

Cognitive Dissonance Identification in the Institutional Setting of the Academic Library*

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Abstract

The purpose of this study was to evaluate a possible model for using Leon Festinger's theory of cognitive dissonance in organizations. The theory has been studied in other fields, education, social sciences and management, to link attitudes to subsequent behavior. Studies show that organizations have been negatively affected by the presence of cognitive dissonance. The study proposed a model in which two conditions must be met for a finding that cognitive dissonance is present in an organization. First, incongruent perceptions of challenges that academic library directors may be experiencing as held by them and their supervisors must be present. Second, the cognitive dissonance reduction technique of avoidance must be present. The study's findings revealed the presence of incongruent perceptions, however, a cognitive dissonance reduction technique was not found using the study's identified measure of a cognitive dissonance reduction technique.

Keywords : *Academic libraries; Academic library directors; Cognitive dissonance theory; Leon Festinger; Public universities*

Based on the theory of cognitive dissonance given by Leon Festinger (1957) in his book, *A Theory of Cognitive Dissonance*, and literature supporting its use in the organizational environment, this research examined the existence of cognitive dissonance in the organizational setting of academic libraries. According to the theory, conflicting ideas upset the equilibrium between cognitions and create dissonance. Dissonance leads to psychological discomfort that results in behavior to reduce that discomfort or to avoid increasing the discomfort. Dissonance reduction is imperative since the dissonance is intolerable. Identified reduction behaviors include: changing one of the dissonant elements, adding consonant cognitions, and decreasing the importance of dissonant cognitive elements (trivializing the situation).

Another dissonance reduction behavior is avoidance of the situation or information causing the dissonance (Festinger, 1957). A premise of cogni-

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tive dissonance theory is that if dissonance is present, the people involved will be motivated to restore cognitive consistency by using a cognitive dissonance reduction technique. The cognitive dissonance reduction technique of avoidance was selected to be studied. Avoidance of the situation was represented by the number of times the groups met to discuss library-related issues. A significant negative relationship between differences in perceptions between the two respondent groups and the number of meeting times would indicate the presence of a cognitive dissonance reduction technique. The presence of a cognitive dissonance reduction technique, in turn, would support the presence of cognitive dissonance.

When cognitive dissonance is present in an organization, it can be detrimental to the organization and its operation (e.g., Burnes and James, 1997; and Bacharach, Bacharach and Sonnenstuhl, 1996). Given the theory of cognitive dissonance, it is logical to assume that highly incongruent perceptions of library director's challenges held by the library director and his/her supervisor will produce cognitive dissonance. It is logical to assume also that cognitive dissonance reduction techniques will be present as well.

The purpose of this study was to evaluate a possible model for using the theory of cognitive dissonance in organizations. The study's model proposed that two conditions must be met for a finding that cognitive dissonance is present in an organization. First, incongruent perceptions of challenges that academic library directors may be experiencing as held by them and their supervisors must be present. Second, the cognitive dissonance reduction technique of avoidance must be present. To determine avoidance, the study used the number of times the administrators meet annually to discuss library related matters. For a finding that cognitive dissonance was present, both conditions must be met: there must be incongruence between the perceptions and there must be a cognitive dissonance reduction technique.

The theory, according to Jack W. Brehm and Arthur R. Cohen (1962) gained interest early in its inception for various reasons. The lack of theoretical models in the social sciences and the generality of the theory make it attractive to researchers in other fields, they explain. They stress that there is an important difference between other psychological studies that deal with behavior guidance and cognitive dissonance theory. Cognitive dissonance theory "deals, at least in part, with the consequences of a given behavior or consequence" (p. 299). Further, Brehm and Cohen relate that:

evidence of the effects of dissonance has shown that it bears on: (1) opinions on various issues, (2) evaluations of persons, groups, and activities,

(3) salience of information, (4) recall of information, (5) acceptance of information, (6) seeking of and voluntary exposure to information, (7) perceptual distortion, (8) change in behavioral commitment, and (9) motivation (p. 309).

Literature suggest that the theory has been tested by people with diverse interests. A growing body of research has shown that the theory has broad adaptability for many fields. It has been studied extensively to link attitudes to subsequent behavior. A fairly lengthy review of the literature is provided to establish the theory's breadth. Studies from the field of education emphasize the value of cognitive dissonance to change attitudes so learning can occur (e.g., Szajna, 1990; Misiti, 1991; Parish and Necessary, 1992). Other studies have reported challenges of the academic library directors (e.g., McAnally and Downs, 1973; Mech, 1990; Rooks, 1994, Hernon, 2002, McElrath, 2002). The studies, however, do not use differing perceptions of challenges that may be present in the environment and a cognitive reduction technique to identify the presence of cognitive dissonance.

Literature from the educational field focuses on cognitive dissonance within an individual as a motivation to change attitudes and behavior. Empirical investigations include studies by Kathy Atkins Woodruff of a cognitive behavioral educational strategy on seat belt use among students demonstrates the use of cognitive dissonance to change attitude. Students were divided into three groups. One group wrote a summary of a lecture on seat belt use, another group wrote a letter advocating seat belt use to television networks, and the third group served as a control. She hypothesized that students with low seat belt use would feel dissonance when hearing information (lecture) and, additionally, that other students with low seat belt use would feel more dissonance when advocating seat belt use (the letter writers). The students would reduce dissonance by increasing their own seat belt use. She found that the group that was most involved (writing the letters) reported the greatest improvement in seat belt use. Woodruff stresses in her study the difficulty of measuring cognitive dissonance directly. Her study provides evidence that cognitive dissonance can lead to changed behavior and supports the use of a questionnaire to gather data on opinions. A search of *Mental Measurement Yearbook* revealed no instruments to measure the presence of cognitive dissonance directly. Cognitive dissonance, therefore, has been measured only indirectly.

Like Woodruff, Frank L. Misiti, Jr. (1990) studied cognitive dissonance and attitude change. His research focused on the effect of counterattitudinal advocacy on improving science attitudes of 141 "average ability" middle

school students. In an experiment, one group of students was required to write an essay about why they liked science. They were told that they would read the essays to the class. He predicted that the dissonance produced would be reduced by attitude change in the direction of the counterattitude, in this case, liking science. Since the students had to write the essay, it was assumed that they would make the decision to write it and would find positive elements in the decision. The result would be that they would believe the positive assertions. A control group was not required to write. The study used the Middle School Science Attitude Scale to measure students' science attitudes. His findings indicated that sixth grade females and seventh grade males experienced the predicted change in attitude. Misiti's experiment failed to control for commitment. The theory predicts that if there is no choice, then little cognitive dissonance is produced.

Neale R. Chumbler (1994) examined the attitudes of podiatry students in relation to older people since older people are most likely to be the clients of health care professionals in podiatric medicine. His research goal was to find characteristics that would be desirable for prospective students entering the field. His findings suggest podiatry students who had close relationships with their grandparents and were motivated by intrinsic rewards were less likely to have negative stereotypes of older people. Consequently, they were less likely to have negative attitudes toward treating older people than were students who entered the field motivated by extrinsic rewards and who did not have close relationship with their grandparents (Chumbler, 1994). No attempt in this study was made to examine actions that resulted from the knowledge that there were discrepant views held by the two groups.

Cognitive dissonance theory has been applied to explain human behavior as it relates to computer assisted instruction as well as computer usage. Bernadette Agatha Szajna (1990) studied unrealistically high expectations, realistic expectations, unrealistically low user expectations and satisfaction and perceived decision performance of 158 introductory MIS students. An experiment was designed that required subjects to play the role of regional sales managers with a decision-making task about promotional budget allocation. She found that users with low expectations of information systems who experienced negative disconfirmation of their expectations still gave lower ratings for the system. Ones with higher expectations of information systems who then experienced negative disconfirmation of their expectations gave higher ratings. Only the ones with more realistic expectations gave about the same ratings. The students used the cognitive dissonance reduction technique of maximizing positive aspects of their chosen belief when they rated the system. Her findings indicate that "attitudes have an

action component and favorable attitudes are consistent with high levels of voluntary use of information systems” (Szajna, 1990. p. 96).

J.R. Clark et al. (1995) in their article, “Education Reform and Cognitive Dissonance: The Theory of the Second Guess,” combine elements of cognitive dissonance theory and public choice literature to explain aspects of education reform. Emotional aspects of education reform can be explained by Festinger’s theory, they argue. A knowledgeable expert’s differing opinion will produce greater dissonance in a person (a voter) who has little or less knowledge about an issue. They relate that legislators use educational issues to diminish dissonance or to produce it when needed to affect elections and legislature. One way they accomplish this is to “appeal to expertise” (p. 46). The authors assert that “Educational bureaucrats also manage dissonance to expand their bureaus and budgets since each new educational problem justifies additional responsibility and resources” (p. 46). The authors’ article supports findings that cognitive dissonance is an important psychological concept. It also demonstrates the extent to which it has been adapted to fields like public administration.

These studies reinforce Festinger’s theory that cognitive dissonance influences attitude and behavior change and that choice is important for a finding of cognitive dissonance. Cognitive dissonance theory postulates that people attempt to reduce dissonance by accenting the positive elements of the chosen decision. Their research addressed this assertion and found evidence of its use. These studies support the premise that maximization of positive aspects of one’s decision is a cognitive dissonance reduction technique that can be documented. They also provide rationalization that dissonance can be present after a decision.

William Latta (1991) used Festinger’s cognitive dissonance theory to study psychological aspects of weight loss. One premise of the theory is that a person will highly value a goal when he must spend a high amount of effort to achieve it. Latta conducted an experiment using three groups in a weight loss program. Two groups were given psychotherapy and a placebo (a vitamin pill). A third group served as the control. The two groups were allowed to choose to participate in psychotherapy that consisted of difficult cognitive tasks.

Latta predicted that when the groups realized that the task of losing weight would be difficult; they would experience cognitive dissonance. To explain his anticipation of cognitive dissonance in the experiment, Latta cites findings from studies by Cohen (1962), Cooper, Zanna and Goethals (1974) and Goethals and Cooper (1975) that found dissonance arousal comes from decisions that produce aversive results. The theory maintains

the subjects would maximize positive aspects of their decision to reduce dissonance. In this experiment, they would “aggrandize their goal” to reinforce to themselves their choice. Latta hypothesizes that they could “misattribute” the dissonance to other factors in the environment rather than the psychotherapy. One goal of his experiment was to see if the therapist could manage the misattribution. One group was told about cognitive dissonance and the possibility of misattribution of dissonance. This group was cautioned that psychotherapy was very likely the cause of any dissonance they would feel. The two experimental groups were also given a pill (a placebo) and told that the pill could arouse dissonance. The subjects could blame the vitamin pill instead of the therapy for the dissonance. The other experimental group received just the placebo.

Latta found that the informed group lost more weight during his 15-day experiment than did either of the two other groups. By attributing their dissonance to the psychotherapy, that group “came to highly value being motivated to achieve their goals” (Latta, 1991. p. 236). Latta found that the other subjects misattributed their dissonance to the placebo, became less receptive to the therapy and, therefore, less motivated with the result of less weight loss.

M. Brent Halverson (1970) studied the relationship between cognitive dissonance and value systems in adults. Past investigations, Halverson asserted “assumed the magnitude of dissonance to be that which would lead to the outcomes predicted. And, if the observed outcomes varied, one reasonable explanation quite often addressed was that the magnitude of dissonance must have been other than assumed” (Halverson, 1970. p. 38). He developed, therefore, a cognitive dissonance measurement to detect the presence or absence of cognitive dissonance. He based the measurement on W. A. McGuire’s (1966) findings that suggest a “more direct measure of this postulated internal state” could be gained by using “the subject’s verbal reports of his dissonant feelings” (Halverson 1970. p.38). Halverson cites studies conducted by Chapanis and Chapanis (1964) and by Smith (1964) that support the contention that the subject’s verbal reports of his dissonant feelings are crucial to the theory of cognitive dissonance. Although Halverson did not establish a significant link between cognitive dissonance and the terminal value system in adults, he did offer the idea that a measurement of cognitive dissonance was possible using the subject’s feelings as its basis. Based on the assertions of Halverson and others that questionnaires are appropriate to gather information about attitudes, the present study incorporated the use of questionnaires to gather information about perceptions of the study’s two groups.

Cognitive dissonance theory has been used extensively in the field of nursing. Donna Eisenhower in 1983 conducted a pilot study to test her thesis that what nurses feel and think about the elderly will affect how they treat elderly patients. She used an observational instrument to study 112 nurses at a Veterans Hospital with the objective to propose conditions where nurses' feelings and attitudes would be predictive. She used correlation analysis to determine if dissonance was present. Her findings did not detect the presence of cognitive dissonance, however, she stresses that bias may have been introduced because of the nurses desire to present themselves as positively as possible. She stresses that other methods of data collection have problems with this bias as well.

Lucille Tabler in 1996 surveyed professional caregivers in 16 non-profit rural home health care agencies. She administered a series of four reliable, validated questionnaires to determine a model with which to predict outcomes. She used factor analysis to analyze the data. She did not find evidence that cognitive dissonance was present using that data collection technique. She, like Eisenhower, found that the respondents wanted to look good so a response bias was introduced. Unlike the data collection methods of these studies, the present study will develop a questionnaire specifically for the study.

Literature in the organizational setting establishes that cognitive dissonance theory is valuable to the study of management and organizational change. It has been studied in other management organizational settings by linking attitudes of groups, for example, managers and their supervisors, with outcomes. Studies show that organizational outcomes have been negatively affected by the presence of cognitive dissonance (e.g., Tiller, 1980; Kantiowitz, 1992; Burnes and James, 1997). These studies establish that cognitive dissonance is a powerful motivator, that dissonance reduction occurs and that behavior is affected when cognitive dissonance is present. The theory has been used also to study the effects of dissonance that may exist between two groups in an organization.

Jacobo A.Varela (1971) applied the theory to the workplace. He stressed that management is responsible for much of the dissonance that results in many employee disputes. He emphasized that decisions in the workplace involve dissonance including the most important one, the decision to quit. He studied cognitive dissonance reductions techniques including ones that: discredit the source of the tension, change one's behavior, seek social support and avoidance of a situation where one would feel cognitive dissonance.

Daniel B. Overbeck (1973) studied the presence of dissonance between

11 program administrators and service administrators in a large state institution. He developed a questionnaire using attributes considered important by each group. The attributes were paired and each subject chose one of the two attributes as the important one that a charge attendant should use when carrying out daily duties. Significant difference was found for six of the ten attitudes. Dissonance was said to be present. His work is important for the present study to establish the use of the theory to find dissonance between two groups in an organization. His study, however, is limited to only 11 subjects. With so few, a generalization of his findings seems suspect.

Michael Francis Foran (1972) in his research examined “situational and personality factors in the budgeting process” and the general applicability of dissonance theory to the process. He investigated the relationship between cognitive dissonance and post-decisional modes of dissonance reduction; mechanistic and organic organizational systems; and the personality variable of authoritarianism; and feedback. The dependent variables were “magnitude of cognitive dissonance and the mode of its reduction” (Foran, 1972. p.20-21). Additionally, he relates that “since nothing is cited in the experimental literature that would measure cognitive dissonance and its magnitude directly, it was necessary to use an indirect measure” (Foran, 1972. p.24). Like Halverson and Woodruff, Foran developed a questionnaire for the study. Foran’s findings failed to establish a relationship between cognitive dissonance and the two organizational systems, authoritarianism or feedback. Although cognitive dissonance was not found, his work supports the use of cognitive dissonance theory in organizations and the quest to find information gathered from questionnaires to indicate it.

Mikel G. Tiller (1980) used cognitive dissonance theory to develop a dissonance model of participative budgeting. He conducted an experiment to define specific conditions under which participative budgeting can enhance commitment to the budget and, therefore lead to increased performance of the budget task (Tiller, 1980. p.65). His hypothesis that a participative budgeting process produces conditions under which cognitive dissonance is expected to occur was supported. The study’s findings indicate that cognitive dissonance should occur in the budgeting context if a manager chooses a performance level that he knows to be difficult to achieve. Dissonance reduction will occur with manager’s “cognitive enhancement of the chosen budget, thus, committing him to its achievement” (Tiller, 1980. p.68). This leads to increased budget commitment and increased performance. Tiller’s findings are the reverse of Foran’s. Tiller’s experiment was not conducted in the field using practicing professionals.

Cognitive dissonance theory has been used to help explain the processes

of change in current organizations. Robert H. Howard (1982) used role conflict theory and cognitive dissonance theory to study perceived organizational goals, actual goals and desired goals from organization members' perspectives. His purpose was to determine how incongruent perspectives of organizational goals relate to innovation in an organization. The unit of analysis was employees of the Law Enforcement Assistance Administration in the Department of Justice. Data collection methods included document analysis, interviewing and questionnaire development. Findings show that the organizational member's goal congruence is related to their evaluation of the administrative innovation. If there is perception of incongruent goals, the organization member will have low confidence in management and rate innovation negatively. The study reinforces the use of cognitive dissonance in organizations and the fact that it can have a negative affect on them. The study, however, did not look at perceptions between groups.

Bernard Burnes and Hakeem James (1997) report that the existence of cognitive dissonance can impair the successful implementation of change in organizations. They conducted a case study of two managers and the groups they managed. In Project One, the manager communicated the necessary changes to the employees and involved them in developing the needed actions to implement the changes. In Project Two, the manager dictated changes that were to be made and how the changes were to be accomplished. Burnes and James found that cognitive dissonance was relatively low among the employees in Project One, and the required changes were successfully implemented. In Project Two, cognitive dissonance was high among the employees (they were frustrated and resentful); and, had the project manager not left, Bernard and James predict that the required changes would not have been successfully completed. Other studies confirm this idea. Bruce Michael Kantrowitz's dissertation, *Editorial Economics*, compares the effects of editorial treatment and non-treatment on different audiences. He found that when communicators and managers or communicators and investigators disagree in the evaluation of a text and appropriate editorial treatment, dissonance can arise within all collaborators. He also thinks use of editing that fails to consider the audience can cause dissonance reduction responses that might include "derogation of message and source or avoidance of future information" (Kantrowitz p. xi). These last two studies are both small case studies. The present study examined a large sample to determine if cognitive dissonance could be detected.

Samuel B. Bacharach, Peter Bamberger and William Sonnenstuhl, Jr. (1996) developed a model of organizational transformation process to explain an organization's reaction to environmental change. Airline deregulation

lation brought new administrative cost-cutting directives that prompted confrontative techniques by labor. Both aspects created cognitive dissonance for base managers and supervisors. Labor established peer counseling to replace what they considered mid-managements' paternalistic approach to employee personal problems. To resolve their cognitive dissonance and return to consistency, these middle managers changed their "logics of action" (the way they typically dealt with each group) to realign administrators' directives with their own goal of maintaining a "dedicated and skilled workforce" (Bacharach, Bamberger & William Sonnenstuhl, Jr, 1996. pp. 478-479). The original realignment had now created dissonance for the technical levels (labor) who realized they needed managers' influence to help solve some employee problems. The middle managers negotiated between both groups until a new "logics of action" for each group was accepted. Administrators relaxed the goal of cost-savings to have a more dedicated workforce. Labor adjusted its goals.

The authors call this process the "micropolitics" of cognitive dissonance. When the core administration changed their "logics of action" to better fit with labor's new "logics of action", organizational consistency was reestablished. The authors stress that the process of realignment is often "counterintuitive if not counterrational", but that it works (Bacharach, Bamberger & Sonnenstuhl, Jr., 1996. pp. 492-498). This case study emphasizes the positive as well as negative aspects of cognitive dissonance in an organization. The study theorizes that positive benefits can ultimately result out of the negative effects of cognitive dissonance in an organization. The present study will focus only on possible negative outcomes as dissonance reduction techniques.

Robert T. De Filippis (1994) developed a management model made up of specific behaviors that lead to behaviors statistically related to business results. He identifies that there are three practical stages in organizational performance improvement: focus on the results; assist managers to find out, first, if they really want to be managers and, next, to find the right job fit for them; and focus on processes. Stage one produces cognitive dissonance which requires "building confidence and a commitment to behavioral change" he relates (De Filippis, 1994. pp. 23-24).

The idea that cognitive dissonance in an organization can have an effect on outcomes is established by these studies. The idea that cognitive dissonance can be detrimental to the organization is established by these studies as well. These studies also suggest that the use of cognitive dissonance theory between groups in organizations is a valid theory to use today.

Methodology

A direct measure of cognitive dissonance is still to be found. Cognitive dissonance, therefore, has been measured only indirectly. Studies conducted by Chapanis and Chapanis (1964), Halverson (1970), and Smith (1964) and others support the contention that the subject's verbal reports of his dissonant feelings/perceptions are crucial to the theory of cognitive dissonance. The present study incorporated this idea by asking the study's participants to report their perceptions on selected challenges identified in the literature by content analysis. A survey was selected as the data collection method and two questionnaires were developed by the researcher. Each participant was asked to choose a number that represents the intensity of his/her opinion on the particular question using a Likert-type scale (1-5).

The survey's potential participants were randomly selected academic library directors and their supervisors in public universities classified as Carnegie classified Masters I or II institutions located in the southeast United States. Questionnaires were sent to 161 possible participants. There were 88 usable questionnaires returned.

Data Analysis

A difference score representing the congruence/incongruence of responses to the survey-provided challenges given by academic library directors and her/his supervisor was computed. The difference score represents the congruence/incongruence of the two groups' perceptions of a particular challenge. A difference score of zero indicates congruence between the perceptions. A difference score that is equal to one indicates incongruence on a continuum scale ranging from a "greater than zero" to a maximum of "four" (the greatest difference possible on the survey-provided Likert scale). A difference score of two or more indicates high incongruence.

The survey instruments were coded so the responses of the academic library director and his/her supervisor for each institution could be obtained and a "difference" score was calculated. To obtain the difference score, the response scores to each of the eight challenges given by the supervisors were subtracted from the response scores to the same challenge given by the academic library director from the same institution. When the supervisor's response was higher on the scale than that of the academic library director, a minus was assigned to the absolute value of the difference to indicate the condition. When the academic library director's response was higher on the scale than her/his supervisor, a plus was added to the absolute value of dif-

ference. (Example: the CAO’s response was a four and the corresponding academic library director responded with a two. A negative number two (-2) was assigned). This allows for the identification of the respondent group who estimated it as a greater challenge.

This difference score measure was then correlated with the mean of the estimated number of times the two groups report meeting. Measures of central location, dispersion, and frequencies are provided when appropriate.

Discussion

Table 1 provides information about the frequencies for the difference scores for each of the survey-provided challenges. When academic library directors reported higher challenges, the frequency is provided on the right side of the table and designated a positive number. When the supervisor reported the higher challenges, the frequency is provided on the left side of the table and is designated a negative number. In general, the higher percentages of difference score are in the zero column. This column designates congruence.

Table 1 Frequencies for the Difference Scores between Respondents from the Same University for Each of the Survey-Provided Challenges

Challenge	Dif. Score	Dif. Score	Dif. Score	Dif. Score	Dif. Score	Dif. Score	Dif. Score
	-3	-2	-1	0	1	2	3
	%	%	%	%	%	%	%
Organizational Change	6.8	4.5	15.9	27.3	29.3	11.4	4.5
Crime	0.0	6.8	25.0	43.2	20.5	4.5	0.0
User Sat.	0.0	6.8	31.8	25.0	27.3	9.1	0.0
Hardware	0.0	4.5	13.6	40.9	27.3	11.4	2.3
Software	4.7	11.6	14.0	37.2	23.3	4.7	4.7
Training	2.3	6.8	20.5	29.5	36.4	4.5	0.0
Serials	0.0	6.8	13.6	52.3	36.4	11.4	0.0

n=88

Minus(-)indicates the supervisor reported the higher estimate of challenge

Plus(+)indicates the academic library director reported the higher estimate of challenge

Differences in perspectives (incongruent perspectives) suggest the possibility that dissonance is present in the organization. Four challenges: organizational change, hardware, software, and training, show a high amount of difference in perspectives according to the studies’ definition of incongruence. The largest difference is in perceptions about organizational change. This difference is apparent when looking at frequencies of responses in the 2

and -2 columns and 3 and -3 columns. Difference scores that are 2 or greater are defined as highly incongruent for the study. Additionally, organizational change is the only challenge with a large difference on both ends. For organizational change, 11.3% of supervisors' responses are highly incongruent and 15.9% of academic library directors are highly incongruent. Using this finding, the presence of cognitive dissonance is indicated by the 27.2% of highly incongruent responses to this challenge.

The theory of cognitive dissonance predicts that if cognitive dissonance is present, cognitive dissonance reduction techniques will be present also. If the differences in perspectives significantly correlate negatively with meeting times, a cognitive dissonance reduction technique will be said to be present. It will mean that the groups are avoiding meeting one-on-one.

Table 2 shows the number of meeting times reported. The responses tended to be roughly similar for the first four categories of meeting times. The most frequent response by both groups was 7-12 times. Most interesting is that 13.6% of supervisors reported meeting 21 or more times while only 6.8% (3) academic library directors reported the same number.

Table 2 Frequency of Reported Meetings Per Fiscal Year between Academic Library Directors and Their Supervisors

	0 times	1-6 times	7-12 times	13-20 times	21 or more times	Totals
	(#) %	(#) %	(#) %	(#) %	(#) %	%
LD	(1) 1.7	(10) 22.7	(19) 43.2	(10) 22.7	(3) 6.8	(43) 97.1
SUP	(0) 0	(11) 25.0	(19) 43.2	(8) 18.2	(6) 13.6	(44) 100

n_1 =LD-Library Directors=44

n_2 =SUP=Supervisor Officers=44

Frequencies are in parenthesis

Twenty-five percent of the responses given by both groups indicate that they meet six times or less. This finding may indicate that cognitive dissonance reduction is occurring in some libraries. The infrequent meetings could indicate some avoidance is present. That computes to a meeting once every two months over a fiscal year. Conversely, this may indicate satisfaction with the academic library director's performance. Some supervisors may think the academic library directors need infrequent meetings with his/her superior in order to do their job. Unfortunately, the satisfaction may lead to "benign neglect" of the library as suggested by Larry Hardesty (1991). He recommends regularly scheduled meetings to encourage the flow of information needed for any future crisis decisions. On the other hand, these groups may be following Peter Drucker's (1974) philosophy that one can either "work or meet" (Drucker, 1974. p. 408).

Means and standard deviations are shown in Table 3. Means are higher for the supervisors indicating they think they meet more often than do the academic library directors. A possible explanation is that since the supervisors meet with many department heads, it may be more difficult for them to remember meetings with each individual administrator. Standard deviations for the supervisors are greater indicating wider spread of responses. Again, this finding could support the idea that it is more difficult for the supervisors to remember specific meeting times.

Table 3 Mean & Standard Deviation for Reported Meetings

	Mean	Median	Std. Deviation
LD	13.9	9.5	0.92
SUP	15.0	9.5	0.98

n_1 =LD-Academic Library Directors=44

n_2 =SUP=Supervisor=44

Correlation coefficients were obtained for the difference scores to the challenges given by each of the two groups and the overall mean score for meeting times to determine if a relationship exists between them. A significant correlation would mean that a relationship exists between the difference score to challenges and meeting times. A significant negative correlation would indicate the presence of a cognitive dissonance reduction technique. Analysis of the statistics relating to the difference between responses and meeting times do not support the presence of a cognitive dissonance reduction technique.

Conclusion

The study contributed to theory by exploring the concept of cognitive dissonance, however modestly, to the theory of cognitive dissonance in the organizational setting of academic libraries. Cognitive dissonance theory may be an important theory for use in the emerging field of Information Studies as well as in the field of Library Science. This is the first time the theory has been used in the field of Library and Information Science. The present study contributed information gained as a result of applying the theory.

The study contributed to cognitive dissonance theory by providing information about a possible model of using questionnaires to collect data from two key administrators to provide evidence of the presence of cognitive dissonance combined with the identification of a cognitive dissonance reduction technique.

The following additional conclusions were drawn from the results of the study and the procedure used. The researcher concludes that cognitive dissonance was not found. The survey instrument while providing a rich source of information did not detect the presence of cognitive dissonance. The two conditions that were needed to be present for a finding that cognitive dissonance existed were not present. Some difference in perceptions was identified. No significant measure of a cognitive dissonance reduction technique was present, however. Although cognitive dissonance was not detected, it does not mean that it was not there. It was not detected using this study's techniques. For this particular survey group, meeting times may not be the appropriate measure to determine if avoidance of the situation is occurring.

Future Research Needed

The theory has been used in other organizations to determine the presence of cognitive dissonance and the presence of cognitive reduction techniques. Since cognitive dissonance has been shown to affect organizations negatively, it is important that studies continue efforts to determine the presence of cognitive dissonance. This study's limitations of only two variables to identify the presence of cognitive dissonance should be broadened in future research. Using a greater number of choices on the Likert scale could be helpful in detecting the presence of cognitive dissonance. Future research is important to develop a model for identifying cognitive dissonance. If cognitive dissonance can be determined to be present, the possibility exists that strategies can be developed to reduce resultant negative effects.

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