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ABSTRACT

Differences between declining colleges and colleges not experiencing decline were investigated, along with dysfunctional organizational consequences that may be associated with decline. Attention is directed to 12 negative attributes resulting from conditions of decline, seven of which were found to be significant: no innovation, scapegoating, resistance to change, low morale, no credibility, non-selective cuts, and conflict. The sample of 334 colleges was made up of 127 public and 207 private institutions, of which 180 were small, 120 were medium, and 34 were large. Of the colleges, 20% had experienced declining enrollments during the last 5 years, 42% had greater than 5% growth, and 38% were stable between plus and minus 5%. Questionnaires were completed by 3,406 respondents (department heads, administrators, and trustees). Schools were categorized as declining based on: (1) reported decline with 100% agreement among respondents; (2) actual data indicating declines in enrollments and revenues (adjusted for inflation) between 1977 and 1981; and (3) findings that there were more years of decline than of growth during the period and that the overall change was negative. Multivariate analyses of covariance were used to compare declining and stable institutions on the 12 attributes, using the three definitions of decline. (SW)

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The Aftermath of Decline

In the last decade, literature on the subject of decline has grown exponentially. Beginning with projections of impending shortages and reductions in the early 1970s (Chelt, 1973; Ackoff, 1974; Hirschman, 1970; Aiken, Ferman, & Sheppard, 1968; Bogue, 1972; Boswell, 1973; Boulding 1975), decline has become an important focus of writing in organizational theory and in higher education management (Hirschorn, 1983; Whetten, 1980, 1981; Mingle, 1981; Mayhew, 1979; Levine, Rubin, & Wolohojian, 1981; Carnegie Council, 1981). Approximately 70 percent of the literature on decline in organizations (and especially higher education) has been produced since 1978 (see Zammuto, 1983, for a bibliography).

An examination of that literature leads to at least three conclusions. First, decline is neither a temporary inconvenience to be merely tolerated by organizations, nor is it a condition isolated to a few poorly run organizations. Rather, decline is a condition that promises to be a major part of the environment, and it is being experienced by most sectors of our society. Organizations ranging from the high technology firms to industrial and manufacturing conglomerates, from federal bureaus and city governments to schools and colleges, from hospitals and health maintenance organizations to retail and marketing firms have all experienced conditions of decline. Because of this widespread influence of decline, organizations cannot afford to sit back and weather the storm, waiting for such conditions to pass. Deliberate responses are required of organizations if they are to cope effectively with these conditions.

Second, very little empirical research has been conducted on decline in organizations. Authors have proposed numerous suggestions for how to cope with and manage decline, but few suggestions have been grounded in empirical investigations. The large majority of published documents are theoretical treatises, proposed frameworks, descriptions of the experiences of a single organization or a single individual, or demographic trend analyses. Very few writers have reported empirical analyses of a sample of organizations that have experienced decline.

Third, there is general agreement among writers that conditions of decline produce dysfunctional consequences. Increases in conflict, secrecy, ambiguity, self-protective behaviors, and turnover, for example, along with decreases in morale, innovativeness, participation, and long-term planning are among the common problems that arise as the aftermath of decline. Authors have suggested that these consequences occur in individuals and groups as well as in organizations. That is, when conditions of decline occur, there is general agreement in the literature that serious problems are encountered on the individual as well as the organizational level of analysis.

These conclusions about the state of the literature on decline serve as the groundwork for this investigation. Because decline is a condition that requires deliberate management by organizations in order to mitigate its negative consequences, and because little empirical research has investigated the aftermath of decline or how best to cope with it, there is a need for research that increases our understanding of organizations in decline. Specifically, before valid prescriptions for effectively managing decline are possible, research must show (1) how decline differs from other environmental conditions, and (2) the

extent to which organizations really do encounter special problems as a consequence of decline. This study focuses on the differences between conditions of decline and nondecline, and it explores the extent to which organizations experience the predicted aftermath of decline. The primary research question being investigated is, "When organizations encounter decline, do they also experience the full range of dysfunctional organizational consequences claimed to be associated with that condition?" No other research to date has investigated empirically this question.

Dysfunctional Consequences of Decline

At least twelve negative attributes have been identified as resulting from conditions of decline. Those attributes and the logic associated with them are discussed in this section. In the section following, the manner in which those attributes were investigated is explained followed by a report of the results of the research.

Conditions of decline invariably bring with them restricted resources and pressures to cut back. Levine (1978, 1979), Whetten (1980), Hermann (1963), Hirschman (1970), and others have noted the intensification of conflict under such circumstances. The presence of a smaller resource pie causes organization members not only to be protective of their own resources (i.e., turf-consciousness), but to clash with others in their attempts to obtain additional resources. In times of abundance, most legitimate demands for resources can be met, but when scarcity exists, conflict arising from mutually exclusive resource requirements increases. This conflict often takes the form of increased pluralism, or the emergence of many organized and vocal interest groups (Pfeffer, 1981; Pfeffer & Salancik, 1978; Whetten,

1978). Organizations become politicized so that allocation decisions frequently are subject to intense bargaining and power plays by individuals or groups seeking their own self-interests. Morale worsens inside the organization as the "mean mood" becomes widespread (Bozeman & Slusher, 1978; Hermann, 1963; Whetten, 1981). Organizations in decline seldom are very pleasant places to work both because of the prevalence of political infighting and the shortage of resources to meet needs and desires (Levine, Rubin, & Wolohojian, 1981; Starbuck, Greve, & Heberg, 1978). In an attempt to ameliorate conflict and meet as many needs as possible, slack resources (i.e., contingency accounts, uncommitted reserves, savings, new project funds, etc.) are often used as operating funds. That is, slack resources are expended to keep the organization in a status quo condition, and all organizational redundancies are eliminated. Making drastic cuts in budgets while maintaining pockets of uncommitted resources is usually unacceptable to organized, vocal special interest groups. Too much conflict would arise, so slack is eliminated.

A number of authors have identified the short-term orientation that conditions of decline perpetuate in organizations (Cameron, 1983; Whetten, 1981; Rubin, 1979; Bozeman & Slusher, 1979). That is, long-term planning is supplanted by short-term responses to immediate crises, conflicts, and constituencies' demands (Lowin, 1968). Concerns with efficiency and organizational survival override concerns for things such as five-year plans (Anderson, 1976; Hall & Mansfield, 1971; Hoisti, 1978; Smart & Vertinsky, 1977).

A corollary of this short-term orientation is conservatism, the abrogation of innovation and riskiness. Conservatism permeates

declining organizations, and innovation is as likely to be blamed for decline (that is, people believe that experimentation in untested areas created decline) as it is to be seen as a viable response alternative. Most authors, in fact, suggest that organizations experiencing decline implement almost no innovations and resist experimentation and probationary activities (Whetten, 1981; Cameron, 1983; Boyd, 1979). Resistance to change is magnified in conditions of decline because mistakes are both more visible and more costly than in growth conditions. When no slack resources are available to cover for errors, organizations tend to remain conservative and risk-averse. When there is a need to retrench or cut back, across-the-board cuts rather than selective or prioritized reductions are usual responses as a means to reduce conflict and ameliorate competing demands for resources (Whetten, 1980; Cameron, 1983; Levine, 1978, 1979; Cyert, 1978; Boulding, 1975).

Hall and Mansfield (1971), Bozeman & Slusher (1979), and Whetten (1981) are among those who have pointed out that decline in organizations is especially stressful for managers and administrators. A "threat-rigidity response" (Staw, Sandelands, & Dutton, 1981) is common under such conditions. Threat-rigidity often manifests itself as increased centralization and decreased participation (Billings, Milburn, & Schaalman, 1980; Mintzberg, 1979; Khandwalla, 1978; Rubin, 1977). Centralization restricts communication channels, and lower participation rates tend to dampen morale and commitment among organization members. Organizational leaders often serve as scapegoats for the frustrations felt by organization members because decision making is centralized at the top and information is less available.

This, in turn, leads to a loss of leader credibility, made worse by an implied failure of leaders to produce growth in a culture that defines growth as good, and bigger as better. That is, when managers do not reverse a declining trend or produce some visible success in overcoming declining conditions, a frequent attribution is that they are not very competent leaders. If they were competent, organizational decline would not be occurring or would at least be of short duration (Whetten, 1980; Bass, 1981; Hermann, 1963).

This uncomfortable condition of having to respond to short-term crises and constituency demands, being scapegoated and criticized by organization members, and not having available resources with which to implement innovations and long-term projects helps explain why voluntary turnover among managers and administrators is so high under conditions of decline. Hirschman (1970), Whetten (1981), and Levine (1979) point out that many organizations encounter leadership anemia since the best, most creative, and, therefore, the most marketable personnel are the first to leave. Not only does the strategy of "skating fast over thin ice" make sense in terms of career development, but the discomfort resulting from declining organizations' climates often makes leaving the organization the most reasonable alternative for competent leaders.

In summary, a large number of writers have identified particular organizational characteristics that result from conditions of decline. Those discussed above do not represent a comprehensive list, but they do represent a core set of consequences around which there is marked agreement. Table 1 summarizes the twelve characteristics considered to be the aftermath of decline.

TABLE 1 ABOUT HERE

Unfortunately, very few empirical studies have investigated the extent to which these characteristics really are present in declining organizations. Those studies that have been conducted have produced largely supportive evidence for the aftermath of decline. For example, two studies of resource allocation decisions in universities found political behavior increasing when resources were relatively scarce, implying greater conflict and more pluralism (Hills & Mahoney, 1978; Pfeffer & Moore, 1980). However, another university study found that political activity decreased (but information distortion increased) in times of scarce resources--perhaps because subunits were too discouraged by the prospects for success to spend energy in conflict and negotiation (Rubin 1977). Krakower and Zammuto (1983) found that declining institutions had lower leader credibility and fewer slack resources, but no differences between declining and nondeclining schools on centralization, innovation, or turnover. Salancik and Pfeffer (1974) found greater use of power in the allocation of the most scarce resource than in the allocation of other resources in a university. These few studies of colleges and universities have included at most only two or three of the characteristics attributed to the aftermath of decline. The intent of this paper is to examine all twelve of the attributes in a broader sample of organizations than has ever been used in order to determine if institutions really do suffer these negative consequences.

METHODOLOGY

Investigating the aftermath of decline required that both growing and declining organizations be studied in order for comparisons to be made. The organizations selected for inclusion in the study were colleges and universities in the United States. These organizations were selected both because many of them have encountered severe decline over the past several years and because they differ in their organizational attributes from most private and public sector organizations from which much of the decline literature has emerged. Therefore, the extent to which colleges and universities are similar to businesses and governmental organizations in the aftermath of decline can be examined in this study.

Sample

Presidents in a sample of four-year institutions of higher education were contacted by mail and invited to participate in the investigation. Institutions were selected on the basis of four control variables: enrollment size (between 200 FTE and 20,000 FTE), institutional control (public, private), enrollment and revenue change (declining, stable, and growing), and the presence of graduate programs (bachelors, masters, and doctorates). Three hundred thirty four schools agreed to participate, and that sample is representative of the entire population of four-year schools in the United States relative to the four control variables. Public institutions constituted 38 percent of the sample (N=127), private schools were 62 percent (N=207). Twenty percent of the schools had experienced declining enrollments during the last five years (N=66), 42 percent had a greater than 5 percent growth

rate (N=140), and 38 percent were stable between +5 and -5 percent (N=120). One hundred eighty schools (54 percent) were classified as small (200 - 2,500 FTE), 120 (36 percent) were medium in size (2,500 - 10,000 FTE), and 34 (10 percent) were large (10,000 - 20,000 FTE).

At each of the 334 schools, individuals were identified that could provide an overall institutional perspective. These respondents constitute the internal dominant coalition for each institution and consist of presidents; chief academic, finance, student affairs, external affairs, and institutional research officers; selected faculty department heads; and selected members of the board of trustees. The number of respondents contacted at each institution ranged from 12 to 20 (approximately six administrators, six faculty department heads, and six trustees). In all, 3,406 individuals participated in the study (55 percent of the total contacted)--1,317 administrators (39 percent of the sample), 1,162 faculty department heads (34 percent of the sample), and 927 trustees (27 percent of the sample).

Concepts

A questionnaire was constructed and mailed to each respondent. Anonymity was promised for both respondents and institutions, so no names will be used in this paper. All questions focused at the institutional level of analysis, asking respondents to rate the extent to which certain characteristics were present at their school.

Questions assessing the twelve dysfunctional attributes discussed earlier are listed in Table 2. The questionnaire was designed to assess other variables not included in this investigation, and because of questionnaire length, only one-item scales were used to assess the

attributes. The questionnaire was too long to construct multiple item scales for each attribute.

TABLE 2 ABOUT HERE

Because there is no one best way to measure decline, and because the meaning of decline may vary dramatically depending on how it is measured, three different methods were used to operationalize the concept of decline. First, respondents were asked on the questionnaire whether or not their institution had experienced a decline in enrollments in one or more of the last four years, and whether or not their institution had experienced a decline in revenues in one or more of the last four years. Earlier investigations have shown that the correlation between declining revenues and enrollments was only .31 (Zammuto, 1983), so these two indicators were treated separately. Schools where 100 percent of the respondents agreed that the school had experienced decline were categorized as declining. Second, enrollment and revenue data from the Higher Education General Information Survey (HEGIS) were used to identify institutions that had actually declined in enrollments between 1977 and 1981, and that had declined in revenues (after adjusting for inflation) between 1977 and 1981. Declining schools were those with more than a 5 percent drop in each of those two indicators. Third, schools were identified that had experienced any decline in revenues between 1977 and 1981. Schools were categorized as declining if there were more years of decline than of growth during that period, and if the overall change was negative (enrollment data were not included in this third method).

Using the first method for defining decline (100 percent agreement) produced 67 institutions categorized as having declining enrollments and 27 institutions categorized as having declining revenues. The second method (more than 5 percent decline) categorized 56 institutions as having enrollment decline and 34 institutions as having revenue decline. The third method (more decline in revenues than growth) identified 80 schools categorized as being in decline.

Analyses

Comparisons were made between declining institutions and all others using the three different definitions of decline. Multivariate analyses of covariance (MANCOVA) were used to make comparisons and test for significant differences. Previous research on colleges and universities suggested that public-private differences may be significant among institutions and that institutional size may be an important qualifier of these research results (Zammuto, 1983; Zammuto, Whetten, & Cameron, 1983; Baldrige, Curtis, Ecker, & Riley, 1978; Cameron, 1983), so these two variables served as covariates in the analyses.

RESULTS

Table 3 reports the MANCOVA results for declining institutions compared to all other institutions when 100 percent of the respondents agreed that the institution had experienced enrollment decline.

TABLE 3 ABOUT HERE

When all attributes are combined together in a weighted linear

combination (MANCOVA), a significant difference can be detected between declining and nondeclining institutions ($p < .01$). In addition, a significant interaction exists between decline and institutional control ($p < .002$) but not size ($p < .57$). However, when examining each of the attributes separately (ANCOVAs), only two of the twelve attributes are significantly different at the $p < .05$ level in declining and nondeclining institutions (no slack and no credibility). One attribute (low morale) has a significant interaction effect with institutional control.

An examination of the mean scores of each attribute reveals that as a linear combination (i.e., the MANCOVA analysis), the declining institutions are characterized by more of the negative attributes than other schools, and that public declining schools, in particular, are characterized by these attributes. But the differences between declining and nondeclining schools on the single attributes are so small that ten of the twelve fail to show significant differences.

Table 4 reports a similar analysis when decline is defined as 100 percent agreement by respondents that revenue decline was experienced by their institution. No significant MANCOVA results appear and only two of the twelve attributes (scapegoating and turnover) reach the $p < .05$ level of significance when comparing declining with nondeclining schools.

TABLE 4 ABOUT HERE

One attribute (turnover) has a significant interaction effect with institutional control, and one attribute (no planning) has a

significant interaction effect with institutional size. Examination of group means shows that declining public institutions have more turnover and less planning.

In general, the results displayed in these two tables are disappointing from the standpoint of predictions from the literature. Individual attributes expected to be associated with decline in institutions appear only slightly more often than would be expected by chance alone.

Tables 5 and 6 compare declining and nondeclining institutions when the definition of decline is dependent on actual changes in enrollments and revenues from 1977 through 1981 from the HEGIS data (i.e., more than 5 percent decline).

TABLES 5 AND 6 ABOUT HERE

Significant MANCOVA results occur only for the interaction between enrollment decline and institutional control, but no main effect is present when the attributes are linearly combined for either enrollment or revenue decline. Moreover, when considering individual attributes, significant differences are present on two or fewer variables in each analysis. These results, coupled with those reported in Tables 3 and 4, give strong suggestion that the aftermath of decline does not occur in colleges and universities to the extent to which it was expected. Declining schools are, in general, not significantly different than nondeclining schools.

Turbulence as a Potential Explanation

One potential reason for these insignificant differences between declining institutions and others is that a relatively small decline may be experienced differently than a large decline. Institutions may not develop dysfunctional attributes unless decline is relatively severe. To investigate that possibility, a MANOVA was conducted for institutions categorized as declining using the third method (i.e., more years of decline than growth between 1977 and 1981, and an overall decline in enrollments and revenues during that time). One analysis simply compared declining schools with all others. The other analysis compared the ten most severely declining schools (decline averaged -31 percent between 1977 and 1981, with a range of -19 to -57 percent) with the ten schools with the least severe decline (decline averaged -2 percent, with a range of -1 to -5 percent). Table 7 reports the results using revenue decline.

TABLE 7 ABOUT HERE

As in the previous analyses, declining schools are not significantly different from other institutions, nor do severe decliners show significant differences from small decliners. Institutions experiencing severe decline appear not to be characterized by dysfunctional attributes any more than other institutions.

Another possible explanation for the insignificant results in Tables 3 through 7 is that decline itself may not cause these attributes to occur--rather, turbulence or dramatic change may be the precursor. The dysfunctional consequences attributed to decline may

Instead be experienced by institutions that are undergoing a great deal of change (dramatic growth, dramatic decline, or a large variance in both growth and decline over time). This possibility arises from the literature on crisis, in arguments made by authors such as Staw, Sandelands, and Dutton (1981), Hermann (1963), Turner (1976), Billings, Millburn, and Schaalman (1980), Rubin (1977), Starbuck and Hedberg (1977), Lentner (1972) and others. They have suggested that turbulence and its resulting uncertainty produce a variety of dysfunctional consequences in organizations (e.g., a threat-rigidity response), many of which are represented in the attributes measured in this study. Bourgeois, McAllister, and Mitchell (1978) concluded, for example, that "most managers would respond to turbulent environments in a manner opposite to that which is predicted to lead to greater effectiveness" (p. 508).

To test that explanation, institutions were categorized as turbulent or stable based on their amount of enrollment and revenue change between 1977 and 1981. Two separate procedures were used. One procedure summed the absolute value of percentage change scores for each year between 1977 and 1981 to obtain a proxy for turbulence. (For example, if an institution grew 6 percent in one year and declined 5 percent the next year, the absolute change score would be 11; $|6| + |5| = 11$) A cut-off value of $|15|$ was used to separate turbulent from stable schools. The other procedure compared schools that had an overall percent change in enrollments and revenues of between +5 and -5 percent between 1977 and 1981 (stable schools) with institutions that grew 6 percent or more and institutions that declined 6 percent or more (turbulent schools). MANCOVAs were conducted to determine significant

differences between the turbulent schools and the stable schools using each of the two operationalizations of turbulence. Separate analyses were produced for enrollment turbulence and for revenue turbulence, and institutional control and size once again served as covariates. Tables 8 through 11 report the results.

TABLES 8 THROUGH 11 ABOUT HERE

Significant MANCOVA results were produced in each of these analyses. That is, when a linear combination of attributes is formed, significant differences exist between turbulent and stable schools. More importantly, when considering the two definitions of revenue turbulence, significant differences were found on at least eight of the individual attributes (i.e., eight attributes in Table 9, nine attributes in Table 11). Enrollment turbulence did not produce as many significant differences as did revenue turbulence (i.e., four attributes were significant in Table 8, only one in Table 10).

This suggests that enrollment and revenue turbulence are experienced or interpreted differently in institutions, and revenue turbulence may produce more negative consequences than enrollment turbulence.

At first blush, these analyses seemed to provide the explanation for the nonsignificant differences between declining schools and others. That is, it appeared that turbulence (especially revenue turbulence) rather than decline per se produced these negative organizational attributes. Literature exists to support that result. However, an examination of the mean scores on each of the twelve

negative attributes revealed that the stable schools had more of each negative attribute than the turbulent schools! When considering revenue turbulence (Tables 9 and 11), stable schools were found to have significantly less planning, less innovation, more scapegoating of leaders, more resistance to change, lower morale, more fragmented pluralism, less leadership credibility, more nonselective cuts, and more conflict than turbulent schools!

These findings were so surprising, and so contradictory to previous literature, that an additional analysis was conducted in order to try to find an explanation for these results. An examination of the composition of the turbulent group revealed that 45 of those schools were declining and 158 were growing. This imbalance in the number of declining versus growing schools raised the possibility that growing schools simply overpowered the declining schools in the analysis. Growing schools may have much more positive attributes than stable or declining schools, and, therefore, turbulent schools may seem to be better off than stable schools. This explanation is certainly more reasonable than the implication from Tables 9 and 11 that stable schools possess more of the negative attributes than do turbulent schools. Separating out the growing schools from the declining schools seemed a reasonable way to try to make sense of the results.

Tables 12 and 13 report the results of MANCOVAs comparing growing institutions with all others on both enrollments and revenues. Growing institutions were defined as those with a 6 percent or more growth rate between 1977 and 1981. The purpose of this analysis was to determine whether conditions of growth are significantly more positive for institutions than stability and conditions of decline.

TABLES 12 AND 13 ABOUT HERE

The MANCOVA results revealed significant differences between growing schools and stable and declining schools when revenues are considered ($p < .000$) but not when enrollments are considered ($p < .11$). Significant interaction effects also emerged with institutional control ($p < .04$) and size ($p < .05$) in Table 13. These interactions suggest that significant differences on a linear combination of the attributes were present especially when comparing private growing institutions with others. An examination of the individual ANOVAs revealed that seven of the nine attributes that showed significant differences in Tables 9 and 11 also were significant in Table 13. That is, the significant results in Table 11 appear to be accounted for by the differences between growing schools and all others. Three attributes (no planning, no innovation, nonselective cuts) had significant interactions with institutional control, and two attributes (no innovation, nonselective cuts) had significant interactions with size. A comparison of mean scores on these attributes showed that growing schools are characterized by the positive attributes and stable and declining schools are characterized by the negative attributes. That is, the aftermath of decline appears to be typical of declining and stable institutions, so that nongrowth more than turbulence or decline is associated with the presence of negative attributes. The presence of growing revenues appears to be the only condition that mitigates against these negative consequences. This is especially true, as revealed by the interaction effects, for small, private institutions.

SUMMARY AND CONCLUSIONS

This study was an exploratory investigation of the extent to which declining organizations exhibit a set of attributes that a variety of authors has predicted as typical characteristics of declining institutions. The analyses have been presented in such a way as to reveal the complexities of both assessing decline and testing those predictions. Three methods and two variables were used to operationalize decline. Only in the case of respondents' perceptions of enrollment decline did significant differences emerge between declining schools and all others. However, those differences were present only when the negative attributes were linearly combined in a MANOVA, not when each attribute was considered singly. This result suggested that the negative attributes were not limited to declining schools alone, and that factors other than simple decline accounted for those characteristics. The nonsignificant differences between institutions experiencing severe decline and those experiencing less severe decline helped confirm that conclusion.

Comparisons between schools defined as stable and those defined as turbulent did reveal significant differences on most of the attributes, but contrary to expectations, stable schools rather than turbulent schools possessed the negative characteristics. This surprising finding led to a comparison between growing institutions and all others to determine if it was growth, not turbulence, that accounted for the significant differences. This final analysis led to the major conclusion of this investigation: Negative attributes associated with the aftermath of decline are characteristic of both stable and

declining institutions. Schools with growing revenues have the most positive organizational attributes.

It is not difficult to generate a post hoc explanation for this major conclusion given what is known about colleges and universities as organizations. Because of certain rapidly rising costs, and perhaps because of a cultural bias in which "good" is equivalent to "growth," stable revenues (adjusted for inflation) can often be interpreted as decline. For some institutions, revenues are declining; for others, stable revenues may mean what Whetten (1980) calls "decline as stagnation." Unfulfilled expectations are as likely to occur in conditions of stagnation as in conditions of decline, and conflict, scapegoating, low morale, and other dysfunctional consequences are understandable results. Because resources are abundant in conditions of growth, however, the aftermath of decline does not occur.

Enrollment growth, unlike revenue growth, can often put a strain on institutions' resources, particularly when revenues do not keep pace with enrollments. This is especially true in public institutions (see Table 13) where legislative allocations, more than tuition income, determine available financial resources. Therefore, it is reasonable to expect nonsignificant differences when comparing institutions experiencing enrollment growth with all others. It is frequently the case that a growing student body actually leads to a worse institutional situation by putting a strain on both financial and personnel resources.

The exploratory nature of this study, and the nonsignificant results that occurred in several of the analyses, demand that certain caveats be mentioned regarding this major conclusion. First, no

causality was tested in these analyses even though it has been implied in the discussion of the literature and in this study's results. This is an area of needed investigation in the future. Second, the operationalizations of decline were selected somewhat arbitrarily. There is nothing sacred about ± 6 percent change in revenues or enrollments, and different results may have emerged using different levels of growth or decline. Third, findings from colleges and universities cannot be generalized to other types of organizations. Revenue and enrollment growth and decline do not have exact parallels in private sector organizations, for example, so the aftermath of decline in those organizations cannot be generalized from these findings. Fourth, the attributes of individual institutions are not investigated. Group comparisons have revealed what appears to be the association of nongrowth with certain negative attributes, but more in-depth analyses are needed of single institutions in order for confidence to be placed in this conclusion. Finally, significant differences do not appear for all twelve of the negative attributes. Only seven of the attributes (no innovation, scapegoating, resistance to change, low morale, no credibility, nonselective cuts, and conflict) show significant differences at the .05 level. Therefore, more investigations are needed to determine to what extent the attributes that were not significant in this study, although they were predicted in the literature, are really a part of the aftermath of decline.

REFERENCES

- Ackoff, R. Redesigning the future. New York: Wiley, 1974.
- Alken, M., Ferman, L. A., and Sheppard, H. L. Economic failure, alienation and extremism. Ann Arbor: University of Michigan Press, 1968.
- Anderson, C. R. Coping behaviors as intervening mechanisms in the Inverted U stress-performance relationship. Journal of Applied Psychology, 1976, 61, 30-34.
- Baldrige, J. W., Curtis, D. V., Ecker, G., and Riley, G. L. Policy making and effective leadership. San Francisco: Jossey-Bass, 1978.
- Bass, B. M. Stogdill's handbook of leadership. The Free Press, 1981.
- Billings, R. S., Milburn, T. W., and Schaalman, M. L. A model of crisis perception: A theoretical and empirical analysis. Administrative Science Quarterly, 1980, 25, 300-316.
- Bogue, E. G. Alternatives to the growth-process syndrome. Educational Forum, 1972, 37, 35-43.
- Boswell, J. The rise and decline of small firms. London: Allen and Unwin, 1973.
- Boulding, K. The management of decline. Change, 1975, 64, 8-9.
- Boyd, W. L. Retrenchment in American education: The politics of efficiency. Paper presented at the American Educational Research Association Meeting, San Francisco, 1979.
- Bozeman, B., and Slusher, E. A. Scarcity and environmental stress in public organizations: A conjectural essay. Administration and Society, 1978, 11, 335-356.
- Cameron, K. Strategic responses to conditions of decline: Higher education and the private sector. Journal of Higher Education, 1983, 54, 359-380.
- Cameron, K. A contrast of public and private organizations in decline. Presentation at the Academy of Management meetings, Dallas, Texas, 1983.

- Carnegie Council on Policy Studies in Higher Education. Three thousand futures. San Francisco: Jossey-Bass, 1981.
- Chelt, E. F. The new depression in higher education. New York: McGraw-Hill, 1973.
- Cyert, R. M. The management of universities of constant or decreasing size. Public Administration Review, 1978, 38, 345.
- Hall, D. T., and Mansfield, R. Organizational and individual response to external stress. Administrative Science Quarterly, 1971, 16, 533-547.
- Hermann, C. F. Some consequences of crisis which limit the viability of organizations. Administrative Science Quarterly, 1963, 8, 61-82.
- Hills, F. S., and Mahoney, T. A. University budgets and organizational decision making. Administrative Science Quarterly, 1978, 23, 454-465.
- Hirschhorn, Larry. Cutting back. San Francisco: Jossey-Bass, 1983.
- Hirschman, A. O. Exit, voice, and loyalty. Cambridge, Mass.: Harvard University Press, 1970.
- Holsti, O. R. Limitations of cognitive abilities in the face of crisis. In C. F. Smart and W. T. Stanbury (Eds.), Studies on crisis management, Toronto: Butterworths, 1978.
- Khandwalla, P. N. Crisis response of competing versus noncompeting organizations. In C. F. Smart and W. T. Stanbury (Eds.), Studies on crisis management, Toronto: Butterworths, 1978.
- Krakower, J. Y., and Zammuto, R. F. A report on the effects of environmental and institutional factors on college and university enrollments. Working paper. National Center for Higher Education Management Systems, Boulder, Colo.: 1983.
- Lentner, H. H. The concept of crisis as viewed by the United States Department of State. In Charles F. Hermann (Ed.), International crises: Insights from behavioral research, New York: Free Press, 1972.
- Levine, C. H. Organizational decline and cutback management. Public Administration Review, 1978, 38, 316, 325.
- Levine, C. H. More on cutback management: Hard questions for hard times. Public Administration Review, 1979, 39, 179-183.

- Levine, C. H., Rubin, I. S., and Wolohojian, G. G. The politics of retrenchment. California: Sage Publications, Inc., 1981.
- Lowin, A. Participative decision-making: A model, literature critique, and prescriptions for research. Organizational Behavior and Human Performance, 1968, 3, 69-106.
- Mayhew, L. B. Surviving the eighties. Strategies and procedures for solving fiscal and enrollment problems. San Francisco: Jossey-Bass, 1979.
- Mingle, J. R. Challenges of retrenchment. San Francisco: Jossey-Bass, 1981.
- Mintzberg, H. The structuring of organizations, Englewood Cliffs, N.J.: Prentice-Hall, 1979.
- Pfeffer, J. Power in organizations. Pitman Publishing, Inc., 1981.
- Pfeffer, J., and Moore, W. L. Power in university budgeting: A replication and extension. Administrative Science Quarterly, 1980, 25, 637-653.
- Pfeffer, J., and Salancik, G. R. The external control of organizations: A resource dependence perspective. New York: Harper and Row, 1978.
- Rubin, I. S. Retrenchment, loose structure, and adaptability in the university. Sociology of Education, 1979, 52, 211-222.
- Rubin, I. S. Universities in stress: Decision making under conditions of reduced resources. Social Science Quarterly, 1977, 58, 242-254.
- Salancik, G., and Pfeffer, J. The bases and use of power in organizational decision making: The case of a university. Administrative Science Quarterly, 1974, 19, 453-473.
- Smart, C. F., and Vertinsky, I. Designs for crisis decision units. Administrative Science Quarterly, 1977, 22, 640-657.
- Starbuck, W., Greve, A., and Hedberg, B. L. T. Responding to crisis. Journal of Business Administration, 1978, 9, 111-137.
- Starbuck, W., and Hedberg, B. L. T. Saving an organization from stagnating environments. In H. Thorelli (Ed.), Strategy + structure = performance. Bloomington, Ind.: Indiana University Press, 1977.
- Staw, B. M., Sandelands, L. E., and Dutton, J. E. Threat-rigidity effects in organizational behavior: A multilevel analysis. Administrative Science Quarterly, 1981, 26, 501-524.

- Turner, B. The organizational and interorganizational development of disasters. Administrative Science Quarterly, 1976, 21, 378-397.
- Whetten, D. A. Organizational responses to scarcity - Exploring the obstacles to innovative approaches to retrenchment in education. Educational Administration Quarterly, 1981, 17, 80-97.
- Whetten, D. A. Sources, responses, and effects of organizational decline. In J. Kimberly and R. Miles (Eds.), The organizational life cycle. San Francisco: Jossey-Bass, 1980.
- Zammuto, R. F. Bibliography on decline and retrenchment. Working paper. National Center for Higher Education Management Systems, Boulder, Colo.: 1983.
- Zammuto, R. F. Organizational correlates of decline: Some preliminary analyses. Working paper. National Center for Higher Education Management Systems, Boulder, Colo.: 1983.
- Zammuto, R. F., Whetten, D. A., and Cameron, K. S. Environmental change, enrollment decline, and institutional response. Peabody Journal of Education, 1983, 60, 93-107.

Table 1 Dysfunctional Consequences of Organizational Decline

ATTRIBUTE	EXPLANATION
Centralization	Managers make more and more of the decisions, and participation decreases among organization members. Communication suffers.
No Long-term Planning	Crises and short-term needs drive out long-term planning and forecasting.
Innovation Curtailed	Resources with which to experiment are not available, and actions that do not protect core activities are suspect.
Scapegoating	Organization members blame leaders for the uncomfortable condition of decline.
Resistance to Change	Conservatism and self-protectionism lead to a resistance of risky endeavors or untested responses.
Turnover	The most competent members tend to leave both because it is uncomfortable and because they have other options.
Low Morale	Few needs are met and infighting permeates the organizational climate.
Loss of Slack	Uncommitted resources are reallocated to cover operating expenses.
Fragmented Pluralism	Special interest groups organize and become more vocal in seeking resources.
Loss of Credibility	Leaders lose the confidence of subordinates because of the cultural value that growth is effective, decline is ineffective.
Non-prioritized Cuts	Attempts to ameliorate conflict and preserve the status quo lead to across-the-board cuts.
Conflict	Fewer resources create conditions where all needs cannot be met requiring competition for a smaller pie.

Table 2 Questions Assessing the Attributes of the Aftermath of
Decline (1=Strongly disagree, to 5=Strongly agree)

ATTRIBUTE	QUESTION
Centralization	Major decisions are very centralized.
No Long-term Planning	Long-term planning is neglected.
Innovation Curtailed	Innovative activity is increasing. (reverse)
Scapegoating	Top administrators are often scapegoats.
Resistance to Change	There is a lot of resistance to change in this school.
Turnover	There is a great deal of turnover in administrative positions.
Low Morale	Morale is increasing among members of this institution. (reverse)
Loss of Slack	We have no place that we could cut expenditures without severely damaging the school.
Fragmented Pluralism	Special interest groups within the school are becoming more vocal.
Loss of Credibility	Top administrators have high credibility. (reverse)
Non-prioritized Cuts	When cutbacks occur, they are done on a prioritized basis. (reverse)
Conflict	Conflict is increasing within this institution.

Table 3 Comparisons Between Declining Institutions and All Others on ENROLLMENTS When Decline is Defined as 100 Percent Agreement Among Respondents

MANCOVA					
df = 12, 319					
<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
2.14	.01	2.64	.002	.88	.57

ANCOVAS						
df = 1, 330						
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	.88	.35	3.30	.07	3.48	.06
No Planning	2.95	.09	.00	.98	1.13	.29
No Innovation	.07	.38	1.87	.17	.40	.53
Scapegoating	1.44	.23	.03	.87	.05	.82
Resistance	2.59	.11	2.01	.16	2.06	.15
Turnover	.00	.99	.19	.67	.02	.89
Low Morale	.28	.60	5.69	.02	.51	.47
No Slack	4.39	.04	.77	.38	.02	.88
Pluralism	3.44	.06	2.31	.13	.38	.54
No Credibility	4.56	.03	1.00	.32	.01	.94
Nonselective Cuts	.25	.62	2.76	.10	.22	.64
Conflict	.75	.39	.79	.38	.04	.85

Table 4 Comparisons Between Declining Institutions and All Others on REVENUES When Decline is Defined as 100 Percent Agreement Among Respondents

MANCOVA df = 12, 319						
<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>		
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	
1.30	.22	1.57	.10	1.18	.29	
ANCOVAS df = 1, 330						
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	.33	.57	.23	.63	3.17	.08
No Planning	1.50	.22	1.09	.30	4.12	.04
No Innovation	1.77	.18	3.69	.06	.25	.62
Scapegoating	5.44	.02	1.45	.23	.97	.32
Resistance	.13	.72	2.38	.12	.41	.52
Turnover	4.67	.03	5.16	.02	1.24	.27
Low Morale	.23	.63	.86	.36	.06	.81
No Slack	.00	.96	.11	.74	.45	.51
Pluralism	.74	.39	.13	.72	.40	.53
No Credibility	3.08	.08	.07	.79	.80	.37
Nonselective Cuts	.43	.51	.00	.96	.42	.52
Conflict	.67	.41	1.32	.25	.03	.86

Table 5 Comparisons Between Declining Institutions and All Others on ENROLLMENTS When Decline is Defined as at Least 6 Percent Decline Between 1977 and 1981

MANCOVA df = 12, 319						
<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>		
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	
1.65	.08	2.18	.01	1.39	.17	

ANCOVAS df = 1, 330						
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	3.90	.05	3.89	.05	.00	.98
No Planning	.52	.47	1.26	.26	1.59	.21
No Innovation	1.89	.17	1.54	.22	.23	.64
Scapegoating	.27	.60	.31	.58	.04	.83
Resistance	1.58	.21	3.45	.06	.35	.55
Turnover	1.78	.18	1.93	.17	1.03	.31
Low Morale	.26	.61	.16	.69	.13	.72
No Slack	.25	.61	4.14	.04	6.79	.01
Pluralism	2.59	.11	.02	.88	.23	.63
No Credibility	2.44	.12	2.67	.10	.06	.80
Nonselective Cuts	.28	.60	.71	.40	.12	.73
Conflict	.30	.59	.59	.44	2.02	.16

Table 6 Comparisons Between Declining Institutions and All Others on REVENUES When Decline is Defined as at Least 6 Percent Decline Between 1977 and 1981

MANCOVA df = 12, 319						
Attributes		Attributes X Control		Attributes X Size		
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	
1.14	.33	.84	.61	1.66	.08	

ANCOVAS df = 1, 330						
	Attributes		Attributes X Control		Attributes X Size	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	.03	.86	1.30	.26	.13	.71
No Planning	.30	.58	3.38	.07	6.89	.01
No Innovation	3.46	.06	.66	.42	.72	.40
Scapegoating	.14	.71	.94	.33	.11	.75
Resistance	1.66	.20	.02	.87	.14	.70
Turnover	.00	.97	.42	.52	.13	.71
Low Morale	.03	.87	.27	.60	.48	.49
No Slack	6.52	.01	1.85	.17	.55	.46
Pluralism	2.36	.13	.04	.83	1.11	.29
No Credibility	1.63	.20	.08	.78	.10	.75
Nonselective Cuts	.59	.44	.00	.94	.52	.47
Conflict	1.05	.31	.06	.80	.06	.81

Table 7 Comparisons Between Declining Institutions and All Others on REVENUES When Decline is Defined as Decline in A Majority of Years Between 1977 and 1981, and Comparisons Between Institutions Experiencing Severe Decline and Institutions Experiencing Small Decline

MANOVA	<u>F</u>	<u>df</u>	<u>Significance</u>
Declining versus Others	1.41	18, 628	.11
Severe Decline versus Small Decline	.83	11, 8	.62

ANOVAS	<u>Decliners</u>		<u>Severe Decliners</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	2.22	.11	2.22	.11
No Planning	.43	.51	.01	.93
No Innovation	1.21	.27	1.41	.25
Scapegoating	.78	.38	.49	.49
Resistance	.75	.39	.82	.38
Turnover	2.85	.10	.03	.86
Low Morale	.46	.50	1.90	.18
No Slack	.76	.38	1.55	.23
Pluralism	3.42	.07	1.71	.21
No Credibility	.63	.43	2.52	.13
Nonselective Cuts	.45	.50	.40	.53
Conflict	.30	.59	.63	.44

Table 8 Comparisons Between Turbulent and Stable Institutions on ENROLLMENTS When Turbulent is Defined as an Absolute Change Score of 15 or More Between 1977 and 1981

MANCOVA df = 12, 315						
	Attributes		Attributes X Control		Attributes X Size	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
	2.73	.002				
ANCOVAS df = 1, 326						
	Attributes		Attributes X Control		Attributes X Size	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	10.20	.001				
No Planning	1.23	.27				
No Innovation	3.71	.05				
Scapegoating	.02	.90				
Resistance	1.77	.18				
Turnover	8.25	.004				
Low Morale	1.53	.22				
No Slack	7.99	.005				
Pluralism	1.29	.26				
No Credibility	.15	.70				
Nonselective Cuts	.75	.39				
Conflict	.08	.78				

Table 9 Comparisons Between Turbulent and Stable Institutions on REVENUES When Turbulence is Defined as an Absolute Change Score of 15 or More Between 1977 and 1981

MANCOVA df = 12, 315					
<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
3.61	.000	1.54	.11	1.48	.13

ANCOVAS df = 1, 326						
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	.01	.94	1.43	.23	1.74	.19
No Planning	4.92	.03	.73	.39	4.74	.03
No Innovation	10.51	.001	5.01	.03	4.55	.03
Scapegoating	12.01	.001	.02	.89	.86	.36
Resistance	26.48	.000	.43	.51	.54	.46
Turnover	1.20	.27	.08	.78	.12	.73
Low Morale	18.94	.000	.00	.97	.34	.56
No Slack	.42	.52	3.64	.06	1.56	.21
Pluralism	11.06	.001	.28	.60	.02	.89
No Credibility	12.94	.000	.63	.43	.11	.73
Nonselective Cuts	1.35	.25	6.98	.009	4.06	.04
Conflict	14.70	.000	.37	.54	.00	.96

Table 10 Comparisons Between Turbulent and Stable Institutions on ENROLLMENTS When Turbulence is Defined as ± 6 Percent or More Change Between 1977 and 1981

MANCOVA df = 12, 315						
<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>		
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	
1.97	.03	1.18	.29	.65	.80	

ANCOVAS df = 1, 326						
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	8.81	.003	.57	.45	1.20	.27
No Planning	1.56	.21	2.51	.11	.10	.76
No Innovation	3.04	.08	.60	.44	.39	.53
Scapegoating	1.07	.30	.28	.60	1.86	.18
Resistance	1.82	.18	2.04	.15	1.46	.23
Turnover	.00	.96	.04	.84	.43	.51
Low Morale	1.08	.30	.81	.37	.04	.84
No Slack	2.84	.09	2.71	.10	.43	.49
Pluralism	.22	.64	.23	.63	.02	.89
No Credibility	1.25	.26	2.11	.15	1.39	.24
Nonselective Cuts	1.11	.29	2.63	.11	.43	.51
Conflict	.05	.82	.55	.46	.32	.57

Table 11 Comparisons Between Turbulent and Stable Institutions on REVENUES When Turbulence is Defined as ± 6 Percent or More Change Between 1977 and 1981

MANCOVA							
df = 12, 315							
<u>Attributes</u>		<u>Attributes X Control</u>				<u>Attributes X Size</u>	
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
2.43	.005	2.00	.02	2.03	.02		

ANCOVAS							
df = 1, 326							
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>		
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	
Centralized	.76	.38	.07	.79	.01	.92	
No Planning	6.12	.01	3.60	.06	1.40	.24	
No Innovation	4.98	.03	6.13	.01	12.71	.000	
Scapegoating	12.70	.000	.13	.72	3.91	.05	
Resistance	18.06	.000	3.13	.08	1.95	.16	
Turnover	.69	.41	1.82	.18	.04	.85	
Low Morale	7.28	.007	.36	.55	2.19	.14	
No Slack	.06	.80	.01	.92	.45	.51	
Pluralism	5.28	.02	.43	.51	.00	.97	
No Credibility	11.73	.001	.52	.47	.89	.35	
Nonselective Cuts	8.11	.005	6.48	.01	4.13	.04	
Conflict	5.03	.03	2.88	.09	2.25	.13	

Table 12 Comparisons Between Growing Institutions and All Others on ENROLLMENTS When Growth is Defined as At Least 6 Percent Growth Between 1977 and 1981

MANCOVA					
df = 12, 315					
<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
1.55	.11	1.72	.06	.83	.62

ANCOVAS						
df = 1, 326						
	<u>Attributes</u>		<u>Attributes X Control</u>		<u>Attributes X Size</u>	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
Centralized	1.18	.28	7.82	.006	3.28	.07
No Planning	.25	.62	4.00	.05	.09	.77
No Innovation	1.10	.29	4.63	.03	1.17	.28
Scapegoating	6.04	.01	.00	.98	3.11	.08
Resistance	7.25	.008	1.15	.28	.70	.40
Turnover	.87	.35	.05	.82	.28	.60
Low Morale	.12	.73	3.91	.05	.03	.85
No Slack	.27	.60	.71	.40	.18	.67
Pluralism	.10	.75	.22	.64	1.18	.28
No Credibility	5.30	.02	2.28	.13	.15	.70
Nonselective Cuts	1.85	.17	2.18	.14	.15	.70
Conflict	1.83	.18	1.12	.29	.57	.45

Table 13 Comparisons Between Growing Institutions and All Others on REVENUES When Growth is Defined as At Least 6 Percent Growth Between 1977 and 1981

MANCOVA df = 12, 315							
Attributes		Attributes X Control		Attributes X Size			
<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>		
.81	.000	1.83	.04	1.77	.05		

ANCOVAS df = 1, 326							
	Attributes		Attributes X Control		Attributes X Size		
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	
Centralized	.03	.87	.07	.79	.08	.78	
No Planning	.99	.32	7.68	.006	.13	.72	
No Innovation	8.56	.004	5.59	.02	10.79	.001	
Scapegoating	5.59	.02	.03	.87	1.97	.16	
Resistance	9.51	.002	3.37	.07	3.55	.06	
Turnover	.41	.52	.53	.47	.01	.91	
Low Morale	3.67	.05	.59	.44	.91	.34	
No Slack	1.81	.18	.06	.81	.97	.33	
Pluralism	.33	.56	.42	.52	.00	.96	
No Credibility	3.68	.05	.47	.50	.67	.41	
Nonselective Cuts	4.12	.04	7.83	.005	5.60	.02	
Conflict	3.85	.05	1.76	.19	1.71	.19	