparisons were made between sales and goals. Then comparisons of incentive conditions were made based on comparable time periods in 1992. Shop B's sales data, listed in Table 2 includes sales, monthly sales goals and percentage differences from January, 1992 through August, 1993; average monthly sales for Shop B are displayed graphically in Figure 2.

Shop B sales trend. For the year, Shop B's 1993 sales were 9.52% lower than sales in 1992 and 14% lower than 1993 monthly sales goals (see Table 2). In 1992, while sales in Shop B exceeded goals 5 months of the year, sales ended the year 0.79% below goals (see Figure 2 and Table 2). Despite this record, top management raised Shop B's goals 1% for 1993.

Shop B condition comparisons. During the group incentive from February through August, 1993 sales fluctuated, exceeding goals 3 months out of 7. Compared to the same months in 1992, 1993 sales were lower than goals during the group incentive. February through August, 1992 sales exceeded goals by 7.82%, but sales during the group incentive months were 12.05% lower than goals.

Individual Employees - Shop B. See average daily sales for Shop B employees in Tables 4 and 5. These data are displayed graphically in Figures 4 and 5. Shop B, which was divided in two parts, consisted of children's clothes and toys on one side and specialty gift and jewelry items on the other side. Employees listed in Figure 4 (A, B, C, and D) worked primarily on the children's side. The manager of the shop and employees E, F, and G worked predominately on the gift side. Sales data for employees E, F, and G are graphically displayed in Figure 5. In the following section, individual employee average daily sales during 1993 group incentive condition (February through August) are compared to each employee's average daily sales in the corresponding months of 1992.

Employee A. Employee A's average daily sales in 1992 ranged from \$176.00 to \$377.00 (see Table 4). During the 1993 group incentive condition, Employee A's average daily sales ranged from \$167.00 to \$411.00. Her average daily sales increased 10% compared to the same months in 1992.

Employee B. Employee B's average daily sales in 1992 were consistently low, ranging from \$114.00 to \$277.00. During the 1993 group incentive condition months, her average daily sales ranged from \$110.00 to \$526.00. Her 1992 average daily sales

increased from \$175.00 to \$240.00 during the group incentive condition months in 1993. This represented a 37% increase.

Employee C. In 1992, average daily sales for Employee C ranged from \$176.00 to \$446.00, whereas her average daily sales during the 1993 group incentive condition ranged from \$243.00 to \$473.00. She increased her overall average daily sales from \$284.00 in 1992 to \$370.00 in 1993. In other words, Employee C's average daily sales increased 30% during the group incentive months.

Employee D. The average daily sales for Employee D fluctuated from \$109.00 to \$582.00 during 1992; her average daily sales range during the group incentive was \$106.00 to \$397.00. Despite these fluctuations, Employee D increased her overall average daily sales 17% during the group incentive months.

Employee E. Figure 5 presents average daily sales for Employees E, F, and G during 1992 and 1993. In 1992, Employee E's average daily sales varied more than any other employee in Shop B ranging from \$104.00 to \$1,016.00. During the group incentive condition her average daily sales ranged from \$219.00 to \$2,733.00 (See Table 5.). Compared to the same months in 1992, her average daily sales increased 13.5%.

Employee F. For Employee F whose average daily sales in 1992 ranged from \$98.00 to \$263.00, the 1993 group incentive condition was not as effective as for other employees. Her average daily sales during the group incentive condition dropped 24.5% with a range of \$70.00 to \$226.00.

Employee G. The average daily sales for Employee G varied widely in 1992, ranging from \$91.00 to \$334.00. Employee G's average daily sales during the 1993 group incentive condition were lower ranging from \$97.00 to \$305.00. Her overall average daily sales decreased by 3.3%.

Overall, the average daily sales of Employees A, B, C, D and E increased during the 1993 group incentive condition (February through August). Of those five employees, Employees A, B, C, and D worked primarily on the children's side of Shop B. For Employees F and G, both of whom worked primarily on the gift side of the store, average daily sales declined during the 1993 group incentive condition.

DISCUSSION

This study examined the effects of group incentives on the sales of individual employees in two retail shops, A and B. In addition to monitoring individual employee sales, the study compared each shop's monthly sales to predetermined goals. In February, 1993 the group incentive condition replaced an existing individual incentive condition in Shop A and supplemented employee hourly wages in Shop B. After 3 months the group incentive in Shop A was replaced by an individual incentive condition. In Shop B the group incentive condition continued from February through August, 1993. Although individual employee sales in both shops were variable during this 8-month study, under the group incentive condition sales productivity for 5 of the

7 employees in Shop B increased. In Shop A sales productivity for 1 of 3 employees increased. Possible reasons for these outcomes are discussed below.

Shop B. Shop B was divided by a wall into two stores: a children's side and a gift side. Inexpensive and moderately priced items were sold on the children's side; conversely, expensive items (e.g., crystal and silver) were located in the gift side of the shop. Although Shop B's total sales during this study were lower than during comparative months in 1992, further analysis showed that there were more sales transactions on the children's side than on the gift side of the shop. Perhaps equally pertinent, all of the employees (A, B, C, and D) who worked primarily on the children's side of the store showed increased average daily sales (i.e., improved their sales productivity).

By contrast, productivity and total sales for employees F and G and the store manager, who worked on the gift side, decreased more in 1993 than during the comparable months in 1992. Although the manager was not part of the study, her data were included in Shop B's totals because all of her working time was spent selling on the gift side of the shop. The only employee working on the gift side of Shop B whose sales productivity increased was Employee E.

The differential productivity rates for employees in Shop B, compared to those in Shop A, may have been the result of the group incentive condition. In Shop B there had been no incentive plan and no bonuses paid during 1992. Furthermore, employees in Shop B had not been informed about either monthly sales goals or the outcome of daily sales relative to goals. The group incentive plan in 1993 not only

offered an additional source of income for these employees, but also provided information and feedback about the group's daily sales relative to monthly shop goals. Equally likely, these outcomes may have been influenced by customers' preferences for lower priced merchandise. Of the eight hotel shops, the five that offered higher priced items failed to meet their goal levels; the three hotel shops that met sales goals from January through August, 1993 offered sundries, tee shirts, and inexpensive imported gifts.

Overall, from February through April, 1993 sales in this shop were lower than sales over comparable months in 1992. The 1993 sales were also lower during the individual incentive condition. Although it is unclear what specific contingencies account for Shop A's outcomes, a review of conditions in the shop during the time period of the study may be helpful.

Shop A's sales, like those in the other hotel shops, may have been affected by national consumer purchasing patterns as well as demographic changes in types of hotel visitors. However, unlike Shop B, Shop A's merchandise included predominately very expensive clothing and accessory items. During 1992, the buyer/manager of the shop bought a variety of clothes in wide range of prices. There was such a balanced assortment that customers had remarked on the quality and the surprisingly affordable prices of the merchandise. In December, 1992 a new buyer was hired; her previous employer had been a luxury specialty store located in the same city as the hotel housing Shop A. The new buyer selected much higher priced merchandise for Shop A than had the previous buyer. Furthermore, unlike her

predecessor, the new buyer did not work with shop customers. As a result, she was not in direct contact with customer requests or reactions to the merchandise or to the prices of items in the shop. In summary, during the months of the study, Shop A was stocked with high priced merchandise; visitors who shopped or stayed in the hotel bought moderately priced goods; consequently, sales in Shop A were poor.

Shop A. In Shop A three part-time employees (A, B, and C) participated in the group incentive, two of whom (Employees A and B) had worked under the original (individual) incentive plan. Employee A's sales productivity dropped when the group incentive condition replaced the individual incentive condition and improved when this condition was reinstated in 1993. Only Employee B's sales productivity increased under the group incentive condition over what it had been under the individual incentive condition. Both Employees A and C improved their sales productivity under the reinstated individual incentive condition. One possible factor that could have contributed to these results was the difference in sales patterns for Employees A, B, and C. These patterns are described below.

Employee A. Initially the data suggest that the group incentive depressed rather than stimulated sales for Employee A. The conditions that may have made the individual incentive condition attractive for employee A (and others as well) were 1) employees' bonuses were based solely on their performance; 2) feedback as to the effect of the incentive was immediate--with each sales ticket completed employees knew whether or not each sale was high enough to warrant a bonus and bonus

amounts were posted; 3) bonuses were paid in cash and, thus, not subject to tax. The individual incentive system produced discrete and certain outcomes.

By contrast, group incentive outcomes were both remote and uncertain: under this condition, total sales had to exceed sales goals in order to earn the group bonus. Under these contingencies, Employee A could not see immediately the relation between individual sales tickets and the group bonus. Furthermore, payment was incorporated into the employee's base salary and taxed, rather than being delivered in cash. During the 1992 individual incentive condition, the buyer/manager had delivered social attention backed up with cash for productive sales behavior. During the 1993 group incentive condition Employee A lost the cash back-up, and the social attention that was available was delivered noncontingently and for off-task behavior.

Employee B. Employee B's average daily sales during the 20-month data collection interval and study was the opposite of Employee A's average daily sales. Her sales productivity was higher during the group incentive than during either of the individual incentive conditions. During the 1992 individual incentive condition, Employee B worked more hours in the shop and had more opportunities to sell merchandise than she did in 1993. Despite these added opportunities in 1992, she was more productive during the 1993 group incentive condition. During 1993 Employee B's work schedule changed. She worked 4 to 5 days a month--primarily on Saturdays. Saturdays are generally considered the best sales day in the retailing business. Furthermore, because of this reduced work schedule Employee B had almost no direct contact with the new shop manager's behavior; consequently, the new contingencies

existing in Shop A controlled little of Employee B's selling behavior. When she worked, she sold more merchandise than in comparable months of 1992.

Employee C. Although a new employee with the company, Employee C's sales increased steadily during the group incentive condition and further increased under the individual incentive condition. Employee C reported that she needed the extra money the group incentive offered. She suggested modifications to the group incentive plan (e.g., dividing monthly goals into weekly goals and posting the progressive sales chart in the back of the shop). She consistently checked the progress of shop sales.

Having discussed the relative lack of effect attributable to the group incentive system in this study, two issues remain to be addressed: 1) the specific variables over which this investigator had no control and which could present similar obstacles to future researchers in this area, and 2) recommendations of variables to consider in future studies dealing with group incentives for retail businesses.

Site for study. Location of the hotel in which Shops A and B were situated presented one uncontrolled variable. The hotel was located in a wholesale commercial district away from retail shopping areas, accessible only by automobile. Consequently, the majority of customers entering Shops A and B were hotel guests rather than local residents. Adding to the location drawbacks was the general condition of the economy during the 8 months of this study.

General economic conditions. National economic trends and the resultant effects on consumer retail spending were other variables out of the experimenter's

control. During the first and second quarters of 1993, consumer spending continued to be lower than many retailers had anticipated (Agin, 1993; Duff, 1993; Patterson, 1993). Analysts cited concerns about unemployment and threats of increased taxes as factors that may have affected spending patterns. The retailers who did report increases in earnings during this period (e.g., Wal-Mart) featured discount and/or low-priced merchandise.

Patterson (1993) reported that "analysts expect that . . . apparel sales will continue to struggle. The apparel that does sell well will have to be modestly priced" (p. 2). A possible fall-out of the slumping economy was reflected in a change in spending patterns by hotel guests, and customer traffic in Shops A and B was important because it determined the number of sales opportunities. Availability of customers (and their spending behavior) was yet another variable not subject to the experimenter's control.

Apparently, changing business conditions (corporate downsizing) also affected the spending behavior of hotel guests in 1993. The changed economic conditions also differentially impacted hotel room, food, and beverage sales. From January through August, 1993 hotel room sales were 50% higher than predicted while food and beverage sales were 50% below budget (P. Jannetto, personal communication, September 21, 1993). Jannetto attributed this disparity between occupancy and food and beverage sales to the changes in purchasing behavior of hotel guests. For example, instead of ordering banquet meals provided by the hotel, many of the convention planners bused attendees to less expensive outside sources for their meals.

In addition to changes in guest spending on hotel food and beverage items, the visitors who shopped in the hotel also selected lower-priced items in Shops A and B. This differentiated purchasing behavior was further limited by the lack of moderately priced merchandise available in Shop A and in the gift section of Shop B.

Merchandising policies. Another variable over which the experimenter had no control was the merchandising policy of the shops' owner. The contingencies responsible for the small number of moderately priced items in Shops A and (part of) B reflected the policies of top management. For 13 years prior to 1993, these two shops targeted guests with large discretionary incomes--a policy that proved incompatible with the guest profile in the hotel in 1993. And, according to Jannetto (1993), "We didn't see it [economic downturn] coming--we just weren't prepared". Exacerbating this situation was the fact that buyers for retail shops must select merchandise approximately 6 months in advance of predicted sales. Thus, merchandise in Shops A and B was selected in 1992 under contingencies consonant with sales figures from 1991-92. Those contingencies did not maintain throughout the months of this study in 1993.

Goal-setting practices. A final variable over which the researcher had no control and that may have affected the results of this study was the goal-setting practices of top management. Top management used hotel occupancy projections and the previous year's sales to set annual sales goals. Although hotel occupancy projections were available to top management, these projections did not include detailed hotel visitor demographic data. For example, meetings and conventions were

listed by name only. There were no data on spending patterns of persons who typically attended each convention's meetings. This incomplete data base resulted in top management overestimating sales goals as well as discretionary income of anticipated hotel guests.

Future Studies. In addition to pointing up variables that could not be controlled for in this study, there were those factors that, if changed, might have affected the outcomes of the study, and could increase the probability of successful outcomes of future studies in this area. In the present study shop sales were compared to shop goals because this comparison is the defining characteristic of the group incentive condition.

But because of the circumstances under which these goals were set, using predetermined sales goals as criteria may have been a mistake. This mistake might have been corrected if monthly goals had been changed to weekly goals. Weekly goals might have shortened the time lag between individual sales and receipt of the group bonus. This might have enabled employees in Shop A to earn at least some of the bonuses available during the group incentive condition and may have changed individual employee sales patterns. In reality, the fact that for these employees no bonus contingency functionally existed precludes any conclusive statements as to the positive value of group incentives in Shop A.

In addition to shortening the time between sales and goals, other contingencies might have mediated the delay between employee productivity and sales goals. During the 1992 individual incentive condition Shop A's buyer/manager mediated the

delay and inconsistencies in the system by holding daily meetings with employees, posting employee sales, and acknowledging appropriate employee behavior each day; these contingencies were not in effect during the months of the study in 1993.

Another factor that may have affected the outcomes in this study was the arbitrarily set bonus pool. The bonus pool in this study was comprised of a fixed amount of money budgeted by top management. This fixed amount was not functionally related to changes in monthly sales. By contrast, most successful group incentives plans according to Hillgren (personal communication, January 17, 1993) accrue a bonus pool (based on increase in shop income over baseline) versus budgeting a fixed bonus amount.

While this study used sales data as a measure of productivity, another approach to measuring productivity in future studies might be the ratio of completed sales tickets to the number of persons entering the establishment. Such data would provide not only immediate, on-going feedback to managers, but also serve as a useful input for improving customer service and selling techniques.

Site selection for the study was another factor that if changed could affect the outcome of future studies. Apparently, the targeted shops in this study depended on hotel guests (i.e., customer traffic) for sales opportunities and were limited by the business conditions in the hotel. Future studies of group incentives in retail settings might be more appropriately implemented in businesses located in retail shopping centers or malls. Shopping malls offer opportunities for establishing a more diverse customer base as well as increasing the numbers of potential buyers. Customer traffic

was the most often cited explanation for poor sales by managers and employees in both targeted shops in this study.

This paper has analyzed various environmental and behavioral contingencies that existed prior to and during this study, and suggested specific dimensions to consider changing in investigating the effectiveness of group incentive plans in small retail shop settings. But there is yet another set of contingencies to be examined-- contingencies often overlooked by behavior analysts working in business settings.

Redmon and Agnew (1991) indicate that few organizational behavioral analyses mention metacontingencies, or contingencies at the cultural level of analysis, when reporting outcomes of studies conducted in business settings. This paper offers an analysis of the interlocking behavioral contingencies involving the employees and manager in Shop A as these contingencies changed from January, 1992 through August, 1993. This analysis will focus on changes in the interlocking behavioral contingencies that could account for the observed change in cultural outcomes over this 20-month period. This relationship between the cultural practices (aggregate interlocking contingencies) and cultural outcomes (monthly total shop sales) is what Glenn (1988) labelled as a metacontingency. The metacontingency, per se, is "the unit of analysis encompassing a cultural practice, in all its variations, and the aggregate outcome of all current variations" (Glenn, 1988, p. 168).

"In the interlocking contingencies of reinforcement comprising a cultural practice, each individual participating in the practice provides critical components of the behaviorally potent environment for the other participants. The entire set of

repeatedly replicated interlocking contingencies (the practice) is the cultural unit of analysis" (Glenn, 1989, p. 11). It is this cultural unit of analysis that is discussed below.

If a business setting (e.g., Shop A) is described as a cultural unit then the interlocking behavioral contingencies accounting for the behavior of its members and the aggregate outcomes produced by that unit can be analyzed. So, following Glenn's (1988) conceptual model, this paper will discuss Shop A as a permaculture. Glenn (1991) defined the basic elements of a permaculture as including "1) repeated enactments of a scene [selling merchandise in Shop A], 2) by a group of individuals [shop manager and shop employees], 3) the personnel of which group changes gradually over time [e.g., first manager left Shop A in December, 1992; new manager arrived January, 1993; Employee C came to work in Shop A in February, 1993 and left in July, 1993]" (Glenn & Malagodi, 1991, p. 8).

Interlocking Contingencies in Shop A during 1992. During the first 11 months of 1992 and under the individual incentive condition, the buyer/manager in Shop A was observed by the experimenter to model on-task, productive work behavior: promptly greeting all customers, talking with customers about the merchandise, helping customers in the dressing rooms, suggesting additional accessories, straightening racks, and dusting shelves. She consequated employees' productive sales behavior by smiling, praising, and performing "high fives" when difficult and/or large sales were closed. Each morning she met with employees to assign special projects, to

review sales goals, and to answer employee questions. She also organized several social events to celebrate special work efforts (e.g., fashion shows, inventory, etc.).

Additionally, cash bonuses were paid to employees who sold more than \$250.00 to one customer. For example, if an employee sold \$200/day for a week she earned no cash bonus; however, if she sold one customer a \$400 item she earned \$4 payable at the end of the week. Although there was a delay between selling merchandise and receiving the bonus, the buyer/manager bridged this delay by delivering praise and social attention immediately following large sales and by posting all employees' daily sales. The manager oftentimes rang up and bagged customer purchases when there were customers in the shop waiting to be served. Employees, in turn, helped each other complete sales and congratulated each other on sales that resulted in cash bonuses. Employees repeated customer comments about the quality, price and appearance of merchandise to the buyer/manager.

The interlocking contingencies that existed in Shop A during this period were all related to one outcome: selling Shop A's merchandise. Examples of how these interlocking contingencies affected this one outcome included: 1) When the buyer/manager bagged customer purchases, her behavior made possible more sales, because the shop staff was available to approach other customers and sell more merchandise and earn more/higher bonuses. 2) When employees gave the buyer/manager feedback from customers about the quality, quantity, cost of the shop's merchandise, the buyer/manager, in turn, was able to give top management an accurate assessment of what she needed to purchase for the shop and why. 3) The

buyer/manager's behavior served an important function--it provided the only training these salespersons received: the buyer/manager trained by modeling desirable behavior and reinforcing the salespersons' imitative behavior.

Cultural Outcome of Interlocking Contingencies in Shop A. Glenn and Malagodi (1991) describe a cultural outcome as a change in the environment resulting from the aggregate behavior in the interlocking behavioral contingencies that constitute a particular permaclonic unit. Following Glenn's model, the permaclonic unit is Shop A; the aggregate behavior in the interlocking behavioral contingencies was outlined above. There was one positive cultural outcome resulting from these interlocking contingencies: maintenance of high shop sales (see Figure 1).

Interlocking Contingencies in Shop A During 1993. By contrast, during the 8-month 1993 study period the new manager of Shop A modeled and reinforced leisure behavior (e.g., talking on the phone for extended periods, talking to employees about nonwork-related topics when the shop was empty and while customers were in the shop). The investigator observed customers entering the shop, looking at merchandise and leaving the shop without having been approached by a salesperson. The new manager held her only shop meeting in March, 1993. Although shop sales had been declining since December, 1992, the agenda for this March meeting did not include information about declining sales nor did the manager delineate procedures to increase sales. However, during the meeting the manager did present employees with a checklist of shop cleaning duties. She told her staff that if these duties were completed each day for 30 days she would treat all the employees to a hotel "happy

hour". Employees complied with her request (including turning in completed checklists each week), but the promised social event did not occur.

In February, 1993 the group incentive replaced the individual incentive condition. Under the group incentive condition employees would earn a bonus only when total shop sales equalled or exceeded total monthly goals. The group incentive condition delayed the receipt of the bonus and replaced the direct behavioral relation of employee sales with an indirect cultural relationship. There was no longer a contingent relationship between individual selling and a bonus, because the relation had been replaced by a cultural level contingency. At that point, bonuses for individuals were based on aggregated behavioral outcomes (shop sales), and no procedures were implemented to ensure that interlocking behavioral contingencies were in place to produce the desired outcome.

Further, the new manager did not buy for the shop nor did she have input into what merchandise was purchased for the shop. She did not consistently interact with customers. She failed also to solicit employee feedback about what customers liked and did not like about the merchandise. She complained about the decline in shop sales and the reluctance of her staff to help with daily clerical and (after March, 1993) cleaning tasks in the shop. This manager spent long periods in the back room of the shop completing clerical tasks, which took her off the selling floor and left the employees unsupervised.

There was no clear focus on selling Shop A's merchandise during the period from February through August, 1993. The experimenter observed what appeared to be

a higher rate of off-task social behavior while the rate of selling behavior appeared to decrease. The following changes in interlocking contingencies seem to have produced the outcomes of this study: 1) Prior to the new manager's arrival, the shop staff had engaged in verbal and nonverbal behavior requiring considerable effort. The behavior (primarily verbal) modeled by the new manager required less energy and produced consistent social reinforcers. Therefore, talking on the phone and to each other soon replaced on-task selling behavior; however, this behavior did not increase sales. 2) The former manager had provided shop employees with a daily forum (shop meetings) for asking questions and relating customer feedback; whereas, there was only one shop meeting held during the 1993 portion of this study. 3) The new manager spent little time on the selling floor because she assumed all of the cleaning tasks (e.g., dusting shelves, straightening racks, etc.) in addition to the clerical work. On the one occasion when she assigned cleaning activities she did not differentially consequence staff's compliance. Thereafter, if or when she asked various staff for help with shop duties the staff agreed to help but did not, and there were no consequences for noncompliance. 4) When the group incentive was imposed on Shop A, employees responded negatively. As one employee reported to the researcher, her large sales and extra effort expended to make large sales did not make much difference when she compared them to the monthly sales goal. Another problem with the group incentive was that the extent of outcomes was not directly correlated with the behavior of any particular salesperson. For example, earning the bonus might have been a function of only two salespersons' behavior and the behavior of the rest of the staff may have

contributed nothing. 5) The new manager's negative verbal behavior (e.g., complaining about long shop hours, the new buyer, declining sales) provided an imitative stimulus for shop staff. Their negative verbal behavior and the removal of the individual incentive plan, in turn, decreased the reinforcing value of approaching customers.

Cultural Outcome of Interlocking Contingencies in Shop A. The cultural outcome of these new interlocking behavioral contingencies in Shop A was a decrement in shop sales. In addition to lower sales than those in 1992, shop sales were 30% lower than shop goals (see Figure 1). The divergent cultural outcomes in Shop A were a function of the "aggregate behavior of participants in the context of the physical [e.g., location of shop, changing demographics of customers, economic conditions] and institutional structure [e.g., individual incentive system, the group bonus system, the sales goals] of the company" (Glenn, 1988, p. 168).

CONCLUSIONS

In addition to the aforementioned cultural analysis, the contribution of this study to the field of organizational behavioral analysis lies in its relevance to the current motivational structures (group incentive plans) extant in business settings world wide. Global competition has forced organizations to focus on improved customer service and quality. To achieve these objectives, many companies have eliminated management levels and formed employee work groups. The growing emphasis on

team work and group behavior is illustrated by Kanin-Lovers and Cameron (1993) [quoting H. Golub, CEO of American Express Travel Related Services]:

We have always put a premium on individual excellence and rewarded it whenever deserved. And, we still need individual stars. However, more importantly, we need to have all our people pulling together toward our shared vision and common objectives. None of us can succeed fully as individuals unless all of us succeed. This new emphasis on teamwork simply reflects that reality. (p. 1)

According to a Coopers & Lybrand survey on compensation planning for 1993 (1992), as the rewards provided by traditional merit-increase programs shrink, more companies are concerned about finding new ways to motivate their employees. Among the programs generating the greatest interest are gainsharing and small group incentives. However, using the present study as an example, the outcome of instituting a small group incentive (e. g., imposing a cultural level contingency in Shop A) without ensuring maintenance of interlocking behavioral contingencies to reach that cultural outcome (shop sales) may bring about an undesirable aftermath.

To help maintain interlocking behavioral contingencies under a group incentive condition in a small retail shop the following approaches are suggested: 1) Ask for and include employee input in designing a group incentive plan. 2) Arrange work schedules to ensure that employees rotate the responsibility of determining and (the next day) posting daily group sales. 3) Design and implement "team sell" procedures (with employee input) to promote the involvement of at least two staff with each

customer (e.g., one sells the outfit, the other shows accessories). 4) Manager models positive verbal behavior and delivers contingent praise for on-task behavior. 5) Manager trains employees to deliver contingent positive feedback to each other. 6) Manager arranges special discounts when sales for particular day, week or month exceed formally or informally set goals.

According to Schuster and Zingheim (1993), successful employee collaboration and team work are motivated by pay plans that focus the individual's behavior on group goals and ultimately on the goals of the organization. This study investigated the effect of a small group incentive plan on retail sales in two small shops because of the growing importance of this form of compensation as reflected in corporate practices and in the nonbehavioral business literature. Additionally, there has been a lack of attention paid by organizational behavioral researchers to this area.

Rigg (1992) summed up the importance of this area to applied behavior analysts when he declared: "Whatever the final structure of the incentive system, the overall objectives are to link action and performance to reward and to motivate the team to satisfy the organizational goals" (p. 27). What better means of meeting this challenge than the application of organizational behavioral technology designed by informed behavior analysts.

APPENDIX A
FIGURES

Figure 1. Monthly net sales and goals for Shop A January, 1992 through August, 1993.

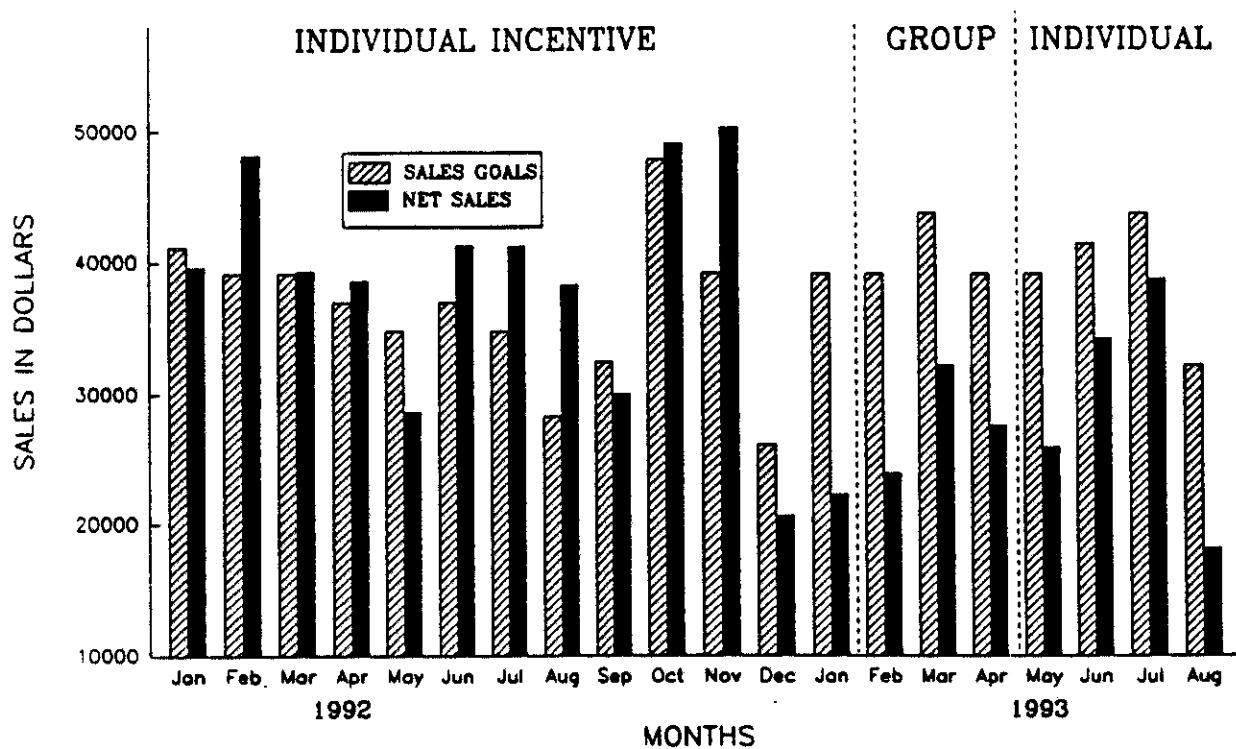


Figure 2. Monthly net sales and goals for Shop B January, 1992 through August, 1993.

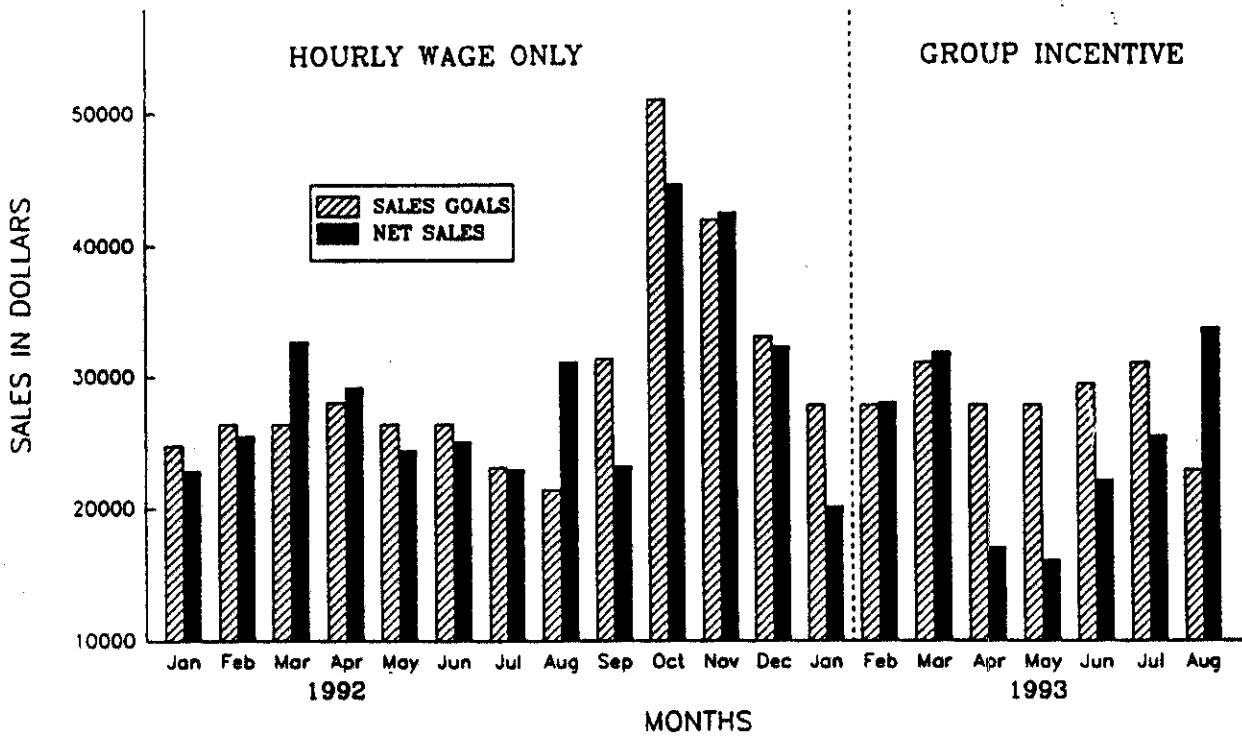


Figure 3. Average daily sales of Shop A and Employees A, B, and C over two incentive change conditions.

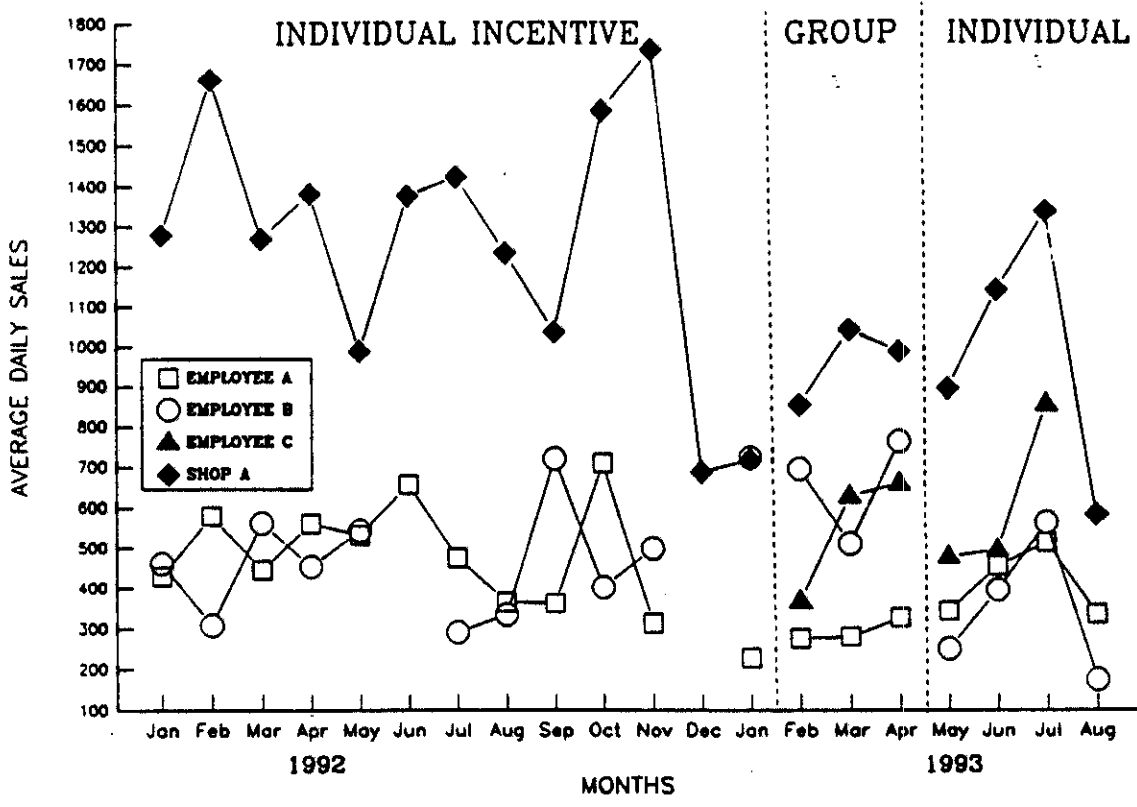


Figure 4. Average daily sales for Shop B and Employees A, B, and C over one incentive change condition.

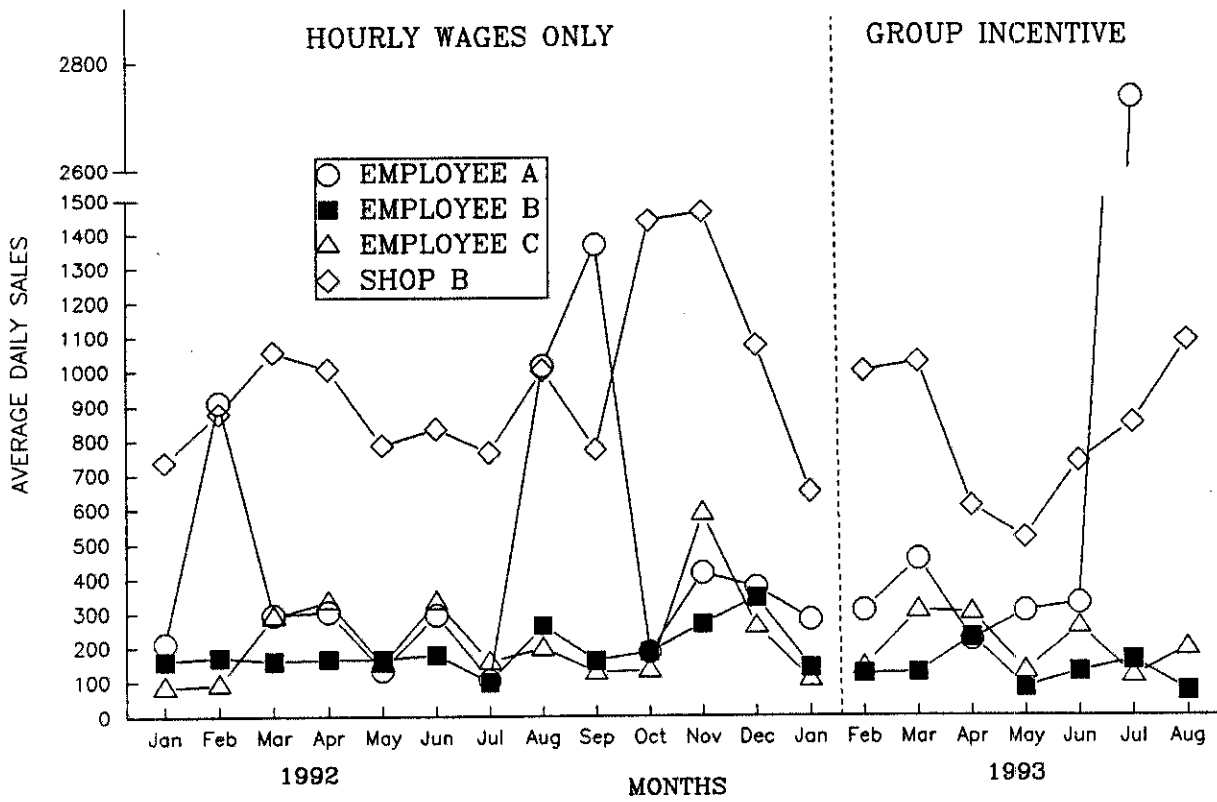
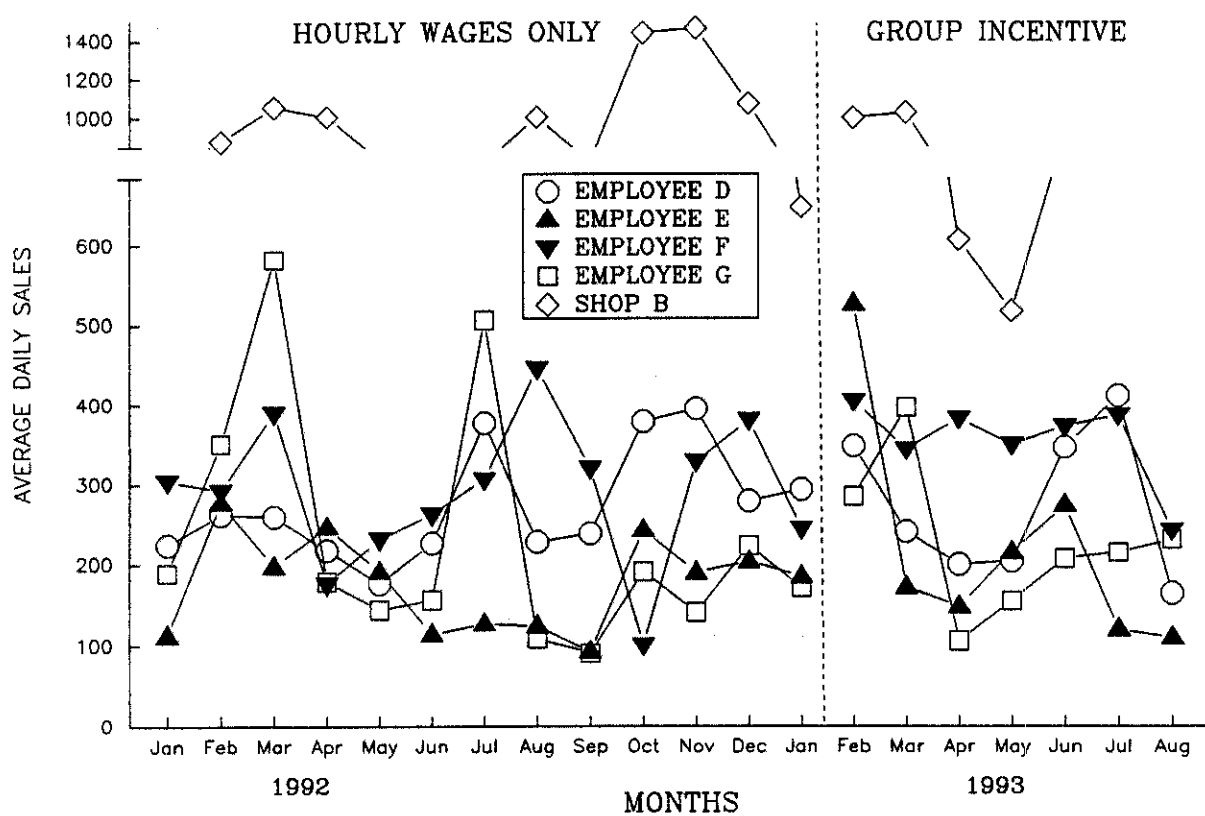


Figure 5. Average daily sales for Shop B and Employees D, E, F, and G over one incentive change condition.



APPENDIX B
TABLES

Table 1

Monthly net sales, sales goals and percentage changes for Shop A from January, 1992 through August, 1993

DRESS SHOP SALES

MONTHS	1992 SALES GOALS	1992 NET SALES	PERCENT +/- OF SALES	1993 SALES GOALS	1993 NET SALES	PERCENT +/- OF GOALS	PERCENT +/- 1992 SALES
JANUARY	\$41,125	\$39,662	-3.56%	\$39,100	\$22,234	-43.14%	-43.94%
FEBRUARY	\$39,150	\$48,174	23.05%	\$39,100	\$23,872	-38.95%	-50.45%
MARCH	\$39,150	\$39,351	0.51%	\$43,700	\$32,193	-26.33%	-18.19%
APRIL	\$36,975	\$38,626	4.47%	\$39,100	\$27,585	-29.45%	-28.58%
MAY	\$34,800	\$28,622	-17.75%	\$39,100	\$25,925	-33.70%	-9.42%
JUNE	\$36,975	\$41,259	11.59%	\$41,400	\$34,193	-17.41%	-17.13%
JULY	\$34,800	\$41,229	18.47%	\$43,700	\$38,725	-11.38%	-6.07%
AUGUST	\$28,275	\$38,236	35.23%	\$32,200	\$18,100	-43.79%	-52.66%
SEPTEMBER	\$32,450	\$30,004	-7.54%	\$32,200			
OCTOBER	\$47,850	\$49,067	2.54%	\$46,000			
NOVEMBER	\$39,150	\$50,284	28.44%	\$36,800			
DECEMBER	\$26,100	\$20,597	-21.08%	\$27,600			
FEB-APR							
TOTAL	\$115,275	\$126,151	9.43%	\$121,900	\$83,650	-31.38%	-33.69%
MAY-AUG							
TOTAL	\$134,850	\$149,346	10.75%	\$156,400	\$116,943	-25.23%	-21.70%
YEARLY							
TOTAL	\$436,800	\$465,111	6.48%	\$460,000	\$222,827	-29.80%	-29.30%

Table 2

Monthly net sales, sales goals and percentage changes for Shop B from January, 1992 through August, 1993

GIFT SHOP SALES

MONTHS	1992 SALES GOALS	1992 NET SALES	PERCENT +/- OF SALES	1993 SALES GOALS	1993 NET SALES	PERCENT +/- OF GOALS	PERCENT +/- 1992 SALES
JANUARY	\$24,705	\$22,854	-7.49%	\$27,785	\$20,124	-27.57%	-11.95%
FEBRUARY	\$26,352	\$26,456	0.39%	\$27,785	\$27,979	0.70%	5.76%
MARCH	\$26,352	\$32,732	24.21%	\$31,054	\$31,801	2.41%	-2.84%
APRIL	\$27,999	\$29,193	4.26%	\$27,875	\$16,982	-39.08%	-41.83%
MAY	\$26,352	\$24,362	-7.55%	\$27,875	\$16,021	-42.53%	-34.24%
JUNE	\$26,352	\$25,004	-5.12%	\$29,419	\$22,125	-24.79%	-11.51%
JULY	\$23,058	\$22,950	-0.47%	\$31,054	\$25,488	-17.92%	11.06%
AUGUST	\$21,411	\$31,095	45.23%	\$22,882	\$33,703	47.29%	8.39%
SEPTEMBER	\$31,352	\$23,178	-26.07%	\$28,844			
OCTOBER	\$51,028	\$44,604	-12.59%	\$44,611			
NOVEMBER	\$41,940	\$42,452	1.22%	\$36,086			
DECEMBER	\$33,053	\$32,245	-2.44%	\$24,912			
FEB-AUG TOTAL	\$177,876	\$191,792	7.82%	\$197,944	\$174,099	-12.05%	-9.23%
YEARLY TOTAL	\$359,954	\$357,125	-0.79%	\$360,182	\$194,223	-13.96%	-9.51%

Table 3

Net sales, average daily sales and number of days worked each month for Shop AEmployees A, B, and C over two incentive conditions

<u>EMPLOYEE A</u>	<u>SHOP A 1992 - 1993</u>								<u>SUB-TOTAL AUG MAY-AUG</u>	<u>TOTAL</u>
	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>SUB-TOTAL FEB-APR</u>	<u>MAY</u>	<u>JUNE</u>	<u>JULY</u>	<u>AUG</u>		
1992										
DAYS WORKED	9	13	13	35	12	17	12	15	56	91
TOTAL SALES	\$5,790	\$5,536	\$7,289	\$18,615	\$6,915	\$11,163	\$5,694	\$5,483	\$29,255	\$47,870
AVERAGE DAILY SALES	\$643	\$426	\$561	\$532	\$576	\$657	\$475	\$366	\$522	\$526
1993										
DAYS WORKED	12	12	10	34	8	12	11	12	43	77
TOTAL SALES	\$3,320	\$3,358	\$3,272	\$9,950	\$2,746	\$5,643	\$5,649	\$4,039	\$17,897	\$27,847
AVERAGE DAILY SALES	\$277	\$280	\$327	\$293	\$343	\$470	\$514	\$337	\$416	\$362
<u>EMPLOYEE B</u>										
1992										
DAYS WORKED	1	22	18	41	13	0	6	10	29	70
TOTAL SALES	\$305	\$12,372	\$8,610	\$21,287	\$6,506	\$0	\$1,743	\$3,678	\$11,927	\$33,214
AVERAGE DAILY SALES	\$305	\$562	\$478	\$519	\$500	\$0	\$291	\$368	\$411	\$474
1993										
DAYS WORKED	5	4	4	13	3	7	9	8	27	40
TOTAL SALES	\$3,471	\$2,046	\$3,064	\$8,581	\$750	\$2,763	\$5,063	\$1,401	\$9,977	\$18,558
AVERAGE DAILY SALES	\$694	\$512	\$766	\$660	\$250	\$395	\$563	\$175	\$370	\$464
<u>EMPLOYEE C</u>										
1993										
DAYS WORKED	16	16	14	46	14	12	13	0	39	85
TOTAL SALES	\$5,867	\$10,046	\$9,230	\$25,143	\$6,688	\$5,951	\$11,114	\$0	\$23,753	\$48,896
AVERAGE DAILY SALES	\$367	\$628	\$659	\$547	\$478	\$496	\$855	\$0	\$609	\$575

Table 4

Net sales, average daily sales and number of days worked each month for Shop B
Employees A, B, C, and D comparing hourly wages to a group incentive condition

SHOP B 1992 - 1993

1992	FEB	MAR	APR	MAY	JUNE	JULY	AUG	TOTAL
<u>EMPLOYEE A</u>								
DAYS WORKED	22	23	13	20	19	17	18	132
TOTAL SALES	\$5,763	\$5,984	\$2,831	\$3,520	\$4,312	\$6,402	\$4,108	\$32,920
AVERAGE DAILY SALES	\$262	\$260	\$218	\$176	\$227	\$377	\$228	\$249

<u>EMPLOYEE B</u>								
DAYS WORKED	6	10	5	5	9	7	7	49
TOTAL SALES	\$1,660	\$1,968	\$1,237	\$953	\$1,023	\$887	\$867	\$8,595
AVERAGE DAILY SALES	\$277	\$197	\$247	\$191	\$114	\$127	\$124	\$175

<u>EMPLOYEE C</u>								
DAYS WORKED	12	5	8	4	8	6	3	46
TOTAL SALES	\$3,509	\$1,948	\$1,410	\$926	\$2,106	\$1,844	\$1,339	\$13,082
AVERAGE DAILY SALES	\$292	\$390	\$176	\$232	\$263	\$307	\$446	\$284

<u>EMPLOYEE D</u>								
DAYS WORKED	6	2	14	9	7	1	10	49
TOTAL SALES	\$2,107	\$1,163	\$2,499	\$1,299	\$1,091	\$506	\$1,094	\$9,759
AVERAGE DAILY SALES	\$351	\$582	\$179	\$144	\$156	\$506	\$109	\$199

(table continues)

Table 4

Net sales, average daily sales and number of days worked each month for Shop B
Employees A, B, C, and D comparing hourly wages to a group incentive condition

SHOP B 1992 - 1993

<u>1993</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUNE</u>	<u>JULY</u>	<u>AUG</u>	<u>TOTAL</u>
<u>EMPLOYEE A</u>								
DAYS WORKED	14	19	13	16	17	16	16	111
TOTAL SALES	\$4,877	\$4,582	\$2,600	\$3,261	\$5,895	\$6,571	\$2,671	\$30,457
AVERAGE DAILY SALES	\$348	\$241	\$200	\$204	\$347	\$411	\$167	\$274
<u>EMPLOYEE B</u>								
DAYS WORKED	10	10	6	6	4	8	5	49
TOTAL SALES	\$5,260	\$1,722	\$887	\$1,292	\$1,096	\$962	\$552	\$11,771
AVERAGE DAILY SALES	\$526	\$172	\$148	\$215	\$274	\$120	\$110	\$240
<u>EMPLOYEE C</u>								
DAYS WORKED	7	4	3	6	7	7	7	41
TOTAL SALES	\$2,837	\$1,375	\$1,150	\$2,097	\$3,314	\$2,710	\$1,698	\$15,181
AVERAGE DAILY SALES	\$405	\$344	\$383	\$350	\$473	\$387	\$243	\$370
<u>EMPLOYEE D</u>								
DAYS WORKED	7	7	6	5	6	11	7	49
TOTAL SALES	\$1,998	\$2,778	\$639	\$774	\$1,242	\$2,361	\$1,620	\$11,412
AVERAGE DAILY SALES	\$285	\$397	\$107	\$155	\$207	\$215	\$231	\$233

Table 5

Net sales, average daily sales and number of days worked each month for Shop B
Employees E, F, and G comparing hourly wages to a group incentive condition

SHOP B 1992 - 1993

<u>1992</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUNE</u>	<u>JULY</u>	<u>AUG</u>	<u>TOTAL</u>
<u>EMPLOYEE E</u>								
DAYS WORKED	6	8	8	7	6	5	1	41
TOTAL SALES	\$5,467	\$2,351	\$2,422	\$929	\$1,763	\$518	\$1,016	\$14,466
AVERAGE DAILY SALES	\$911	\$294	\$303	\$133	\$294	\$104	\$1,016	\$353
<u>EMPLOYEE F</u>								
DAYS WORKED	13	12	6	11	12	5	9	68
TOTAL SALES	\$2,259	\$1,907	\$989	\$1,803	\$2,129	\$492	\$2,371	\$11,950
AVERAGE DAILY SALES	\$174	\$159	\$165	\$164	\$177	\$98	\$263	\$176
<u>EMPLOYEE G</u>								
DAYS WORKED	15	14	10	13	9	15	11	87
TOTAL SALES	\$1,360	\$4,046	\$3,337	\$1,974	\$2,993	\$2,351	\$2,157	\$18,218
AVERAGE DAILY SALES	\$91	\$289	\$334	\$152	\$333	\$157	\$196	\$209

(table continues)

Table 5

Net sales, average daily sales and number of days worked each month for Shop B

Employees E, F, and G comparing hourly wages to a group incentive condition

SHOP B 1992 - 1993

1993	FEB	MAR	APR	MAY	JUNE	JULY	AUG	TOTAL
<u>EMPLOYEE E</u>								
DAYS WORKED	3	6	9	4	5	1		28
TOTAL SALES	\$917	\$2,751	\$1,972	\$1,211	\$1,637	\$2,733		\$11,221
AVERAGE DAILY SALES	\$306	\$459	\$219	\$303	\$327	\$2,733		\$401
<u>EMPLOYEE F</u>								
DAYS WORKED	9	10	9	4	5	5	9	51
TOTAL SALES	\$1,102	\$1,237	\$2,032	\$325	\$630	\$804	\$628	\$6,758
AVERAGE DAILY SALES	\$122	\$124	\$226	\$81	\$126	\$161	\$70	\$133
<u>EMPLOYEE G</u>								
DAYS WORKED	8	11	4	4	5	9	2	43
TOTAL SALES	\$1,115	\$3,351	\$1,190	\$512	\$1,283	\$1,030	\$194	\$8,675
AVERAGE DAILY SALES	\$139	\$305	\$298	\$128	\$257	\$114	\$97	\$202

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