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A PRELIMINARY EMPIRICAL TEST OF DAFT AND WEICK'S TYPOLOGY
OF ORGANIZATIONS AS INTERPRETIVE SYSTEMS

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A Preliminary Empirical Test of Daft and Weick's Typology
of Organizations as Interpretive Systems

A preliminary test of the Daft and Weick typology using a controlled
environment has resulted in only limited support for the relationships
between construction of the environment and scanning, interpretation and
decision processes. Additional analysis, however, did indicate a strong
relationship between assumptions about the environment and performance of the
organization.

Only recently have scholars begun to identify the critical role that the process of interpretation plays within organizations. Interpretation has been hypothesized as determining the ways in which organizations will function internally (Daft & Weick, 1984) as well as its overall effectiveness and flexibility in adapting to changes in its external environment (e.g. Pfeffer & Salancik, 1978, Meyer, 1982; Dess & Keats, 1984). Most recently, Daft and Weick (1984) have proposed that numerous internal organizational characteristics and, ultimately performance, are premised on the ways in which key decision makers interpret their environments.

To date, however, little empirical research has been done to assess organizations as interpretive systems or to understand the actual impact that different processes of interpretation have, although a number of scholars have called for such research (e.g. Smircich & Stubbart, 1985; Pondy & Mitroff, 1979; Ford & Baucus, 1987). Recognizing that the paucity of study in the area might be related to the difficulty of researching interpretive processes and their relationships to other organizational factors, Daft and Weick (1984) proposed a tentative model of organizations as interpretive systems for future empirical testing. This paper reports a preliminary test of selected aspects of the Daft and Weick (1984) framework under a controlled environmental situation. A controlled environment was considered important to this preliminary investigation so that differences in outcomes could be attributed more directly to differences in ways of enacting the environment, rather than to all of the other extraneous factors that might otherwise modify the predicted relationships.

THE DAFT AND WEICK TYPOLOGY

In recent articles there has been increasing attention to the notion that the environments in which organizations exist are enacted by organizational participants (Weick, 1979; Smircich and Stubbart, 1985). Prior research (Aguilar, 1967; Wilensky, 1967) has suggested that certain fundamental assumptions about how an organization constructs its environment emerge. On the one hand, an organization enacts its environment as either analyzable or unanalyzable. Environments that are considered analyzable are those which are assumed to be easily understood, containing information that is concrete, hard, measurable and determinant. That is, organizations believe these environments contain predictable relationships that can be discovered, understood and employed. Environments that are unanalyzable are assumed to be confusing, chaotic and jumbled, with very little predictability in terms of events that will occur or their relationship to one another.

On the other hand, organizations can have either an active or passive orientation relative to trying to make sense of that environment. Thus, organizations with an active orientation engage in very proactive and energetic searches for information that will generate data about the environment. This orientation encourages organizations to go beyond the limits of existing information and constantly attempt to generate more. Organizations with a passive orientation are relatively inactive in trying to gather data that would help them comprehend their surroundings. These organizations prefer merely accepting whatever information is provided.

According to Daft and Weick (1984), these fundamental assumptions about the environment concerning analyzability and action orientation create four

distinct cognitive frames of reference that govern how information is gathered, interpreted and manipulated, decisions made and strategies formulated. (For a complete discussion of these relationships, consult Daft and Weick, 1984)).

Analyzable/Active

When the environment is analyzable and the organization is active in its attempts to understand that environment, organizations very proactively and systematically gather data about what is happening in the environment. Because the environment is considered analyzable, data are gathered actively within the organization (internally) but through impersonal channels, such as financial documents, or formal reports, studies, and searches (c.f. Aguilar, 1967; Wilensky, 1967). In processing this information, the organization, requires little discussion time since the data have already been reduced into summary documents or reports. Decisions are made primarily through detailed quantitative analysis and logic, with personnel carefully weighing decision alternatives. The strategy most often pursued will be that of analyzer, which Miles & Snow (1978) describe as a strategy in which the organization maintains a stable core of activities with movement into innovative areas only after careful and thorough consideration.

Analyzable/Passive

When the environment is believed analyzable, but the organization is passive in its action orientation, the organization will also rely on internal and impersonal data sources, but make no attempt to gather new data or systematically analyze actual data received. The organization will be satisfied with the routine and traditional mechanisms, such as formalized records or established information systems, available to assemble that

information. In other words, the organization will not attempt to reduce the amount of information it has, and will use fewer discussion cycles to reach decisional agreement. In decision making, managers are programmed to respond in prescribed ways based on past experiences using standard and routine guidelines. And, in strategy formulation, the organization will attempt to maintain traditional markets, protecting the areas in which it already knows how to compete successfully. This is consistent with the defender strategy of Miles and Snow (1978).

Unanalyzable/Passive

When the environment is considered unanalyzable, however, and the action orientation is passive, the organization will rely on nonroutine and informal information, rumors, hunches and speculation about what is happening. Rather than impersonal and internal sources, data will be gathered from external and personal sources, such as outside experts, or members of other organizations. Because the environment is not believed understandable, there will be multiple interpretations offered and extensive discussions will be required to arrive at a common interpretation. Decisions, therefore, will be arrived at through coalition building. Because the organization will be preoccupied with formulating its internal understanding, and not necessarily predisposed to act proactively, the strategy followed will be one of reactor. As described by Miles and Snow (1978), this strategy focuses on merely reacting to environmental pressures and making changes, not necessarily as a result of what's best for the organization, but of what the organization believes it is being pressured into.

Unanalyzable/Active

When the environment is constructed as unanalyzable, and the organization

is active in its attempts to understand, there will be experimenting and testing as a way to actively cope with the environmental uncertainty. The sources of data are external, yet personal, acquired primarily from irregular reports and intermittent feedback from actions taken. In interpreting information, the organization will require some basic rules and a moderate amount of discussion. There will be a moderate level of equivocality reduction. In decision making, the lack of precedence will encourage considerable discussion of "what-ifs," and relatively active experimentation to gain information about the environment and how it works. Daft and Weick (1984) contend that this is consistent with the strategy of prospector which Miles and Snow (1978) characterize as being highly innovative and risk-taking in the pursuit of entrepreneurial, "try it and see," market opportunities.

HYPOTHESES

Figure 1 summarizes the relationships proposed by the Daft and Weick model (1984). In general, Daft and Weick (1984) suggest that the sources of information and data acquisition, equivocality reduction and discussion cycles, decision processes, and strategic type will differ significantly depending on how the environment is constructed and depending on the organization's action orientation relative to that environment. Specifically, this research tested the following relationships suggested by the Daft and Weick (1984):

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insert Figure 1 about here

Hypothesis 1:   If the environment is viewed as unanalyzable, the organization will use significantly more external and personal sources of information and less internal and impersonal sources of information.

Hypothesis 2:   If the environment is viewed as analyzable, the organization will use significantly more internal and impersonal sources of information and less personal and external sources of information.

Hypothesis 3:   If the environment is viewed as active, the unanalyzable organization will use the same number of decision cycles as the analyzable organization. If the environment is viewed as passive, the unanalyzable organization will use significantly more decision cycles than the analyzable organization and the active organizations.

Hypothesis 4:   If the environment is analyzable, the passive and active organization will both report low equivocality reduction. This amount of equivocality reduction will be different from the unanalyzable organizations.

Hypothesis 5:   The unanalyzable/passive organization will report higher equivocality reduction than any of the other types.

Hypothesis 6:   Coalition building will be reported as the predominate decision making process in the unanalyzable/passive organization, speculation and what-ifs in the unanalyzable active organization, application of routine guidelines in the analyzable/passive organization and quantitative analysis in the analyzable/active organization.

METHODS

To test these hypotheses, questionnaire data were collected from 64 "banks" engaged in a banking simulation game. Because of the anticipated difficulty in operationalizing these constructs in actual banks and in eliminating the effects of extraneous factors, a bank simulation game appeared to offer the ideal setting in which to establish the existence and direction of the hypothesized relationships. According to Cameron and Whetten (1981), simulations, which are used extensively in financial and economic research,

are an underutilized, yet advantageous mechanism in organizational study (Cohen and Cyert, 1965). Simulations are especially appropriate in cases such as this model when there is either little empirical knowledge about the processes or outcomes to be examined or they are inherently ambiguous or complex (Inbar & Stoll, 1972).

The Banking Simulation

The simulation game employed, BankExec, was designed in collaboration with bankers to be played by bankers in simulating asset and liability management in an uncertain and evolving economy. Banks are grouped in communities of eight with each bank competing directly against the seven other banks in its community, as well as within the broader national economy. All banks started identically, that is, each team took over operations of the same bank about which they received two years worth of financial history. Each team functioned as the top management of that bank and were responsible for making strategic decisions at four different times (quarters in 1994) in which they were to determine product/market focus, interest rates and fee schedules on products (e.g. consumer loans, residential loans, commercial checking), and investment opportunities for generating, investing, or reallocating funds. Prior to each set of decisions, each bank received an economic forecast of anticipated national interest rates for the upcoming quarter, and detailed data about the financial position of their bank and the seven others in their community resulting from the previous quarter's decisions.

Sample

In this simulation 64 banks were created, each composed of 4-7 bankers attending the American Bankers Association Stonier Graduate School of Banking first year program. These 64 banks were subdivided into eight communities.

A total of 355 participants, all bank or banking related officers or managers, were assigned by the school's coordinators to one of those banks. The goal was to distribute experiences, banking tenure and education equally across groups.

Questionnaire Construction and Data Collection

Three different questionnaires were distributed during the game and filled out by each participant. A pre-questionnaire before the groups were formed into teams gathered demographic information about each individual, specifically sex, age, education level, banking experience, years in banking and size of employing institution. After the third decision period, a questionnaire was completed with items measuring sources of information used and their relative contribution to decisions, as well as qualitative information about the bank's strategic intentions and rationale. After the fourth and final decision, a questionnaire was completed with items measuring individual team members' beliefs about the environment, their banks' orientation to that environment, number of decision cycles, decision processes and information processing methods. Since questionnaires were included as part of the simulation experience, the return rate on questionnaires was consistently 90-98% per decision.

Independent Variable

A first step in the research was to construct the Daft and Weick (1984) framework based on measures of analyzability of the environment and action orientation relative to that environment and classify banks into appropriate cells. Questions asked participants to rank order on a seven point scale how easily understandable or confusing they believed the environment to be and how active or passive their bank appeared. Dichotomous variables were created by dividing each variable measure into two groups depending on whether the

groups' mean responses were above or below the total sample mean. Together, this classification scheme created the four cells of Daft and Weick (1984): unanalyzable/passive, unanalyzable/active, analyzable/passive, analyzable/active. The 63 classified banks were divided 14, 14, 15, and 20, respectively. (One bank did not return the final questionnaire).

Dependent Variables and Analysis

Sources of information were measured by asking participants to rank order the contribution of selected sources of information to the decisions being constructed. On a Likert scale (7=most important; 1=least important), participants rated the contribution of effective group decision making, group consensus, instructor guidance, influential individuals, the activities of other banks, forecast of economic trends, the financial portfolio, results of previous decisions, performance of other banks, speculation about the competition, discussion inside the group and discussions outside with other team members. Principal component factor analysis with varimax rotation of these items generated four factors, identified as personal/internal, personal/external, impersonal/internal and impersonal/external (see Table 1).

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insert table 1 about here

Items loading on each factor were summed and divided by the number of items as a measure of that factor. Then, similar to procedures used by Daft, Sormunen and Parks (1988), new variables were created for personal, impersonal, internal and external sources of data as follows:

1. Personal = (Personal/Internal + Personal/External)/2

2. Impersonal = (Impersonal/Internal + Impersonal/External)/2

3. Internal = (Personal/Internal + Impersonal/Internal)/2

4. External = (Personal/External + Impersonal/External)/2

The number of decision cycles used was measured by asking individuals to rank order whether their group used few or many discussion cycles (1=many; 7=one to two) before agreement was reached. The question was reverse scored and the mean response for each bank was calculated.

Equivocality reduction was measured by asking participants to assess on a 1-7 scale (7=high; 1=low) the importance of four methods of coping with the information available or constructed during the simulation. Trying to build a coalition through extensive discussion and discussing 'what-ifs' possibilities were used to operationalize high equivocality reduction, while employing routine banking guidelines and relying on quantitative analysis of existing financial information were considered to represent low equivocality reduction. Total scores for high and low equivocality reduction were constructed by summing and weighting the items composing each variable.

Table 2 presents means and standard deviations for dependent variables. A general linear model was used to determine initially if there were significant overall differences. Planned contrasts were conducted as part of that analysis to assess the predictions about mean differences among different classification types and sources of information, decision cycles and equivocality reduction. The specific contrasts examined are incorporated into Table 3 (see Results section).

Insert table 2 about here

Decision processes were measured by asking participants to select the

most representative decision process used in their banks from four choices: trying to create a consensus, applying routine banking guidelines, discussions of contingencies, and extensive quantitative analysis. Individual responses were examined by bank and a group plurality was determined and entered as the group's decision process. Frequencies and percentages of matches between decision process and classification type were recorded.

Additional analyses: Analysis of variance to assess performance differences between banks, depending on how they constructed their environment and responded to it, was used. Total return to shareholders, return on assets and net income were the dependent measures in these analyses.

RESULTS

Results of the general linear model indicated overall significant differences for impersonal and internal sources of information ($F=2.37$; $p<.10$ and $F=3.10$, $p<.05$, respectively), for number of decision cycles ($F=3.44$, $p<.05$), and for both high and low equivocality reduction ($F=2.57$, $p<.10$ and $F=2.56$, $p<.10$, respectively). There were no overall significant differences for external or personal sources of information.

Insert table 3 about here

Results of the planned contrasts for sources of information, equivocality reduction and decision cycles are presented in Table 3. While both unanalyzable groups did use personal sources of information, contrary to predictions (Hypothesis 1), all the groups used the same amount of personal information. While the unanalyzable groups did not differ in the use of

external data, the predicted differences (Hypothesis 1) between these groups and the analyzable group were also not supported. For impersonal sources of information, the analyzable groups used significantly more impersonal data, as predicted (Hypothesis 2), than the unanalyzable/passive group ($F=4.74$, $p<.05$); but, the predicted differences between the analyzable groups and the unanalyzable/active group were not supported. In addition, contrary to predictions, the unanalyzable/passive group used significantly more, not an equal amount, of impersonal data than the unanalyzable/active banks ($F=6.24$, $p<.05$). For internal sources of information, the analyzable groups used significantly more internal data than the unanalyzable/passive group ($F=7.02$, $p<.05$), as predicted (Hypothesis 2). Contrary to predictions, the banks that considered the environment unanalyzable and were passive used significantly more internal sources of data than banks who were unanalyzable/passive ($F=6.84$, $p<.05$). Predicted differences between the analyzable group and the unanalyzable/active group were not supported.

The planned contrasts results generally did support the hypothesis for number of decision cycles. As predicted in Hypothesis 3, the analyzable/active and unanalyzable/active groups reported the same number of decision cycles; the unanalyzable/passive group reported significantly more decision cycles than the active groups ($F=7.37$, $p<.01$) and significantly more than the analyzable/passive banks ($F=3.68$. $p<.10$).

The results for low equivocality reduction indicated significant differences, though in the opposite direction from predicted (Hypothesis 4). Although both sets of banks that viewed the environment as analyzable reported no differences in the amount of equivocality reduction, these same banks showed a significantly greater use of financial analysis and application of

traditional banking standards than either set of unanalyzable banks (F=5.95, p<.05).

The results for high equivocality reduction were generally opposite from predictions (Hypothesis 5). In general, both sets of analyzable banks reported significantly more, not less, use of coalition building and trial and error (F=4.20, p<.05). In particular, the banks that were unanalyzable/passive used significantly less, not more, coalitions and trial and error than either set of analyzable banks (F=5.78, p<.05).

The results examining the relationship between classification type and decision processes (Hypothesis 6) were tenuous. The higher proportion of agreement tended to occur in the unanalyzable/passive and analyzable/active banks. Table 5 indicates that within the analyzable/active group 35% made decisions based on quantitative analysis. Within the unanalyzable/passive group, 36% made decision by building a group consensus. Within the unanalyzable/active group, none made decisions by discussing what-if possibilities. Finally, within the analyzable/passive group, only 14% made decisions by employing standard banking criteria.

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insert table 5 about here

Results of the analysis of variance for performance measures also provided intriguing results in the study. They indicated that banks performed significantly differently depending on their beliefs about the analyzability of the environment and their action orientation. Significant performance differences were observed for all financial measures: year-to-date ROA (F = 14.31, p <.0001), total return to shareholders (F = 5.15, p < .01), and, net

income ($F = 3.27$, $p < .05$) (see Table 6). Post-hoc tests of the means (Scheffe) indicated that the analyzable/active group significantly out-performed all the other groups on ROA and total return to shareholders, and that the unanalyzable/passive group performed significantly worse than either of the analyzable groups.

DISCUSSION

This research set out to test the assertions of Daft and Weick (1984) that specific assumptions about the environment and particular action orientations would result in different scanning processes, interpretation processes and decision processes. Overall, the predicted relationships in the model were only partially supported. Components of the model for internal and impersonal sources of information, and decision cycles were supported, while differences in both high and low equivocality reduction were opposite from predictions. No significant support was found for personal and external sources of information. Observed matches between environmental construction and decision processes were also minimal, although there appeared to be more matches in banks when the environment was constructed as unanalyzable/passive or analyzable/active.

In terms of actual performance, those banks viewing the environment as analyzable and taking an active stance performed better on measures of ROA and total return to shareholders. Interestingly, these same banks (analyzable/active) also appeared not to limit themselves to only internal and impersonal sources of data. In fact, these banks used more total sources of information, some sources significantly more so, than other groups,

particularly when compared to those banks viewing the environment as unanalyzable and acting passively with respect to it. This observation appears consistent with Daft et. al. (1988) who found that high performing companies scanned more data sources more frequently than lower performing ones. Along with more data sources, fewer decision cycles were necessary for the active/analyzable group, perhaps because they generally had more information at their disposal as a result of using more data sources. The use of multiple sources of data may arise from increased feelings of control over the environment and a consequent lessened need for discussion because so much information has been shared among the group.

The analyzable/active banks also showed a significant difference in the use of quantitative analysis and standard banking procedures, even more so than banks that also viewed the environment as analyzable, yet acted passively with respect to it. Curiously, however, both active and passive analyzable banks also reported higher, not lower, use of coalition building and trial and error. It may be that an active stance relative to the environment encourages various methods of information processing strategies, perhaps, dependent upon the information being reduced.

There are several interpretations of the lack of congruence between decision processes and the classifications as proposed by Daft and Weick (1984). The first and most obvious is that the simulation game was not long-lived enough for groups to fully develop a consistent set of decision processes. However, while only four decisions were made, they do represent one full year of intense bank operations, during which success is contingent upon developing and implementing a consistent set of asset and liability management decisions. Another possibility is that measures were inadequately or

incompletely operationalized. It is entirely conceivable that the teams were unaware of the decision processes they used or were unable to identify the processes clearly enough in order to translate them into categories provided. The results for decision processes should, therefore, be considered with caution.

The specific relationships found do suggest that elements of the Daft and Weick (1984) typology offer insights into differences in internal organizational operations. However, in further explaining the limited support for the Daft and Weick (1984) typology, it is possible that the relationships formulated by Daft and Weick (1984) are simply not as clear-cut as those authors describe. In fact, the general patterns of means, from lowest in the unanalyzable/passive group to highest in the analyzable/active banks, suggests that model may be less cross-sectional and more a process of development along two separate continuum: one reflecting the analyzability of the environment and the other capturing the organization's action orientation. A continua of environmental construction might account for the observed pattern of means at the high and low ends and the difficulty of capturing differences in the sources of information tapped, the number of decision cycles or amount of equivocality reduction of those banks not at those extremes.

Perhaps the most interesting and managerially significant finding of this study relates to the performance differences. When the environment is believed to be understandable and the organization takes an active not passive stance, it is likely to perform better on both internal and external performance measures than companies with different environmental constructions. Further research, such as that by Daft et. al. suggesting that scanning processes differ in high versus low performance companies, would be

needed to explore how performance is related to or affected by scanning, interpretive or decisional processes.

For the interim, from these limited results, it can be suggested that there is a relationship between performance outcomes and positive assessments about the analyzability of the environment together with an active stance with regard to that environment. These factors also appear to be positively related to the use of numerous and varied information sources, which, if the expected causal relationship holds true, results in increased organizational efficiency with regard to decision making since fewer decision cycles are needed.

In summary, the significant differences found do indicate that the model has tapped into some important factors that may ultimately help explain performance differences as well as differences in internal organizational processes in companies operating in similar environments. Further research is needed to improve understand of the directionality of the relationships or suggest alternative explanations. It does appear, however, that beliefs of greater analyzability and activeness with regard to the environment have some relationship to better performance and that multiple sources of data may be one moderating factor in explaining those performance differences.

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Figure 1

Summary of Daft and Weick (1984)

	Unanalyzable/ Passive	Unanalyzable/ Active	Analyzable/ Passive	Analyzable/ Active
Information Sources	external, personal	external, personal	internal, impersonal	internal, impersonal
Decision Cycles	many	moderate	few	moderate
Equivocality Reduction	high	moderate	low	low
Decision Making	coalition building	trial & error	standard guidelines	quant. analysis
Strategy*	reactor	prospector	defender	analyzer

* Strategic differences were not assessed in this study.

Table 1

Data Sources

	FACTORS			
	Impersonal/ External	Impersonal/ Internal	Personal/ Internal	Personal/ External
Items:				
Effective grp discussion	.00540	.25058	.50544	-.11949
Influential individuals*	.18491	.39589	.32603	.40559
Activities of other bks	.83867	.07795	.02375	.01849
Group consensus	.14904	.12809	.67175	.14019
Instructor guidance	.05064	-.00530	.14196	.75929
Forecast of economy	-.10158	.72052	.12183	-.02745
Past portfolio of decisions	.20902	.73624	.12679	.05636
Previous decisions	.16317	.76393	.24935	.00035
Past performance	.84510	.16493	.11631	.08262
Speculation about other bks	.81195	.00351	.07639	.18676
In session discussion	.09485	.19992	.78845	.03166
Discussion with other bks	.13322	.00286	-.01715	.76314

*Item dropped due to pattern of loadings.

Table 2

Means and Standard Deviations

Variable	Unanalyzable/ Passive (n=14)		Analyzable/ Passive (n=14)		Unanalyzable/ Active (n=15)		Analyzable/ Active (n=20)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Personal	4.67	.336	4.78	.388	4.70	.344	4.85	.307
Impersonal	5.07	.322	5.26	.334	5.36	.445	5.29	.271
External	4.13	.438	4.11	.488	4.12	.513	4.17	.416
Internal	5.39	.394	5.66	.207	5.73	.318	5.29	.271
Decision Cycles	3.97	.772	3.38	.737	3.48	.868	3.07	.832
Hi Equiv.	4.69	.481	5.02	.413	4.98	.611	5.18	.497
Lo Equiv.	4.52	.753	4.82	.390	4.59	.491	5.02	.664

Table 3

VARIABLE	PLANNED CONTRASTS		F	DIRECTION SUPPORTED
Personal	Unanalyzable/ Passive	= Unanalyzable/ Active	0.04	=
	Analyzable/ Passive	= Analyzable/ Active	0.33	=
	Unanalyzable	> Analyzable	2.22	=
Impersonal	Unanalyzable/ Passive	= Unanalyzable/ Active	6.24**	>
	Analyzable/ Passive	= Analyzable/ Active	0.08	=
	Analyzable	> Unanalyzable/ Passive	4.74**	>
	Analyzable	> Unanalyzable/ Active	0.56	=
External	Unanalyzable/ Passive	= Unanalyzable/ Active	0.05	=
	Analyzable/ Passive	= Analyzable/ Active	0.03	=
	Unanalyzable	> Analyzable	0.63	=
Internal	Unanalyzable/ Passive	= Unanalyzable/ Active	6.84**	<
	Analyzable/ Passive	= Analyzable/ Active	0.41	=
	Analyzable	> Unanalyzable/ Passive	7.02**	>
	Analyzable	> Unanalyzable/ Active	0.17	=
Decision Cycles	Unanalyzable/ Active	= Analyzable/ Active	2.20	=
	Unanalyzable/ Passive	> Analyzable/ Passive	3.68*	>
	Unanalyzable/ Passive	> Active	7.37***	>

Table 3
(cont.)

VARIABLE	PLANNED CONTRASTS		F	DIRECTION SUPPORTED
Equivocality Reduction (High)	Analyzable/ Passive	= Analyzable/ Active	0.87	=
	Unanalyzable/ Passive	> Analyzable	5.78**	<
	Unanalyzable Passive	> Unanalyzable/ Active	2.27	=
	Unanalyzable	> Analyzable	4.20**	<
Equivocality Reduction (Low)	Analyzable/ Passive	= Analyzable/ Active	0.95	=
	Unanalyzable/ Passive	> Analyzable	4.64**	<
	Unanalyzable/ Passive	> Unanalyzable/ Active	0.13	=
	Unanalyzable	> Analyzable	5.95**	<

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

Table 4

Percentages and Matches
Environmental Construction and Decision Process

	Unanalyzable/ Passive	Analyzable/ Passive	Unanalyzable/ Active	Analyzable/ Active
Decision Process Predicted	Coalition Building	Std Banking Guidelines	Trial & Error	Quantitative Analysis
Number Observed	6	2	0	7
Percent of total in category	43%	14%	0%	35%

Table 5

Performance Differences by Classification Type

Variable	F	Unanalyze/ Passive	Analyze/ Passive	Unanalyze/ Active	Analyze/ Active
ROA	14.31***	.19	.62	.41	.86
RTS#	5.15**	−.03	.12	.05	.27
NET INCOME	3.27*	.96	1.50	1.02	1.66

Total return to shareholders (% increase in stock price plus dividends)
*** p < .0001
** p < .01
* p < .05

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