

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 7 August 1998		3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE AN EXAMINATION OF THE RETALIATION PROCESS AGAINST WHISTLEBLOWERS: A STUDY OF FEDERAL GOVERNMENT EMPLOYEES				5. FUNDING NUMBERS
6. AUTHOR(S) Michael T. Rehg				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Indiana University				8. PERFORMING ORGANIZATION REPORT NUMBER 98-022D
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) THE DEPARTMENT OF THE AIR FORCE AFIT/CIA, BLDG 125 2950 P STREET WPAFB OH 45433				10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION AVAILABILITY STATEMENT Unlimited distribution In Accordance With 35-205/AFIT Sup 1				12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words)				
14. SUBJECT TERMS				15. NUMBER OF PAGES 148
				16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT		18. SECURITY CLASSIFICATION OF THIS PAGE		19. SECURITY CLASSIFICATION OF ABSTRACT
				20. LIMITATION OF ABSTRACT

AN EXAMINATION OF THE RETALIATION PROCESS AGAINST
WHISTLEBLOWERS: A STUDY OF FEDERAL GOVERNMENT EMPLOYEES

Michael T. Rehg

Submitted to the Faculty of the University Graduate School
in Partial Fulfillment of the Requirements
for the Degree
Doctor of Philosophy
in the Kelley School of Business
Indiana University

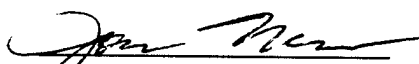
July 1998

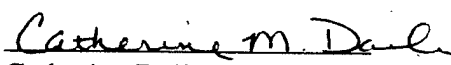
DTIC QUALITY INSPECTED 1

19980811 139

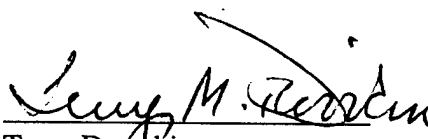
ACCEPTANCE

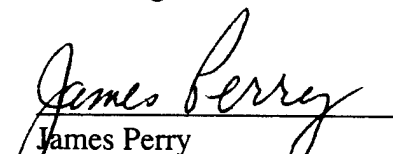
Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirements of the Degree of Doctor of Philosophy.


Janet Near, Chairperson

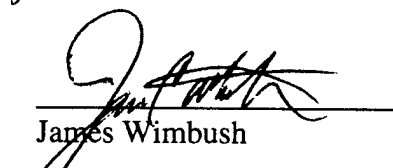

Catherine Daily

Doctoral Committee


Terry Dworkin


James Perry

June 29, 1998


James Wimbush

© Michael T. Rehg 1998

All Rights Reserved

ACKNOWLEDGMENTS

And some to such a height of learning grow,

They die persuaded, that they nothing know.

- Sir John Beaumont: Of the Miserable State of Man.

After finding out how long this dissertation was, my 13-year old son remarked, “How can you write so much on one thing?” and my conclusion is that I couldn’t have without the support and guidance of many talented people. Nothing we do is ever really an individual effort, and this dissertation is no exception. Nevertheless, I am solely responsible for the errors contained within.

I had help in this journey before I even reached Indiana University. This three-year effort would not have even begun were it not for Craig Brandt, and many others on the AFIT faculty who helped and encouraged me, first through my master’s program, and more recently, through the Ph.D. application process. I’m especially grateful to Lt Col Jim Van Scotter, who has been both a mentor and a colleague over the past four years, from applying while I was in Egypt to the downsizing of AFIT.

I am extremely fortunate to have met and worked with Janet Near. She kept me on track despite my efforts to get sidetracked into remote tangents. I’d still be meandering somewhere had she not focused my efforts to get this document done, and leave my other far-fetched ideas for later. It’s fitting that she was the first professor I talked to before arriving at IU. She was always willing to lend an ear, and find a way to make things work. I look forward to continued collaboration in the future.

My committee was absolutely fantastic, fun to work with, conscientious and diligent. Their diverse interests provided me with multidisciplinary insights to the topic. Special thanks to Catherine Daily, who not only worked through the proposal and dissertation, but my Pre-Proposal Paper as well. Her thorough, prompt, and organized methods made revisions much easier. Terry Dworkin, James Wimbush and Jim Perry all gave unselfishly of their time, whether it was to talk business or just chat.

Although not on my committee, Chris Albright was also helpful, willing to spend time answering my questions on statistics. I also owe special thanks to Arvind Parkhe, for encouraging me to look at similarities between disciplines, and especially for providing much-needed humor at appropriate times.

I've also been fortunate to meet and work with Marcia Miceli of Ohio State. She provided her time and shared her knowledge of whistle-blowing as I worked with the MSPB data sets. Her expertise and timely advice has been not only valuable, but also remarkable given her location. I hope I can reciprocate in kind in the future.

I've enjoyed working with my cohort through the long hours of classwork—Wade Danis, JulieBeth Paine, Brian Lee, Yusef Nur and Stewart Miller. Sweating blood together was much more fun than sweating blood alone! Luckily we had a great “upperclass” to lean on, like Lou Marino, Gary Insch, Katherine Ryan and Karen Strandholm, who were good big brothers and sisters.

Lastly, where would I be now were it not for Denise? She rescued me long ago from oblivion, and has continued to do so for the last 15 years. Through it all, her counsel has been wise and proper, and when I still didn't get it, she provided the much needed motivation! She has endured my absence over the last four years, from a

remote in Egypt to a semi-remote in Bloomington. There is no way I could have done this without her taking care of all the family responsibilities. Knowing I can't ever really repay that debt, I hope I can at least pay off the interest.

Most especially, I dedicate this dissertation to the three stars in the sky in which I find joy, who provide endless variety to my life, and who make all of the struggles worth the effort – Nicky, Pip and Marie.

TABLE OF CONTENTS

ACKNOWLEDGMENTS	iv
TABLE OF CONTENTS	vii
LIST OF APPENDICIES	x
LIST OF TABLES	xi
LIST OF FIGURES	xiv
ABSTRACT	xv

CHAPTER

1. INTRODUCTION	1
Introduction	
Significance of the Research	
Research Questions	
Outline of Research	
2. LITERATURE REVIEW	7
Definition of Whistle-blowing	
Predictors of Whistle-blowing	
Context of Retaliation	
Definition of Retaliation	
The Retaliation Process	
Predictors of Retaliation	
Summary	
3. STUDY ONE: CAN LEGISLATION PROTECT FEDERAL WHISTLE-BLOWERS?	26
Introduction	
Legislative Effectiveness	
Power Theory	

Seriousness of the Wrongdoing
 Escalation of the Situation
 Methods
 Summary

4. STUDY ONE: RESULTS AND DISCUSSION 42

Introduction
 Effect of Federal Whistle-blowing Legislation over Time
 Predictors of Retaliation
 Comparing the Regression Equations
 Discussion
 Seriousness and Comprehensiveness of Retaliation
 Limitations to Study One
 Summary and Future Research Questions

5. STUDY TWO: A SYNTHESIS AND EXTENSION
 OF RETALIATION MODELS 75

Introduction
 Retaliation Theory
 Extending Retaliation Models
 Control Theory
 A Proposed Retaliation Model
 Methods
 Summary

6. STUDY TWO: RESULTS AND DISCUSSION 98

Introduction
 Informal vs. Formal Retaliation
 Persistence of the Whistle-blower
 Discussion
 Predictors of Informal Retaliation
 Predictors of Formal Retaliation
 The Dual-Mode Retaliation Phenomenon
 Predictors of Persistence of the Whistle-blower
 Limitations to Study Two
 Summary

7. GENERAL SUMMARY AND CONTRIBUTIONS	119
Introduction	
Summary	
Overall Limitations	
Directions for Future Research	
Implications for Practice	
REFERENCES	130
VITA	148

LIST OF APPENDICIES

APPENDIX A: Measures for Study One	138
APPENDIX B: Measures for Study Two	145

LIST OF TABLES

<u>Table 1</u>	
Summary of Previous Findings for relevant variables	19
<u>Table 2</u>	
Trends in whistle-blowing and retaliation in the MSPB surveys of federal employees.	39
<u>Table 3</u>	
Hypotheses for Study One.	40
<u>Table 4</u>	
Descriptive statistics and results of difference of proportions tests for incidences of wrongdoing, whistle-blowing, identified whistle-blowing, and retaliation. . .	43
<u>Table 5</u>	
Means, standard deviations, and correlations for all variables in the full 1980 data set.	46
<u>Table 6</u>	
Means, standard deviations, and correlations for all variables in the full 1983 data set	47
<u>Table 7</u>	
Means, standard deviations, and correlations for all variables in the full 1992 data set	48
<u>Table 8</u>	
Results of hierarchical regression analyses on the comprehensiveness of retaliation across three time periods using multiple independent variables.	49
<u>Table 9</u>	
Crosstabs of seriousness of wrongdoing and identified whistle-blowing, 1980-1992	51
<u>Table 10</u>	
Results of the regression on the dependent variable comprehensiveness of retaliation with interaction of seriousness and other independent variables across time.	54
<u>Table 11</u>	
Descriptive characteristics of the external channel count variable, using samples of identified whistle-blowers.	59

Table 12

Results of regression of the dependent variable: use of external channels by seriousness of wrongdoing using identified whistle-blowers	60
--	----

Table 13

Regression equations compared using LISREL.	62
---	----

Table 14

Results of the hierarchical regression of comprehensiveness of retaliation using all 13 types of retaliation measured in 1992, and multiple independent variables.	74
--	----

Table 15

Categorizing the Ewing (1980), and Devine and Aplin (1988) frameworks into O'Day's (1974) description of the four steps in the retaliation process . . .	77
---	----

Table 16

Frequencies of retaliation types from the 1992 Merit Systems Protection Board survey	91
---	----

Table 17

Frequencies of items used to create Persistence measure, from question 61 of the 1992 MSPB survey.	93
---	----

Table 18

Determination of sub-samples for regression on dependent variables formal-only retaliation, informal-only retaliation, dual-mode retaliation and persistence of the whistleblower	95
---	----

Table 19

Type of analysis performed and results for each hypothesis in Study Two	96
---	----

Table 20

Means, standard deviations, and correlation between informal-only retaliation and independent variables in the 1992 data.	99
--	----

Table 21

Means, standard deviations, and correlation between formal-only retaliation and independent variables in the 1992 data.	100
--	-----

Table 22

Means, standard deviations, and correlation between dual-mode retaliation and independent variables in the 1992 data.	101
--	-----

Table 23

Comparison of standardized beta weights from multiple regression analysis on the dependent variables informal-only, formal-only and dual-mode retaliation using independent variables from Study One	103
--	-----

Table 24

Means, standard deviations, and correlation between persistence and independent variables in the 1992 data.	106
---	-----

Table 25

Results from hierarchical regression analysis on the dependent variable persistence of the whistleblower using multiple independent variables from Study One.	107
---	-----

Table 26

Crosstabs of mode of retaliation by number of retaliation experiences.	110
--	-----

Table 27

Crosstabs of identified whistle-blowers by type of retaliation experience	111
---	-----

LIST OF FIGURES

<u>Figure 1</u>	
Model of whistle-blowing process	11
<u>Figure 2</u>	
Hypothesized relationship between power, seriousness, the channels used to report wrongdoing and the type of retaliation	34
<u>Figure 3</u>	
Interaction between seriousness of wrongdoing and pay, using 1980 sample of identified whistle-blowers.	55
<u>Figure 4</u>	
Interaction between seriousness of wrongdoing and supervisor support, using 1983 sample of identified whistle-blowers.	56
<u>Figure 5</u>	
Interaction between seriousness of wrongdoing and race, using 1992 sample of identified whistle-blowers.	57
<u>Figure 6</u>	
Relationship between external reporting and seriousness of wrongdoing, using 1980 sample of identified whistle-blowers.	60
<u>Figure 7</u>	
Short- and long-term outcomes of whistle-blowing	81
<u>Figure 8</u>	
Categories of retaliation experienced by identified whistle-blowers in the 1992 sample	89
<u>Figure 9</u>	
Path diagram of retaliation types and their predictors, using standardized coefficients from three regression equations, with sub-samples of all identified whistle-blowers who suffered retaliation	104

ABSTRACT

Despite federal legislation protecting whistle-blowers, surveys of federal employees have shown an increasing trend in retaliation against whistle-blowers. Past research has shown that employees who did not get the support of supervisors and management and who reported wrongdoing to external channels were especially likely to suffer retaliation. Three surveys conducted by the United States Merit Systems Protection Board of thousands of federal government employees were used to examine whistle-blowing and retaliation trends across time, and to establish a baseline of significant predictor variables of retaliation in general. Then, retaliation was examined in more detail, dividing it into formal and informal responses organizations take against whistle-blowers to determine if different predictors and effects were associated with each type of retaliation. These categories reflect the social and bureaucratic means of control that are present in organizations.

Significant changes from 1980 to 1992 included a decrease in the observance of wrongdoing, an increase in the amount of whistle-blowing, a decrease in the amount of identified whistle-blowing and an increase in the amount of retaliation against identified whistle-blowers. Supervisor lack of support and management lack of support were consistently related to an increase in the amount of retaliation suffered by identified whistle-blowers.

Somewhat different results were evident when retaliation was split into informal and formal types. Informal retaliation was associated with both coworker lack of support and management lack of support, while formal retaliation was associated with management lack of support and most recent performance appraisal.

The most prevalent type of retaliation, however, was the combination of both informal and formal responses to whistle-blowers. Lack of support from supervisors and management, as well as most recent performance appraisal, and reporting to external channels, were significantly associated with this dual-mode of retaliation.

Additionally, it was found that whistle-blowers were more likely to complain about the retaliation when both informal and formal retaliation were experienced than when either type was experienced exclusive of the other.

The results suggest that retaliation is more of a social control mechanism than a bureaucratic one, but that informal and formal controls occur most frequently together.

CHAPTER ONE

INTRODUCTION

Introduction

As greater numbers of employees take an active role in reducing misconduct in the workplace, whistle-blowers are coming forth in all types of industries and organizations - educational institutions, private business, civil service organizations, and public and government organizations. However, not all organizations are receptive to this aid from within. On a weekly, if not daily basis, cases are appearing in the media of whistle-blowers who suffer retaliation at the hands of their employers. A recent case involved Mr. Jeffrey Wigand, a research director for the Brown and Williamson tobacco company who exposed tobacco industry executives in 1994 for lying to Congress about the addictive properties of nicotine in cigarettes (James, 1997). He blew the whistle on an industry which had never lost a lawsuit, for which he was labeled a chronic troublemaker, was sued for violation of contract in disclosing company secrets, and received two telephone death threats (Gleick, 1996). In another case, George Galatis and George Betancourt's exposure of safety violations at the Millstone Connecticut nuclear power plant drew retaliatory actions from Northeast Utilities and the Nuclear Regulatory Commission (Pooley, 1996). As they took their case above their non-responsive supervisors, Galatis had his performance evaluation downgraded, was "offered" a job in another department, and had his personnel file

forwarded to company lawyers, while Betancourt was told he was not a “team player” and was reassigned.

Although whistle-blowing in general has received a great deal of attention (see Miceli & Near, 1992 for a review), retaliation - one possible outcome of the whistle-blowing process - has received less attention in the academic literature. Past research on retaliation has generally been conducted in one of two ways: case studies of situations brought to the attention of the media (Vinton, 1994; Glazer & Glazer, 1989; Soeken & Soeken, 1987), and large mail surveys which looked at retaliation in general, in terms of its predictors and effects (Miceli & Near, 1989; Near et al., 1995; Near & Miceli, 1986; Parmerlee et al., 1982).

Significance of the Research

Although past research has used two different methods of approaching the subject, retaliation is still not well understood in the organizational setting. Are we to believe that most whistle-blowers do suffer retaliation, as the case studies seem to show, or that most whistle-blowers do not suffer retaliation, as the mail surveys show (USMSPB, 1993)? Have the Civil Service Reform Act of 1978 and the Whistle-blower Protection Act of 1989 been effective in protecting whistle-blowers, and if not, is there something inherent in the process of whistle-blowing that defies legislative attempts to prevent retaliation? At a basic level, we don't know much about the behavior of individuals or organizations in whistle-blowing situations. Empirical evidence will help to inform and refine theory about the phenomena.

At a practical level, whistle-blowing results in huge tangible and intangible costs to organizations. Depending on the issue, whistle-blowing can cost corporations

large amounts of money. Some recent cases include General Electric, \$69 million (Seagull, 1995), Teledyne Industries, \$11.5 million (Wall Street Journal, 1996), and the previously mentioned tobacco industry involved in a \$368.5 billion lawsuit. Dworkin and Baucus (1995) found that whistle-blowers that report to external sources usually have better evidence of wrongdoing, and as a result, more credibility with third parties. A firm which retaliates against these individuals will likely experience negative publicity and increased costs of litigation. Intangible costs, which are harder to measure, include damage to the corporate culture, lower employee trust and loyalty to the organization, or lowered productivity, which may result from the general upheaval and corporate ill will exposed by a whistle-blower. Baucus and Baucus (1997) found that firms convicted of illegal wrongdoing suffered lower long-term performance (in return on assets and return on sales measures) than non-convicted firms. Multiple convictions resulted in even lower long-term performance, leading them to conclude that "...managers should worry about damage to a firm's reputation and strive to avoid the label of corporate wrongdoer" (Baucus & Baucus, 1997: 147). Strategically then, managers have cause to be concerned about whistle-blowing.

With the rising interest in whistle-blowing in recent years, the proliferation of cases of retaliation against whistle-blowers, and the impacts of the organization's response to whistle-blowing, it has become imperative to describe retaliatory behavior in more detail and link it to an overall process model of whistle-blowing.

Previous research has studied the predictors of retaliation in general. The primary goal of this research is to discover if there are different types of retaliation and, if so, do predictors and effects vary by type?

The sensitivity of the topic of retaliation makes it a difficult phenomenon to research regardless of the methodology employed. Corporate leaders are generally not enthusiastic about sponsoring controversial research on wrongdoing in their organizations - research which may itself lead to greater employee unrest. Where access to an organization is gained, the danger perceived by whistle-blowers if they are identified decreases their willingness to participate, despite reassurances of confidentiality. Problems such as these, the different methods which have been used, and the different study settings (public vs. private) may have contributed to the different impressions of how much retaliation actually occurs in the workplace. But whether retaliation against whistle-blowers is widespread, as suggested by case studies, or less prevalent, as reported by federal employees on questionnaires, it is still an important phenomenon for managers from all types of organizations to understand. Its occurrence has an impact on the relationship between supervisors and subordinates, employees and their organizations, and organizations and the society in which they function. Unfortunately, the methodological problems have led to a lack of an encompassing theory and understanding of the variables that explain retaliation against whistle-blowers (Near & Miceli, 1996).

Research Questions

Retaliation is one outcome of the whistle-blowing process, a process that involves both individuals and organizations. Retaliation is also a process that will depend on personal, situational, and organizational characteristics in predicting its occurrence and outcome. One would expect then, an interaction between variables that describe organizations in general (like organizational performance, climate and

control), and variables that describe individuals (like commitment), or both organizations and individuals (like power).

Past studies on retaliation against whistle-blowers have found some significant factors, but data limitations have led to inconclusive or conflicting results between studies. For example, coworker support did not significantly predict retaliation in Parmerlee et al.(1982), or in Miceli and Near (1989), but was a significant predictor in Near et al. (1995). Race is another variable that has been both a non-significant predictor (Miceli & Near 1989), and a significant predictor of retaliation (Near et al., 1995).

This study will use a synthesis of theoretical approaches and data points, to get a better understanding of predictors of retaliation against whistle-blowers. The following questions will be specifically addressed:

- 1) What trends emerge across time concerning whistle-blowing and retaliation?
- 2) Is legal protection enough to discourage retaliation when employees report wrongdoing they observe?
- 3) Can the retaliation process be better defined so as to improve our ability to predict its occurrence?

Answering these questions will give employees and managers a better understanding of the process of retaliation. With this understanding they will be better able to reduce its occurrence in their organizations, with the potential of improving the climate of the workplace in regards to whistle-blowing and retaliation. Hopefully, this will lead to a safer and more productive workplace for all employees.

Outline of Research

First, in chapter two, I review the literature on whistle-blowing, its definitions, and the organizational context in which it occurs. Also explored in chapter two is the phenomenon of retaliation, leading to a definition of retaliation against whistle-blowers. In chapter three, I present the theory, hypotheses, and methodology for conducting Study One. Study One examines an overall model of whistle-blowing using data collected across three time periods, to provide the basis for new insights contained in Study Two. Chapter four contains the results and discussion of findings from the analysis of the data pertaining to Study One. Chapter five lays the foundation for Study Two, which is the primary focus of this dissertation. Here I extend models of retaliation drawing upon the theory of control to examine hypotheses about different types of retaliation. Chapter six contains the results and discussion of findings from the analysis of the data pertaining to Study Two. Finally, chapter seven presents a summary of the findings from both Study One and Study Two, limitations inherent to whistle-blowing and retaliation research common to both studies, and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Whistle-blowing is an action that takes place in an organizational setting. This setting has some implications for the term "retaliation," and will serve to focus the discussion. Despite the fact that people of all cultures have engaged in retaliatory behavior since the beginnings of recorded history, retaliation against whistle-blowers is not yet well understood. To help us understand retaliation, we must first look at the whistle-blowing construct, and those who "blow the whistle."

Definition of Whistle-blowing

The term "whistle-blowing" gives one the impression of an individual making a loud noise with an object traditionally used by policemen and sport referees, with the intent of calling attention to a criminal action or a rules infraction. In a business context, the term leads the reader to assume that information is being made public to disclose some type of wrongdoing on the part of the organization, to protect the welfare of a private individual, other employees, or the general public. This theme is often seen in headline stories about disgruntled employees who have gone to the media or Congress to correct corporate wrongdoing. But these are often sensational stories which may not be representative of whistle-blowing behavior in general.

The basic concept behind the term "whistle-blowing" is one of an individual taking the action of *reporting* an individual or group's wrongful behavior to another

individual or group (Elliston et al., 1985). Of the many definitions in the literature, they all have in common the idea that someone observes wrongdoing and tells someone else about it (Bok, 1980; Chalk & von Hippel, 1979; Miceli & Near, 1985). Whistle-blowers have to do more than talk about the wrongdoing with the person committing the action, they must *report* it to someone else. From this core concept, definitions diverge on several dimensions, including, 1) to whom the whistle-blower reports the wrongdoing (the complaint recipient), 2) whether the complaint recipient resides inside or outside the whistle-blowers' organization (internal or external reporting), 3) the nature of the behavior and whether or not it qualifies as wrongdoing, and 4) the motivations and expectations of the whistle-blower regarding his/her actions (Elliston et al., 1985).

At the first level of distinction, it is generally agreed that reporting wrongdoing to family members, friends, or coworkers does not constitute whistle-blowing, since these individuals are not usually able to do anything about the wrongdoing. The second distinction, and one of the most controversial, is whether the whistle-blower reports the wrongdoing internally (within the organization) or externally (outside the organization hierarchy). Chalk and von Hippel (1979: 50) defined whistle-blowing as occurring when someone "independently makes known concerns to individuals outside the organization," while Bok (1980: 2) limited the definition to actions that were "aiming to spotlight neglect or abuses that threaten the public interest." Elliston et al. (1985: 6) defined whistle-blowing as encompassing "only those actions which were aimed at making the information public." Graham limited the definition to "principled organizational dissent" which refers to taking action on wrongdoing that is moral or

ethical in nature (Graham, 1986). Whistle-blowing has been argued to be distinct from "informing," in that the whistle-blower has a definite goal in mind--termination of the wrongdoing--and some confidence in the success of the whistle-blowing (Keenan & McLain, 1992; Near & Miceli, 1996).

Near and Miceli (1985) addressed these issues in their definition of whistle-blowing, which has since been used frequently (King, 1997; Meithe & Rothschild, 1994; Miceli & Near, 1992). They defined whistle-blowing as "the disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action" (Near & Miceli, 1985: 4). It is an attempt by an individual to cause the organization to change its behavior. This definition refocuses the internal/external dilemma to the real issue for purposes of this study--the risk involved when an employee attempts to create change within the organization.

Most whistle-blowers that report to "external" channels have already reported the wrongdoing to "internal" channels, at least in the samples of employees examined to date (Miceli & Near, 1992). The risk of retaliation is present when reporting wrongdoing both internally and externally. If complaint recipients have the power to change the wrongful behavior, they often have the power to retaliate against the whistle-blower as well. This means that both internal and external reporting poses a risk for employees. A case in point is the crash of ValueJet flight 592 in May 1996, due to an explosion of improperly boxed oxygen-generating canisters. FAA inspectors had reported internally (to a supervisor), that procedures for locating dangerous cargo were inadequate. Their warnings were ignored, and they were threatened with

dismissal, before reporting to external channels (Associated Press, 1996). Dworkin and Baucus (1995) found that internal whistle-blowers were fired more quickly than whistle-blowers who also went external to the organization, although internal whistle-blowers suffered less extensive retaliation in general. It is the threat of retaliation then, that is the important distinction. Someone who observes wrongdoing has to decide whether to report it and risk retaliation or remain silent. (Anonymous reporting is a special case—it's not as effective in most cases, since details usually can't be pursued, but it also reduces the risk of retaliation against the whistle-blower). Miceli and Near's (1992) model of the whistle-blowing process seems to be the most complete in the literature today, and will be used as the framework for examining retaliation behavior.

Predictors of Whistle-blowing

There have been upwards of 25 quantitative studies of whistle-blowers, looking at personal, situational, and organizational characteristics that may help to explain why it occurs and who is most likely to blow the whistle. While a complete reiteration of these results is not necessary here, because it is not the main focus of the study, some general observations should be made. Three perspectives, on why observers of wrongdoing report what they see, relate to: 1) moral development, 2) loyalty, and 3) interaction effects between personal and situational variables (Near & Miceli, 1996). Whether their moral development is higher, or they are more loyal (or disloyal) than non-reporters of wrongdoing has not been conclusively determined (Miceli, Dozier & Near, 1991). Often, it is the nature of their jobs that leads them to observe wrongdoing in the first place. In some cases, whistle-blowers have been shown to be employees with professional status (Miceli & Near, 1988), often committed to their organizations,

and not deserving of the characterization that they are "crackpots" (Near & Miceli, 1996). Whistle-blowers have also been found to be older, long-term employees in an upper level position (Dworkin & Baucus 1995; Miceli & Near 1984, 1985, 1992). At that point, situational and personal characteristics may interact to compel the observer to blow the whistle. Once observers blow the whistle, they become vulnerable to retaliation, especially if they identify themselves. It is this retaliation against whistle-blowers that is of interest in this research.

Miceli and Near divide the whistle-blowing model into five stages: Stage 1: Occurrence of Wrongdoing; Stage 2: The Decision Process Preceding Whistle-blowing; Stage 3: Actions Taken by the Focal Member; Stage 4: Reactions of Others to Whistle-blowing and the Whistle-blower; and Stage 5: Assessment of the Reactions of Others. This research will focus on stage 4, the reaction to whistle-blowing, and more specifically, the negative reactions classified as retaliation. Some of the variables present in earlier stages of the whistle-blowing model will also affect stage 4, such as the seriousness of the wrongdoing, and the amount of power possessed by the whistle-blower. The whistle-blowing process is a complex one, and includes several sub-processes. Retaliation is one of these sub-processes. Factors that influence the larger whistle-blowing process may be affecting the retaliation sub-process as well. This issue will be addressed as the research progresses.

Legislation encouraging the reporting of wrongdoing among federal employees has appeared to influence more people to favorably decide (stage 2) to blow the whistle (stage 3) increasing the amount of whistle-blowing taking place in federal organizations, but its effect on the reactions to whistle-blowing (stage 4) appears to

have been detrimental, given the increase in retaliation. To find out why retaliation has increased despite whistle-blowing legislation we must examine the phenomenon in greater detail.

Context of Retaliation

Retaliation is such a complex phenomenon that theories about it originate in many different disciplines--political science (game theory, international law), economics (conflict theory), industrial-organizational psychology (negotiations), organization theory (clan/social control, strategic response), organizational behavior (retributive justice, organizational culture), international business (bargaining power of multi-national corporations) and law (behavior of law). These are only a few of the constructs and concepts from a limited number of disciplines, but the point is clear: retaliation is not a new concept in the study of human behavior--it has already been documented in various areas, using different terminology. This makes it necessary to specify the type of retaliation being researched, due to the abundance of retaliation definitions in the literature.

Obviously, all types of retaliation are not the same. The context in which retaliation is considered here, the whistle-blowing process, will serve to focus the interpretation of the retaliation phenomenon. For example, retaliation by one business firm in response to the actions taken by another firm may represent one form of retaliation. Another form of retaliation is that taken by an employee or customer in response to a perceived injustice done to them by a supervisor or an organization (e.g., Skarlicki & Folger, 1997). Whistle-blowing itself could be perceived as the disgruntled employee's attempt to "even the score" against a co-worker or supervisor,

or the entire organization. This type of whistle-blowing may be done in "opportunistic self-interest" (Perry, 1993: 81).

Retaliation against whistle-blowers is distinct from the above descriptions of retaliation. O'Day (1974) described retaliation as management's reaction to reform. This kind of retaliation would not be a response to a perceived injustice, but a means for an organization to *control* the whistle-blower through the exercise of *power*. In this context, retaliation may be a bureaucratic response to a threat or a tactical action to prevent a future threat to the organization. Bureaucratic organizations are less receptive to change (Daft, 1978), and since whistle-blowing is a challenge to the authority structure, the basis of bureaucracy, bureaucratic organizations will be resistant to whistle-blowers (Weinstein, 1979).

Definition of Retaliation

Although retaliation may be thought of as having a universal definition, it has not been well defined in a theoretical sense in past whistle-blowing research. At a basic level, its definition is "1: to return like for [like]; repay or requite in kind (as an injury); 2: to put or inflict in return, especially to return evil for evil." (Websters, 1981: 1938) Onuf (1974: 6), in the context of international law, defined reprisal as "a retaliatory act provoked by a prior act seen as unwarranted by its recipient." Even in international law, the perceptual nature of retaliation is evident.

The perceptual nature of retaliation may be one reason for the difficulty in defining it. If an individual does not perceive an action as retaliation, then to them it has not occurred, and conversely, an action may be perceived as retaliatory, but was not meant to be by the person or organization taking the action. This leads to the

problem of linking the actions of the whistle-blower and the organization, and may lead to what Boulding (1962: 35) referred to as "misunderstanding processes." Was the action perceived as retaliation to whistle-blowing actually taken in response to the whistle-blowing, or would it have occurred anyway? Operationally, retaliation has been defined by a variety of actions for respondents to choose from on federal surveys, ranging from harassment to firing (USMSPB 1984, 1993). Past research has summed the number of different types of retaliatory actions that respondents experienced after blowing the whistle, to create an overall organizational reaction to the whistle-blowing. As a whistle-blower experiences more and more retaliatory actions (especially from more than one source), the chance that the reaction to whistle-blowing was unintentional, or exists only in the perceptions of the whistle-blower, is reduced.

Retaliation towards a whistle-blower may represent a bureaucracy's response to a perceived threat (Weinstein, 1979). Staw showed that threatening situations often result in a rigidity of organizational response (Staw et al., 1981). Organizations that perceive whistle-blowing as a threat will respond negatively to the whistle-blower. As Perry (1993) pointed out, the response to the threat may depend on the magnitude of the threat. Deutsch (1973) previously proposed several factors that could affect the response to a threat, including the legitimacy, credibility, and magnitude of the threat.

Threats from less powerful individuals or from individuals lower in social status would be more likely to be perceived as illegitimate, and would evoke a negative reaction, if the credibility of the threatening party and the magnitude of the situation also demand such action (Deutsch, 1973). Credibility has to do with the belief that the

threat will be carried out, which hinges on several underlying factors. Magnitude refers to the level of harm involved. The higher the magnitude, the greater the threat.

Black (1976) also described threats and credibility in the context of law. Black (1976: 2) described the behavior of law in terms of “governmental social control” using five general criteria: stratification, morphology, culture, organization, and conventionality. Law “behaves” according to propositions encompassing the five general criteria. Black looked at legal decisions over time in devising his propositions. For instance, the lower a person’s rank or status, the less likely they are to win a case against a person of higher rank. Organizations are considered to be higher in status than individuals, and are more likely to win cases against individuals than vice versa, although new legislation may be reversing this trend in the 1990s. Because of their higher status, organizations are less likely to be charged with crime in the first place. In terms of deviance, Black (1976) proposed that the less “conventional” an individual, the more likely they are to be charged with a crime, and the less likely they are to win a case against a more “conventional” opponent. Black (1976) also stated that offenses committed by lower status individuals against higher status individuals are more serious than those done by higher status individuals against lower status individuals. These propositions can be adapted to the whistle-blowing process, which often involves a conflict between actors of differential status.

In addition to status, conflict and threat, perceptions of justice may also help to define retaliation. Retributive justice, which deals with punishing individuals for violating rules or norms of society (Hogan & Emler, 1981), is an ancient concept with its roots in revenge-taking. Almost all cultures engage in this activity. The control of

individual freedom of action is often done through the fear of retribution (Hogan & Emler, 1981). Whistle-blowers in organizations with a negative climate towards whistle-blowing violate the norms of the group or organization by reporting wrongdoing and may suffer retaliation as punishment for their behavior. This would fall into the category of social control. In this case the whistle-blower would be perceived to be a deviant, and sanctions from the group are the means used to control deviants (Schachter, 1951).

Using the background of justice, threats, conflict and control, the following definition is proposed:

Retaliation against whistle-blowers represents an outcome of a conflict between an organization and its employee, in which members of the organization attempt to control the employee by threatening to take, or actually taking, an action that is detrimental to the well-being of the employee, in response to the employee's reporting, through internal or external channels, a perceived wrongful action.

THE RETALIATION PROCESS

What happens when employees blow the whistle and the organization retaliates against them? The answer to this depends on several factors, some of which also affect the initial decision to blow the whistle. These include the power of the whistle-blower, the seriousness of the wrongdoing, and other factors that will be covered later. More than likely there will be an escalating effect, where initial actions may be of low intensity, but as the whistle-blower persists in pushing the case towards resolution, the organization's negative reactions become increasingly more serious. This escalation is

seen in O'Day's (1974) theory, in which organizational reactions change from indirect to direct, and increase in intensity in an effort to silence the whistle-blower. This process is repeatedly seen in cases reported in the media, where employees start by reporting problems to their supervisors, then go higher when they get either no response or a negative response from the supervisor. If upper management is also not supportive, whistle-blowers often persist by reporting the activity to an internal auditing function, and may eventually report it to an agency outside of the organization. Use of external channels has been found to increase with the seriousness of the wrongdoing (Callahan & Dworkin, 1994). This was how events unfolded in the Betancourt/Galatis case against the Millstone Nuclear Power Plant mentioned previously (Pooley, 1996).

Predictors of Retaliation

Miceli and Near have looked at the predictors and effects of retaliation in the federal workplace, noting that different whistle-blowers will have different perceptions of the organization's reaction to the whistle-blowing (Near & Miceli, 1996). This could be due to differences in position of the whistle-blower (i.e., upper management versus technician, laborer, or some lower-level category of employee), or to differences in the complaint recipient. To overcome judging the severity of the retaliation perceived by each whistle-blower, past research has produced an index of hostility towards whistle-blowers (Perry, 1993), as well as a measure of the comprehensiveness of retaliation--both measuring how many different types of retaliatory actions the individual experienced. Retaliation has ranged from eight to 13 actions on mail surveys (Near & Miceli, 1986; Parmerlee et al., 1982; Miceli & Near,

1989; Near et al., 1995). Based on previous quantitative studies, Near and Miceli (1996) categorized the potential predictors of retaliation into personal characteristics of the whistle-blower, the situational characteristics surrounding the whistle-blowing event, the organizational context, and power variables. A summary of past findings for variables relevant to this research is included in Table 1.

Table 1.
Summary of previous findings for relevant variables
(from Miceli & Near, 1992)

CATEGORY	EFFECT ON RETALIATION
PERSONAL VARIABLES	
Age	+
Education	+
Gender	0
Length of Tenure	0
Professional Status	0
Race (white)	-
Individual Performance	-
SITUATIONAL VARIABLES	
Co-worker support	0/-
Middle management support	0/-
Top management support	-
Reporting to External channels	+
ORGANIZATIONAL VARIABLES	
Size of work group	+
Favorable Organizational climate	-
POWER VARIABLES	
Seriousness of Wrongdoing	0/+
Organizational Performance	0/+

Personal variables. None of the 11 personal variables (e.g., age, education, race, etc.) studied have consistently been shown to predict retaliation despite being measured by several studies over time. Perhaps these factors become unimportant by the time a whistle-blower gets to stage four of the Miceli and Near model. One problem with personal demographics is the typically low variance in respondents' characteristics. Educated white males are often the largest group, leaving few cases of minorities or people with different backgrounds with which to predict retaliation.

Situational variables. Situational characteristics have shown more consistent results across studies: merit of the allegation, top management support and middle management support all were negatively associated with the extent of retaliation experienced by whistle-blowers, while reporting to external channels was positively correlated with the extent of retaliation suffered (Near & Miceli, 1996). These results are generally explained by theories of power.

Power, like retaliation, is a complex construct, and may have many forms and manifestations in organizational life. We know it exists, yet defining and measuring it can be problematic. It has been defined in terms of the relationship between two social actors, in which one actor can get the other actor to do something they would not otherwise have done (Dahl, 1957). But according to Pfeffer (1981), power is context-specific, or relationship-specific, meaning that it may not be constant from one relationship or context to the next. It may be individually based, such as the five bases of power proposed by French and Raven (1959), or it may be structurally based, residing in the hierarchy of the organization as Perrow (1970) suggested. It has been theorized to be of great importance in the whistle-blowing process, where it has been described in

terms of theories of resource dependence, idiosyncrasy credits, value congruence, and minority influence (Near & Miceli, 1996).

Resource dependence. According to the resource-dependence model (Pfeffer & Salancik, 1978), power is a function of dependence. If an individual is dependent on an organization for a particular resource, such as pay, the organization is said to have power over that individual. If the individual can find another source of income, i.e., jobs are plentiful, or they have highly valued skills that enable them to acquire another job, then the individual is less dependent on the organization, and the organization has less power over them (at least in terms of pay). Individuals can gain power over the organization by bringing valued resources into their organization, as long as the organization cannot get the resources easily from another source. Organizations generally have more resources than individuals, placing the individual in a state of dependence on the organization, which leads to greater power residing in the organization.

In a resource-dependence framework, organizations will retaliate against weaker individuals as part of a *strategic response*, in which they make an example of someone who does not have the resources to respond in kind (Near & Jensen, 1983). The organization can then control the non-conforming employee by threatening to cut off his/her access to these resources.

Idiosyncrasy credits. One way for individuals to increase their power is through the accumulation of idiosyncrasy credits (Hollander, 1958) which allow an individual to deviate from the norms of the organization or group without being sanctioned. Credits are gained through contributions to the group such as solving a

technical problem facing the organization or attracting valuable resources for the organization (Tedeschi et al., 1973). Being loyal to the organization's norms is another way an individual gains credits. Longer job tenure and better performance may also increase an individual's idiosyncrasy credits (Miceli & Near, 1988). As organization members build up these credits they have more freedom to engage in non-conforming behavior, such as whistle-blowing, and have more power to influence others. Maass and Clark (1984) found that individuals who differ from the group in gender or ethnic background, in addition to the issue at hand, have to spend a longer time building up credits to gain influence. As a general rule, newcomers to the organization are low in credits, not having had time to establish themselves.

Value congruence. Enz (1986, 1988) proposed that individuals (and departments) gain power by sharing similar values held by upper management. This sharing would presumably give individuals/departments greater access to information, greater contact with top executives, and cause them to be trusted and valued more by top managers, thus making them more confident in their actions. The effects of value congruence between upper managers and whistle-blowers have not been consistent (Miceli & Near, 1992), suggesting that the value congruence measures need refinement, or that the theory is not useful in explaining retaliation against whistle-blowers.

Minority influence. This theory states that individuals in a workgroup who hold a minority opinion about an issue have an impact on decisions regarding that issue. Individuals have a choice as to whether to conform to the majority viewpoint, or resist the majority influence and deviate from it (Nemeth & Staw, 1989). According to

Muscovici et al. (1969), deviance from majority norms must be consistent to be effective. In other words, individuals who consistently hold a deviant opinion about an issue have more influence over a group than does someone who changes their opinion on the issue. They also found that conformers-turned-deviants had more influence than individuals who were considered deviants prior to the issue (Levine et al., 1976, 1977), thus supporting idiosyncrasy credit theory. However, the difficulty of creating realistic (and ethical) retaliation scenarios in a laboratory setting, makes it subject to generalizability concerns and less useful in explaining the retaliation process.

Organizational context variables. Theories of organizational structure and culture have also been used to explain the effect of organizational context on retaliation. Organizational structure has been conceptualized in terms of the amount of bureaucracy present in an organization, with more bureaucratic organizations perceiving whistle-blowing to be a threat, being less willing to change, and responding by retaliating (Staw et al., 1981). Organizational size has often been used to measure bureaucracy (Child & Mansfield, 1972; Pugh & Hickson, 1976; Pugh et al., 1969), and was associated with greater amounts of retaliation in Miceli and Near (1989). Black (1976) stated that the larger the size of the organization, the less the likelihood of a complaint being filed against it.

An organization's culture towards whistle-blowing can be thought of as how favorable the organization is to the reporting of wrongdoing. This would include the establishment of routine procedures for handling complaints, so that employee voice (Hirschman, 1970), or dissent (Graham, 1986) is a real possibility to inducing change

in the organization. A favorable organizational climate towards whistle-blowing was found to have a negative effect in Perry (1992).

Organizational performance has rarely been studied in connection with retaliation. An organization that retaliates against whistle-blowers is suppressing the reporting of situations or conditions that can have long term deleterious effects on performance. For instance, putting unsafe products on the market can result in lawsuits that drain resources and damage the organization's image (Bok, 1980). However, research results have not supported this connection. Near and Miceli (1988), in a study of internal auditors, found no relationship between retaliation and 1) the perception that the organization's performance was harmed by the wrongdoing or 2) the perception that the organization's performance was harmed by the termination of the wrongdoing. Perry looked at the relationship between organizational prosperity, organizational performance, and punishment and the amount of hostility towards whistle-blowers, but found no significant relationships (Perry, 1992, 1993). While acknowledging the difficulty of measuring these variables, he concluded that the effect of whistle-blowing on an organizations' financial performance may be reduced by three factors: the nature of most whistle-blowing disputes, the ambiguous performance criteria in federal organizations, and the limited influence one person can have over the functioning of large organizations (Perry, 1993).

Summary

In looking at these past studies, it is clear that information gathered about retaliation is relatively scarce, and sometimes contradictory. The complexity of the process of retaliation, which includes many potentially interacting variables, also serves

to cloud the picture. Is the failure to find consistent significant relationships among variables predicting retaliation surprising? Perhaps not, when one considers that past research has looked at retaliation only as a general construct. By breaking it down into its component parts, differences in predictor variables may become more apparent.

CHAPTER THREE

STUDY ONE: THE ABILITY OF LEGISLATION TO PROTECT FEDERAL WHISTLE-BLOWERS

Introduction

This study will be done to examine retaliation as a unitary construct, using survey data collected by the MSPB in 1980, 1983 and 1992. In this chapter, hypotheses concerning the effect of legislation on whistle-blowing and retaliation trends across time are proposed. Additional hypotheses dealing with the predictors that best explain the amount of retaliation being experienced by identified whistle-blowers are also proposed. Samples of civilian employees from large federal government agencies are used to test these hypotheses.

Legislative Effectiveness

The Civil Service Reform Act (CSRA) of 1978 prohibited "the taking of reprisal against any Federal employee who legitimately discloses illegal or wasteful activities and provides for legal sanctions against Federal officials found guilty of violating those prohibitions" (USMSPB, 1993: i). The act also established the U.S. Merit Systems Protection Board (MSPB) which, as part of its duties, conducts periodic studies of the federal civil service system and reports to the President and Congress on whether the "public interest in a civil service free of prohibited personnel practices is being adequately protected" (USMSPB, 1993: i). Later, in 1989, Congress passed the Whistle-blower Protection Act (P.L. 95-454), further strengthening protections for

whistle-blowers by easing their burden of proof of reprisal, and improving the appeal process (USGAO, 1993).

The MSPB conducted three studies of whistle-blowers and retaliation, in 1980 (15 federal agencies), 1983 (22 federal agencies), and 1992 (22 federal agencies) using a survey methodology. The actions of the MSPB in carrying out its duties have presented us with a 13-year field experiment involving several thousand employees from 22 federal agencies. The 1980 data can be considered as base-line data, since the surveys were sent out within two years of the laws' enactment. From a macro perspective, these data are rare in that they allow us to examine the effects of a change in the organization's regulatory environment over time on organizational climate and employee behaviors. The difficulty in conducting sensitive research on organizational wrongdoing and whistle-blowing make these data even more valuable. Therefore, these data will be used to address the question of whether legal protections do in fact encourage whistle-blowing by employees and help protect them from retaliation when they report wrongdoing they observe. If society and the organizations within it can benefit from knowing when organizational wrongdoing occurs, then they will also benefit from knowing something about the conditions that encourage employees to blow the whistle on such wrongdoing.

The federal government's goal in enacting legislation protecting whistle-blowers was to reduce federal fraud, waste and abuse by encouraging the reporting of wrongdoing (USMSPB, 1993). Dworkin and Near (1997) have noted some common assumptions about whistle-blowers shared by lawmakers and others in drafting whistle-blowing legislation:

- 1) Most employees would normally report wrongdoing as an act of conscience;
- 2) Most whistle-blowers suffer retaliation;
- 3) Fear of retaliation keeps most employees from blowing the whistle, and
- 4) If retaliation is controlled, whistle-blowing will increase while wrongdoing will decrease.

These assumptions about whistle-blowers have not been supported. Past research has suggested that the passage of statutes protecting whistle-blowers from retaliation did not result in an increase in the amount of whistle-blowing activity at the state level (Dworkin & Near, 1987) or at the federal level (Miceli & Near, 1989), nor did it decrease the amount of retaliation. One purpose of this study is to examine this question in a more definitive way than has been possible in the past.

H1: Over time, legislation protecting whistle-blowers will lead to a decrease in the incidence of wrongdoing in organizations.

A second purpose of this study is to identify variables that predict retaliation, over time. Whistle-blowers fearful of retaliation might be more likely to remain anonymous than those who felt safe in making their report of wrongdoing, so an effective law would likely reduce the incidence of anonymous reporting as a proportion of whistle-blowing in general. Thus, if the law is effective in achieving the goals intended by the government, we should expect the following to hold true:

H2: Over time, legislation protecting whistle-blowers will lead to an increase in the incidence of whistle-blowing in organizations.

H3: Over time, legislation protecting whistle-blowers will lead to an increase in the incidence of identified whistle-blowing in organizations.

The passage of the Whistleblower Protection Act of 1989 should have strengthened the position of whistle-blowers in the federal government, and further decreased the amount of retaliation, if the assumptions about legislative effectiveness towards whistle-blowing hold true. Therefore we would expect:

H4: Over time, legislation protecting whistle-blowers will lead to a decrease in the incidence of retaliation in organizations.

Power Theory

As noted in the last chapter, four theories of power have been used to study retaliation against whistle-blowers: resource dependence theory, idiosyncrasy credits theory, minority influence theory, and value congruence theory (Miceli & Near, 1992). Mixed support has been found for each theory. This study will focus on resource dependency theory and idiosyncrasy credit theory. The minority influence and value congruence theories will not be used in this research due to their relative lack of explanatory power in retaliation, their limited applicability to retaliation in field settings and the lack of appropriate measures in the MSPB data sets to test them.

Resource dependence. As mentioned in chapter two, power may be a reflection of the dependence relations between individuals and organizations (Pfeffer, 1981). Individuals can gain power by bringing in valued resources to the organization, but conversely, probably depend on the organization for pay, benefits and security. Miceli and Near (1992) argue that power is a function of both dependency and influence. An influential employee may still be dependent on an organization, even if the organization depends on that individual for valued resources. Conversely, a non-influential individual is not necessarily dependent on the organization, if the

organization possesses few resources, or alternate resources are available to the employee. Getting support from supervisors and management could be a reflection of the power of the whistle-blower to influence superiors, and has been shown to decrease the amount of retaliation suffered by the whistle-blower.

Idiosyncrasy credits. As mentioned previously, individuals who accumulate “credits” in a group are less likely to experience sanctions from that group when they deviate from its norms (Festinger, 1950; Hollander, 1958). Whistle-blowing, to the extent that it is behavior outside of group norms, would be considered deviant behavior. Individuals who did not have enough idiosyncrasy credits would not receive the support from their co-workers, supervisors, or management in whistle-blowing situations. This lack of support has been the most consistent factor associated with retaliation in past studies of whistle-blowing (Near & Miceli, 1996). Insofar as being a member of the white race and performing well improve an employee’s “credit rating,” they have also been shown to decrease the amount of retaliation suffered by whistle-blowers.

H5: Whistle-blowers who are less powerful relative to the organization will suffer more comprehensive retaliation than whistle-blowers who are more powerful relative to the organization.

Seriousness of the Wrongdoing

O’Day (1974: 373) stated that “superiors confronted with reform-minded subordinates want his silence or his exit.” This person represents a threat to middle managers by attacking their competence and/or commitment to the organization. Although O’Day mentions middle managers specifically, these threats could apply

equally well to any supervisor in the organization, for they all are managed by someone up the chain of command.

Whether whistle-blowing is perceived as a threat could determine whether retaliation takes place. Whistle-blowing has been described as the intention to influence an organization's behavior (Near & Miceli, 1995), an action that could be seen as a threat by the organization. Deutsch (1973) defined a threat as an attempt by one party to influence another, and it can be either a compelling act or a deterring act. A "compelling act" is one that forces recipients (the targets of the influence) to do something they don't want to do, while a "detering act" is one that prevents recipients from taking an action they would otherwise take. Whistle-blowing could be either compelling or deterring in nature, depending on the wrongdoing involved. For instance, whistle-blowing that exposes unsafe work practices could force the organization to follow proper procedures. Or an employee may report an organization that is involved in illegal price fixing, and prevent the organization from doing that in the future. Therefore, whistle-blowing and threats are both attempts to influence.

One factor that increases the threat of the situation is the magnitude of the wrongdoing, usually termed the seriousness of the wrongdoing activity. Seriousness of the wrongdoing has not had a consistently significant effect on the comprehensiveness of retaliation in past studies (Near & Miceli, 1996). It has been measured in terms of its frequency of occurrence and the amount of money involved, but it may also be measured by how many people are affected, and whether it goes against the moral norms of society (Jones, 1991).

The seriousness issue also has an organizational side as viewed from resource-dependence theory. If the wrongdoing is an activity that critically affects the organization's performance, threatening to halt that activity could be a threat to the existence of the organization; in short, wrongdoing may represent an organizational response (Miceli & Near, 1992). When a deviant behaves in a manner which threatens the group's existence it has been shown to bring about greater rejection than when the deviant is not perceived to be threatening (Lauderdale, 1976). Callahan and Dworkin (1994) found that retaliation was more likely when the organization was very dependent on the wrongdoing. They also found, along with Perry (1993), that retaliation was more likely when the dominant coalition was involved in the wrongdoing.

Activities that occur frequently in an organization, and involve large sums of money, would presumably be important in terms of organizational performance, and valued by the organization. Thus, these are more serious types of wrongdoing. In cases where the wrongdoing being reported is more serious, whistle-blowers may be seen as more of a threat to the organization, and one that has to be dealt with regardless of the amount of power they possess.

H6: Whistle-blowers who report more serious offenses will suffer greater comprehensiveness of retaliation than whistle-blowers who report less serious offenses.

Escalation of the Situation

When whistle-blowers report to external channels, it represents an escalation of the situation. This escalation, which normally occurs after an attempt to internally report the wrongdoing, will bring about more severe responses to the whistle-blowing,

over and above the initial responses, which were ineffective in halting his/her behavior. Going external to the organization may be one of the whistle-blower's last attempts to gain the support of anyone to their cause. It is also more of a threat to the organization, as outside agencies are called upon to take actions to resolve the case. Not surprisingly then, reporting wrongdoing to external channels (which may increase whistle-blower's power), has been associated with higher levels of retaliation against whistle-blowers. This behavior is frequently seen in the case studies of whistle-blowers, often people who have reported the wrongdoing to external constituents, usually after reporting internally and suffering retaliation of some kind (Pooley, 1996). The fact that the case studies make it to the media suggests the wrongdoing is serious enough to persist in the attempt to stop it. This is one area where results of the case studies and the mail surveys may agree.

H7: Whistle-blowers who report to external channels will suffer more comprehensive retaliation than whistle-blowers that do not report to external channels.

Near and Jensen (1983) proposed that organizations could react in two different ways to whistle-blowers—strategically or rationalistically. Strategic retaliation is that which is taken against less powerful whistle-blowers, i.e., those with fewer “idiosyncrasy credits,” those who are more dependent on the organization, or those who are less influential. On the other hand, it's possible that the organization will retaliate in direct proportion to the amount of threat posed by the whistle-blower--retaliating to a greater extent against more powerful and threatening whistle-blowers. This is known as a rationalistic response (Near & Jensen, 1983). “Strategic” and

“rationalistic” response categories are not mutually exclusive—an organization may use both methods, depending on the situation.

Since strategic and rationalistic responses are possible under different conditions, it follows that organizations could use both types of responses to different whistle-blowers. What develops is a pattern of responses that integrates both the power of the whistle-blower and the seriousness of the wrongdoing (see Figure 2).

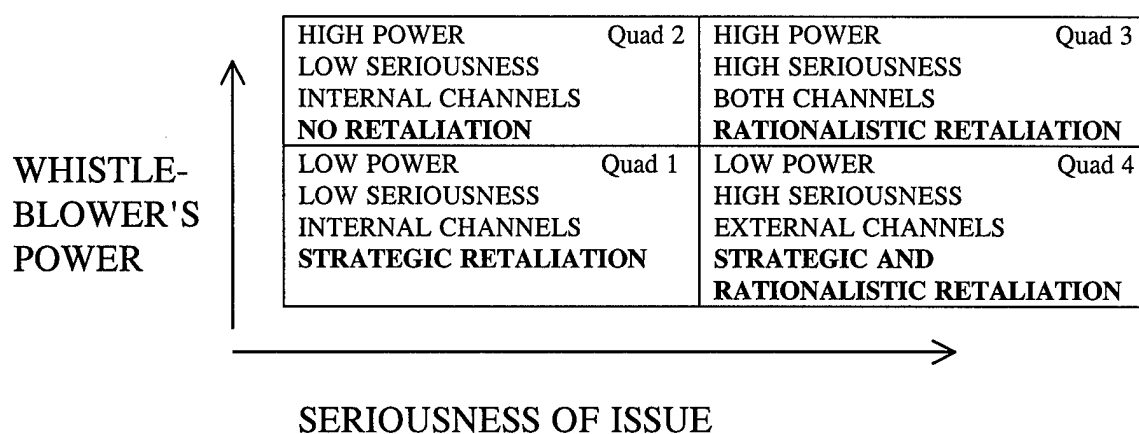


Figure 2

Hypothesized relationship between power, seriousness, the channels used to report wrongdoing and the type of retaliation experienced

Whistle-blowers with low power who blow the whistle over less serious wrongdoing (Quadrant I) will be more susceptible to retaliation in the form of a strategic response from the organization, but will be less susceptible to a rationalistic response. They will most likely start the process internally, and whether they pursue external channels depends on individual factors. Individuals with high power who blow the whistle over less serious offenses (Quadrant II) will be less susceptible to either form of retaliation since neither a strategic nor a rationalistic response is called

for by the organization. The wrongdoing would not be serious enough for the organization to be dependent on it, so that reporting it would not be enough of a threat to evoke a rationalistic response. At the same time, the individual's power makes them safe from a strategic response from the organization, and the low seriousness level precludes the necessity to report externally. This makes Quadrant II the safest condition under which an employee can blow the whistle without suffering retaliation.

Individuals in Quadrant III avoid the strategic response on the basis of their high power, but the seriousness of the wrongdoing and their high power draw a rationalistic response, as they are in the most threatening position in regards to the organization. Due to their high power, they will probably start with internal reporting that will lead to external reports later in the process. Individuals in Quadrant IV are in danger of retaliation on both fronts. They have low power, and are thus vulnerable to strategic retaliation, but conversely, they have raised a threatening issue to which the organization may respond rationalistically. At this point they are highly vulnerable, and will most likely report the wrongdoing to an external actor instead of an internal one. Co-opting a powerful external actor may be their only hope to recoup their losses, as they are likely to suffer retaliation.

H8: There will be a significant interaction effect between seriousness of the wrongdoing and the amount of power a whistle-blower possesses.

Individuals with low power who blow the whistle over more serious wrongdoing will suffer more comprehensive retaliation than individuals with high power who blow the whistle over less serious wrongdoing.

H9: Individuals who blow the whistle over more serious wrongdoing will be more likely to report to external channels than individuals who blow the whistle over less serious wrongdoing.

METHODS

As mentioned at the outset, whistle-blowing research is notoriously difficult to conduct. It's not only a sensitive topic to the individual employee, but is also a threatening topic for organizations to address. What is the best way then, to research this topic? Experimentally designed studies of whistle-blowing would lack the realism of organizational life. Retaliation against subjects would not be ethically feasible in a lab setting. This forces the data collection to the field, where access to corporations can be limited, especially in this subject area. Case studies provide theoretical insights, but lack the generalizability to test such theory. Large sample surveys produce a small number of cases of retaliation, suggesting that a minority of whistle-blowers suffer retaliation. In 1992 for example, the MSPB collected over 13,000 surveys and found only 463 identified whistle-blowers, and 152 cases of retaliation! The surveys conducted in 1983 and 1980 by the MSPB fared no better in finding retaliation cases. Nevertheless these surveys represent the largest number of cases of retaliation ever collected, and provide the statistical power needed to quantitatively test theories of retaliation. Thus, they will be the basis for this research.

Sample

Researchers quickly lose cases in field samples as the data are screened to ensure that only valid cases of whistle-blowing are included. In 1992, analysis of the

initial findings found only 2188 respondents who reported observing wrongdoing in their organizations (USMSPB, 1993). Respondents who did not have good recall of the wrongdoing incident, observers who could not identify the type of wrongdoing observed, or where they observed it, were deleted from the analysis. From this sample, only observers who reported the wrongdoing to someone above the level of coworker, in accordance with the definition of whistle-blowing, were included. The last filter to screen the data selected only those whistle-blowers who were identified as the whistle-blower, since we have to assume that anonymous whistle-blowers do not suffer retaliation.

The United States Merit Systems Protection Board conducted all three surveys of federal government agencies. The surveys were sent to a stratified random sample of permanent federal employees. In 1980, 8,296 of 13,000 surveys were returned for a 66% response rate; in 1983, 4,897 of 7,632 were returned representing a 63% response rate; in 1992, 13,432 of 20,851 surveys were returned for a 64% response rate. The high rates of return may have been due to the surveys being mailed directly to the employees, either at home or at work.

Across the thirteen-year period (1980-1992), 14 of the organizations surveyed participated in all three collection efforts, while 22 were common to the two most recent surveys. One organization surveyed in 1980 (the Community Services Administration), subsequently merged with another organization. With the large number of people surveyed, and the high response rates, the populations are generally the same, and the data, while not strictly longitudinal, do represent a "quasi-field experiment". Although many of the questions changed over the three years, most of

the questions dealing with the central issues of whistle-blowing and retaliation remained the same. In addition, the first year's collection, 1980, essentially represents a baseline of whistle-blowing and retaliation in the federal government, as the legislation protecting whistle-blowers was first enacted in 1978. The last year, 1992, comes after the 1989 Whistle-blower Protection Act, and thus should indicate whether the intervention of the new legislation had an effect. When comparisons are made across all three years, only respondents from the 14 common agencies are included in the sample.

Measures

Dependent variable. This study uses retaliation measured as a total response from the organization, the comprehensiveness of retaliation, as the dependent variable. It is appropriate to use this type of measure to help reduce the individual personality conflicts that often occur in the workplace between a supervisor and subordinate. By summing all of the types of retaliation the individual experiences, the likelihood of the retaliation being individually based, or only a false perception by the whistle-blower, is reduced.

Independent variables. The variables of interest in predicting retaliation against whistle-blowers include influence measures—whether or not they had the support of co-workers, supervisors and upper management. In addition, measures of idiosyncrasy credit such as gender type, ethnic group, performance, and tenure in the organization will be used (see Appendix A for a complete listing of measures).

Analysis

Previously, Near et al. (1995) used a preliminary data set to compare trends across 1980, 1983 and 1992 (see Table 2). That study replicated Miceli and Near (1989), a study which compared trends across time using samples from 1980 and 1983.

Table 2.

Trends in whistle-blowing and retaliation in the MSPB surveys of federal employees

Category of Respondents	PERCENT OF RESPONDENTS IN EACH CATEGORY BY YEAR		
	1980	1983	1992
Observers of Wrongdoing	45	18	14
Observers who Reported Wrongdoing	26	40	48
Reported Wrongdoing and Identified Themselves	74	60	55
Reported Wrongdoing and Experienced Reprisal	17	21	38

A more complete data set was used for this study, with new variables and measures. The first four hypotheses for Study One will be tested for significance using a difference of proportions test (Bruning & Kintz, 1968). This will determine whether the changes in perceived wrongdoing, whistle-blowing, identified whistle-blowing and retaliation are not due to chance alone. Although general trends have already been observed, those observations have not been verified to be significant up to now.

Hypotheses five through seven will be tested using multiple regression analysis to determine if the variables thought to be important to predicting the comprehensiveness of retaliation can explain a significant amount of variance, after controlling for extraneous factors such as size of the agency. The three resulting regression equations will be compared using LISREL, to determine whether the

equations across time are comparable in predictive power, and whether the same variables are significant from year to year. Hypothesis eight will be tested using moderated regression analysis and hypothesis nine will be tested using simple regression analysis.

Table 3.
Hypotheses for Study One

#	HYPOTHESES – STUDY ONE	DEPENDENT VARIABLE	INDEPENDENT VARIABLES	TYPE OF ANALYSIS	RESULTS OBTAINED
H1	Incidence of Wrongdoing will decrease over time	Rate of Wrongdoing	Time (1980, 1983, 1992)	Difference of Proportions	Supported
H2	Incidence of Whistle-blowing will increase over time	Rate of Whistle-blowing	Time (1980, 1983, 1992)	Difference of Proportions	Supported
H3	Incidence of Identified Whistle-blowing will increase over time	Rate of Identified Whistle-blowing	Time (1980, 1983, 1992)	Difference of Proportions	Not Supported
H4	Incidence of Retaliation will decrease over time	Rate of Retaliation	Time (1980, 1983, 1992)	Difference of Proportions	Not Supported
H5	Less powerful whistle-blowers suffer more retaliation	Comprehensiveness of Retaliation	See Appendix A	Multiple Regression	Partially Supported
H6	More serious activities will result in more retaliation	Comprehensiveness of Retaliation	See Appendix A	Multiple Regression	Partially Supported
H7	Reporting wrongdoing to external channels associated with greater amounts of retaliation	Comprehensiveness of Retaliation	See Appendix A	Multiple Regression	Partially Supported
H8	Interaction between whistle-blower power and Seriousness of wrongdoing	Comprehensiveness of Retaliation	See Appendix A	Moderated Regression Analysis	Not Supported
H9	More serious wrongdoing will be reported to external channels	Use of External Channels	Seriousness of Wrongdoing	Simple Regression Analysis	Partially Supported

Summary

Existing research on whistle-blowing and retaliation reveals that we still know very little about these phenomena. This is, in part, a reflection of the difficulty in collecting reliable, conclusive data on these sensitive topics. Study One, as described above, will provide the foundation for extending current models of retaliation against whistle-blowers. But even more meaningful advances are possible, by examining retaliatory behaviors in finer detail than the previous studies have undertaken. It is possible that by looking at retaliation as a unitary construct, the predictive power of the model has been obscured. It is hoped that the research described in Study Two, by subdividing retaliation into informal and formal parts, will lead to a greater understanding of the situations under which retaliation occurs, and serve to inform present retaliation models.

CHAPTER FOUR

STUDY ONE: RESULTS AND DISCUSSION

Introduction

In this chapter I present the results of Study One, outcomes for the nine hypotheses tested using the data from the MSPB surveys of federal government employees in 1980, 1983 and 1992. Following the results section, I discuss the implications of the results to whistle-blowing and retaliation theory.

Effect of Federal Whistle-blowing Legislation Over Time

Sample sizes, incidence rates, and z-scores are presented in Table 4 for 1980 through 1992 time periods.

H1 predicted that the incidence of wrongdoing would decline over time due to legislation protecting whistle-blowers.

This hypothesis was supported, and the amount of decline was significant in two of the three tests, as shown by the z-scores in Table 4. The decline from 45 percent in 1980 to 18 percent in 1983 was significant at the $p < .001$ level, as was the difference between 1980 and the 14 percent in 1992. The amount of decline from 1983 (18%) to 1992 (14%) however, was not significant.

H2 predicted that over time, legislation protecting whistle-blowers will lead to an increase in the incidence of whistle-blowing in organizations.

The results of the field study also supported this hypothesis. Although whistle-

Table 4.

Descriptive statistics and results of difference of proportions tests for incidences of wrongdoing, whistle-blowing, identified whistle-blowing, and retaliation

MEASURES	ALL AGENCIES AND RESPONDENTS ¹		
	1980	1983	1992
Total respondents included ^b	8,296	4,427	13,432
Incidence of wrongdoing			
Percent (n=)	45 (3582)	18 (892)	14 (1717)
z-score difference, vs. 1983 sample ^c	4.24***		
z-score difference, vs. 1992 sample	4.94***	0.77	
Incidence of whistle-blowing			
Percent (n=)	26 (991)	40 (353)	48 (853)
z-score difference, vs. 1983 sample	-1.79		
z-score difference, vs. 1992 sample	-2.91**	-1.14	
Incidence of identified whistle-blowing			
Percent (n=)	74 (732)	60 (212)	55 (472)
z-score difference, vs. 1983 sample	2.11*		
z-score difference, vs. 1992 sample	2.81**	0.72	
Incidence of retaliation			
Percent (n=)	17 (142)	21 (44)	38 (179)
z-score difference, vs. 1983 sample	-0.91		
z-score difference, vs. 1992 sample	-3.50***	-2.64**	

¹Total of 15 agencies surveyed in 1980, 22 agencies surveyed in 1983 and 1992.

^bCases that could not be classified as to whether respondents observed wrongdoing or as to their organizations were excluded.

^c* p < .05, ** p < .01, *** p < .001, two tailed

blowing increased from 26 percent of federal employees who observed wrongdoing in 1980 to 40 percent in 1983, this was not a significant increase. The increase from 40 percent in 1983 to 48 percent in 1992 also was not significant. Comparing the total difference across all three years (1980 – 1992), however, did produce a significant change at the $p < .01$ level.

H3: Over time, legislation protecting whistle-blowers will lead to an increase in the incidence of identified whistle-blowing in organizations.

This hypothesis was not supported, as the results showed a *decreasing* trend over time of identified whistle-blowers relative to those employees who observed wrongdoing. The trend is significant from 1980 (74 percent) to 1983 (60 percent) at the $p < .05$ level. A further decrease occurred in 1992 (55 percent), which results in a more significant change ($p < .01$) when comparing 1980 to 1992 incidence levels; however, the change from 1983 to 1992 (60 down to 55 percent) was not significant.

H4: Over time, legislation protecting whistle-blowers will lead to a decrease in the incidence of retaliation in organizations.

In the fourth test of the effect of the legislation over time, again the opposite trend occurred, a significant rise in the incidence of retaliation over time against those who were identified whistle-blowers. More identified whistle-blowers reported suffering retaliation in 1992 (38 percent) than in 1983 (21 percent) or 1980 (17 percent). This increasing trend in retaliation was not significant between 1980 and 1983, but was significant at the $p < .001$ level between 1980 and 1992, and at the $p < .01$ level when comparing 1983 and 1992 rates.

Overall, then, only two of the four hypotheses on the effect of federal legislation on whistle-blowers were supported, while the other two hypotheses showed significant results in the opposite direction from that predicted.

Predictors of Retaliation

Means, standard deviations, and correlations for variables used in all three years are presented in Table 5 through Table 7. Table 8 contains the hierarchical

regression results for all three time periods, so that comparisons can be made.

Depending on the year, either two or three control variables are entered in the first block of the regression. For the 1980 data, one control variable--agency size--is entered in the first block of variables in the regression analysis, because the sample for that time period was stratified in such a way that respondents from smaller agencies were overrepresented. The 1983 and 1992 samples were not stratified by agency size, so it was not necessary to adjust for size. Organization size was negatively related to retaliation in 1980, although I had not predicted this result. A second control variable--use of external channels--was available in 1980 and 1992 and is also entered in the first block. Use of external channels is significantly related to retaliation in 1980 and approaches significance at 1992. Pay and education were also entered in block one in 1983 and 1992, because these serve as control variables for years when upper managers were deliberately oversampled. Controlling for pay and education likely reduces the effects of this sampling decision on the analysis. These variables were also proxy measures of power in the hypotheses, and results regarding these two variables are discussed below. All other predictors available in a given time period were entered in the second block.

Table 5.

Means, standard deviations, and correlations for all variables in the full 1980 data set (all 15 agencies, all respondents)

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9
1. Extent of retaliation	0.05	1.45	1.00								
2. Agency Size (z-score)	-0.01	0.99	-.054	1.00							
3. Pay Grade	2.96	1.12	-.100**	-.202***	1.00						
4. Educational Level	3.89	0.89	.034	-.109**	.486***	1.00					
5. Coworker lack of support	0.08	0.27	.071*	-.014	-.087*	-.059	1.00				
6. Supervisor lack of support	0.24	0.43	.343***	.040	-.066*	-.003	.252***	1.00			
7. Management lack of support	0.26	0.44	.313***	-.002	.018	.049	.094*	.368***	1.00		
8. Seriousness of wrongdoing	2.23	0.75	.139***	-.156***	.137***	.103**	.030	.097*	.187***	1.00	
9. Use of External Channels	0.16	0.36	.190***	.010	.042	-.051	-.002	.136**	.240***	.187***	1.00

N = 640; * = $p < .05$; ** = $p < .01$; *** = $p < .001$ (Decimal places have been omitted for correlations)

Table 6.
Means, standard deviations and correlations for all variables in the full 1983 data set (all 22 agencies, all respondents)

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9	10	11
1. Extent of Retaliation	0.68	1.58	1.00										
2. Pay Grade	4.12	0.94	-019	1.00									
3. Educational Level	4.28	0.79	090	546***	1.00								
4. Coworker lack of support	0.05	0.22	151*	-054	-025	1.00							
5. Supervisor lack of support	0.15	0.36	539***	-039	-063	158*	1.00						
6. Management lack of support	0.23	0.42	468***	-070	-027	093	339***	1.00					
7. Seriousness of wrongdoing	2.43	0.73	189**	009	112	023	082	165*	1.00				
8. White Race	0.91	0.29	-066	116	092	075	-011	092	115	1.00			
9. Female	0.09	0.28	064	-195**	-065	010	069	-127*	-007	-027	1.00		
10. Job Tenure	3.09	1.04	-099	-154*	-112	093	005	-082	135*	-059	009	1.00	
11. Professional Job Status	0.70	0.46	070	251***	336***	053	097	071	221**	136*	046	013	1.00

N= 194; * = p < .05; ** = p < .01; *** = p < .001 (Decimal places have been omitted for correlations)

Table 7.
Means, standard deviations and correlations for all variables in the full 1992 data set (all 22 agencies, all respondents)

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Extent of Retaliation	0.68	1.32	1.00												
2. Pay Grade	2.93	0.78	-087*	1.00											
3. Educational Level	3.54	0.92	031	506***	1.00										
4. Coworker lack of support	0.21	0.41	146**	-148**	-119*	1.00									
5. Supervisor lack of support	0.34	0.47	307***	-145**	023	299***	1.00								
6. Management lack of support	0.38	0.49	422***	-007	114*	233***	333***	1.00							
7. Seriousness of wrongdoing	2.45	0.65	167**	-040	007	033	089*	211***	1.00						
8. Use of External Channels	0.22	0.42	232***	-140**	-109*	058	044	163**	039	1.00					
9. White race	0.82	0.39	-177***	097*	052	038	-116*	-052	004	-207***	1.00				
10. Gender	1.37	0.48	025	-338***	-184***	188***	229***	003	079	097*	-165**	1.00			
11. Job Tenure	2.62	0.83	049	016	-094*	137**	054	132**	123*	080	065	-216***	1.00		
12. Professional Job Status	0.64	0.48	066	417***	570***	-152**	-049	056	058	111*	-113*	-033	-056	1.00	
13. Most Recent Performance Rating	4.02	0.79	-208***	065	154**	011	-076	-082	009	040	-091*	181***	-032	119*	1.00

N = 353; * = $p < .05$; ** = $p < .01$; *** = $p < .001$ (Decimal places have been omitted for correlations)

Table 8
Results of hierarchical regression analyses on the comprehensiveness of
retaliation across three time periods using multiple independent variables

INDEPENDENT VARIABLES ¹	ALL AGENCIES AND RESPONDENTS ²			UPPER MANAGERS FROM 14 COMMON AGENCIES ³		
	1980	1983	1992	1980	1983	1992
Size of Agency(z)	-.13* -0.081			-0.17 -0.092		
Pay	-0.21*** -0.157	-0.06 -0.035	-0.04 -0.027	-0.39 -0.056	-0.17 -0.074	-0.27 -0.074
Education	0.18* 0.102	0.31* 0.156	0.06 0.046	0.19 0.097	0.14 0.064	0.21 0.139
Co-Worker Lack of Support	-0.11 -0.019	0.53 0.074	0.16 0.045	-0.46 -0.078	-0.36 -0.056	-0.04 -0.010
Supervisor Lack of Support	0.92*** 0.259	1.82*** 0.417	0.60*** 0.215	1.20*** 0.325	1.46*** 0.391	1.18*** 0.453
Management Lack of Support	0.62*** 0.181	1.19*** 0.319	0.61*** 0.225	0.48* 0.150	1.62*** 0.498	0.67* 0.266
Seriousness of Wrongdoing	0.12 0.060	0.27* 0.122	0.18* 0.099	0.05 0.027	0.25 0.142	0.06 0.035
Use of External Channels	0.51** 0.122		0.30 0.093	0.64** 0.175		0.02 0.006
White Racial Heritage		-0.63* -0.116	-0.31 -0.085		-0.26 -0.053	0.34 0.084
Gender (Female)		0.44 0.079	-0.18 -0.067		0.45 0.081	-0.53* -0.199
Job Tenure		-0.14 -0.093	-0.02 -0.011		-0.10 -0.082	0.00 -0.003
Professional Job Status		-0.19 -0.055	0.07 0.024		-0.36 -0.113	-0.06 -0.010
Most Recent Performance			-0.31*** -0.189			-0.25* -0.177
Multiple R	0.45	0.66	0.51	0.50	0.71	0.67
Adjusted R ²	0.19	0.41	0.24	0.22	0.46	0.38
F value	20.1***	14.4***	10.6***	8.12***	10.4***	6.12***
N	640	194	369	203	112	103

¹ Analysis on responses of identified whistle-blowers only. Unstandardized coefficients listed for each variable, with standardized beta values in bold italics. Pay and education variables entered as controls in block one in 1983 and 1992; agency size(standardized), pay and education entered in block one in 1980. All other variables entered simultaneously. If value not shown for a variable, it was not measured in that year.

² Total of 15 agencies surveyed in 1980, 22 agencies surveyed in 1983 and 1992.

³ Upper managers are respondents in pay grades GS/GM-13 and above; 14 agencies were common to all three years.

*= $p < .05$; **= $p < .01$; ***= $p < .001$

H5 predicted that whistle-blowers who are less powerful would suffer more comprehensive retaliation than more powerful whistle-blowers.

This hypothesis received mixed support, perhaps due to the dual types of power embedded within the variables. Of the eight measures of power, majority race, female, job tenure, professional job status, and job performance are measures of idiosyncrasy credits, while the other three are measures of the ability of the whistle-blower to favorably influence co-workers, supervisors and upper managers. Only two of the five idiosyncrasy measures were significant predictors of retaliation -- majority race ($p < .05$ at time one) and job performance ($p < .001$ at time three). The influence measures had a greater effect on retaliation -- support from upper management and supervisors significantly decreased the amount of retaliation suffered at all three time periods, while coworker support did not significantly reduce retaliation. It should be noted that the 1992 survey included thirteen measures of retaliation, while the 1980 and 1983 surveys only listed nine types of retaliation, a consideration which will be discussed in the next section. For purposes of comparison, only the nine types of retaliation are used in the 1992 regression analysis.

H6 predicted that whistle-blowers who reported more serious offenses would experience more comprehensive retaliation than whistle-blowers who reported less serious offenses.

This hypothesis also received mixed support. The seriousness of the wrongdoing was a significant predictor in 1983 only, despite showing significant positive correlation with the dependent variable in 1980 (.143), 1983 (.189), and 1992 (.171). One problem may be the significant correlation between seriousness and many

of the other independent variables, leading to a sharing of variance in the regression equation (see correlation tables 5-7).

In 1980, seriousness of the wrongdoing is significantly correlated with all other independent variables except coworker lack of support. In 1983, it is strongly correlated with management and supervisor lack of support, and less so with coworker lack of support. In 1992, seriousness is significantly correlated with management lack of support, supervisor lack of support and job tenure only.

Another problem may be the restriction of range in the seriousness variable, with a low of one, least serious, and a high of three, most serious. The mean in all three years was no lower than 2.3, with a standard deviation no larger than 0.75. A crosstabs of the data from all three years reveals that only about 15 percent of identified whistle-blowing occurs when the seriousness of the wrongdoing is low, i.e., equal to one, compared to 48 percent when the seriousness is high (see Table 9). And when identified whistle-blowing is examined in relation to whether retaliation was experienced, there is again a positive trend. Only 24 percent of cases low in seriousness (serious = 1) suffered retaliation while 43 percent of cases high in seriousness reported suffering retaliation in 1992.

Table 9.

Crosstabs of seriousness of wrongdoing and identified whistle-blowing, 1980-1992

YEAR (IDENTIFIED WB)	SERIOUSNESS = 1	SERIOUSNESS = 2	SERIOUSNESS = 3	TOTALS
1980	125 (19%)	244 (38%)	274 (43%)	643
1983	29 (14%)	66 (32%)	114 (55%)	389
1992	48 (10%)	179 (39%)	238 (51%)	465
TOTALS	202 (15%)	489 (37%)	626 (48%)	1317

H7 predicted that whistle-blowers who reported to external channels would suffer more comprehensive retaliation than whistle-blowers who did not report to external channels.

This hypothesis was strongly supported in 1980, (Beta = 0.12, $p < .001$) and marginally supported in 1992 (Beta = 0.09, $p < .06$) (see Table 8). In both years, using external channels was entered as a control variable, due to the inability of survey research to determine when or why an employee reports wrongdoing to an external channel. Without this knowledge, we cannot determine whether its the use of external channels that caused an increase in retaliation, or the increase in retaliation that caused whistle-blowers to report to external recipients. Therefore, use of external channels is used as a control variable in the regressions, to partial out its effect from other independent variables on the comprehensiveness of retaliation.

H8 predicted that individuals with low power who blow the whistle over more serious wrongdoing will suffer more comprehensive retaliation than individuals with high power who blow the whistle over less serious wrongdoing

Because of the various measures of power in the data, a total of eight interaction terms for 1983 and nine for 1992 were entered in stepwise fashion as the last block of the regression procedure. Only four were created in 1980, as fewer measures of idiosyncrasy credit are available in that year.

Using an interaction in a regression equation presents problems with collinearity between the interaction term and the lower order variables used to create the interaction (Marquardt, 1980). In the regression equation initially created to test H8, many of the correlations between interactions and main effects variables were over .90. To reduce

the high correlations, a centering procedure was done, subtracting the mean from each variable prior to creating the interaction term (Aiken & West, 1991; Neter et al., 1989). This greatly reduces the correlation, while leaving the Beta weights relatively unchanged (Aiken & West, 1991).

As noted in the discussion of H5, there are two kinds of power being measured in H8 – influence power and idiosyncrasy credits. Three interaction terms were created using influence measures – co-worker lack of support, supervisor lack of support and management lack of support, each multiplied by the seriousness of wrongdoing variable. None of these three interactions were significant in predicting retaliation in 1980 or 1992. In 1983, the interaction between seriousness and supervisor lack of support was significant ($\text{Beta}=0.12$, $t=2.03$, $p < .05$). When the interaction enters the equation, seriousness of the wrongdoing by itself as a predictor becomes non-significant, although supervisor lack of support maintains its significance as an individual predictor.

Idiosyncrasy credit interactions were created in the same way using gender, race, professional job status, last performance appraisal (1992 only), pay and tenure, each multiplied by seriousness of wrongdoing to create the interaction variables. None of these interactions entered in any year, even though interactions between seriousness and pay ($\text{Beta} = -0.07$, $t=-1.84$) and seriousness and race ($\text{Beta} = -0.09$, $t=1.82$) were significant at the $p < .10$ level.

Since only one interaction was significant enough to enter the regression equation as a predictor of comprehensiveness of retaliation in all three years, the hypothesis that seriousness and power interact was not supported.

Table 10.
Results of the regression on the dependent variable comprehensiveness of retaliation
with interaction of seriousness and other independent variables across time

INTERACTION W/SERIOUSNESS	ALL AGENCIES AND RESPONDENTS ²		
	1980	1983	1992
Pay	<i>-0.067</i> -1.84	<i>-0.045</i> -0.185	<i>-0.041</i> -0.825
Co-Worker	<i>-0.039</i>	<i>-0.067</i>	<i>0.019</i>
Lack of Support	-1.04	-1.09	0.379
Supervisor	<i>0.061</i>	<i>0.124*</i>	<i>0.074</i>
Lack of Support	1.49	2.03	1.38
Management	<i>0.015</i>	<i>0.104</i>	<i>0.051</i>
Lack of Support	0.341	1.59	0.927
White Racial		<i>-0.273</i>	<i>-0.085</i>
Heritage		-0.771	-1.82
Gender (Female)		<i>0.010</i>	<i>0.007</i>
		0.166	0.120
Job Tenure		<i>-0.060</i>	<i>-0.029</i>
		-1.04	0.605
Professional Job		<i>-0.003</i>	<i>-0.064</i>
Status		-0.032	-1.35
Most Recent			<i>-0.035</i>
Performance			-0.750

¹ Analysis on responses of identified whistle-blowers only. Standardized beta listed for each variable in bold italics, with t-value below it. All interactions entered stepwise as last block of regression equation. If value not shown for a variable, it was not measured in that year.

² Total of 15 agencies surveyed in 1980, 22 agencies surveyed in 1983 and 1992.

*= $p < .05$

Although the results of using interactions between the power and seriousness measures were generally not supported, they do provide some insight.

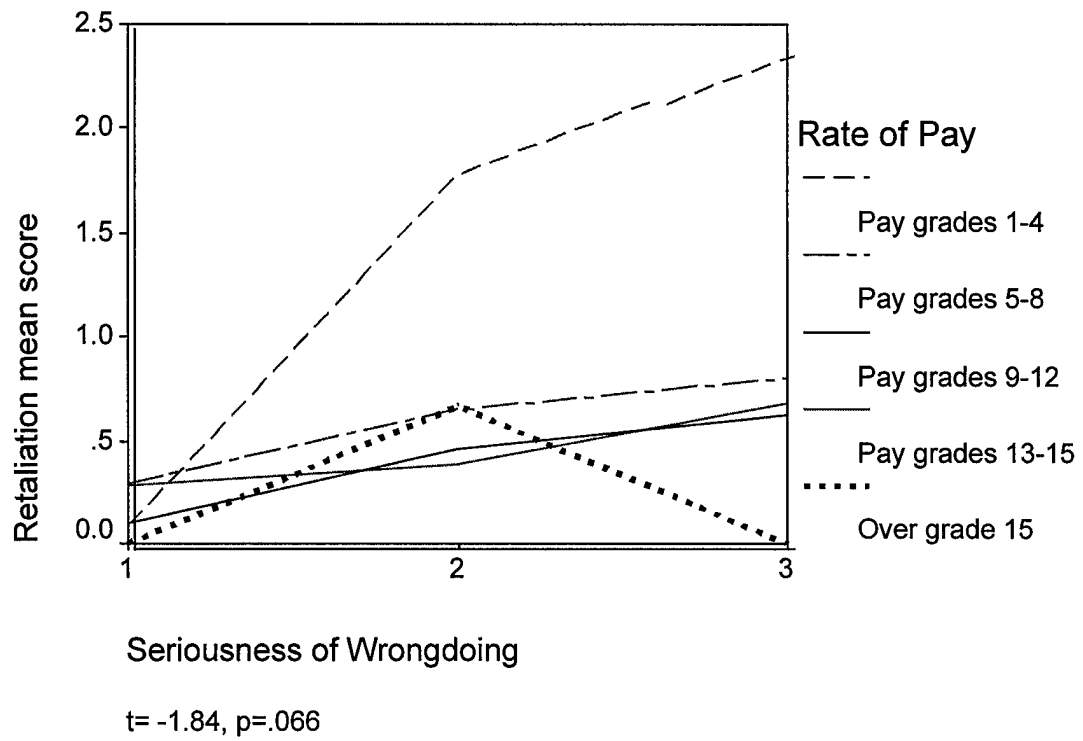


Figure 3.
Interaction between seriousness of wrongdoing and pay, using 1980 sample of
identified whistle-blowers ($n=732$)

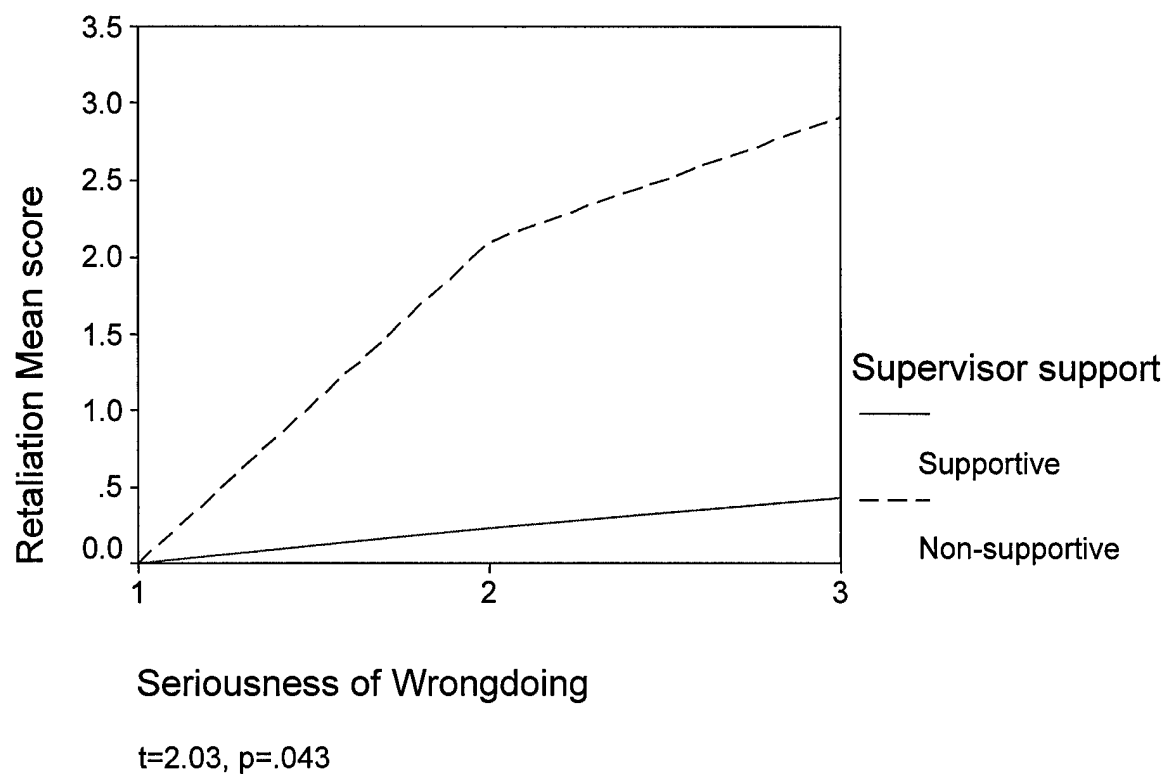


Figure 4.
Interaction between seriousness of wrongdoing and supervisor support,
using 1983 sample of identified whistle-blowers (n=212).

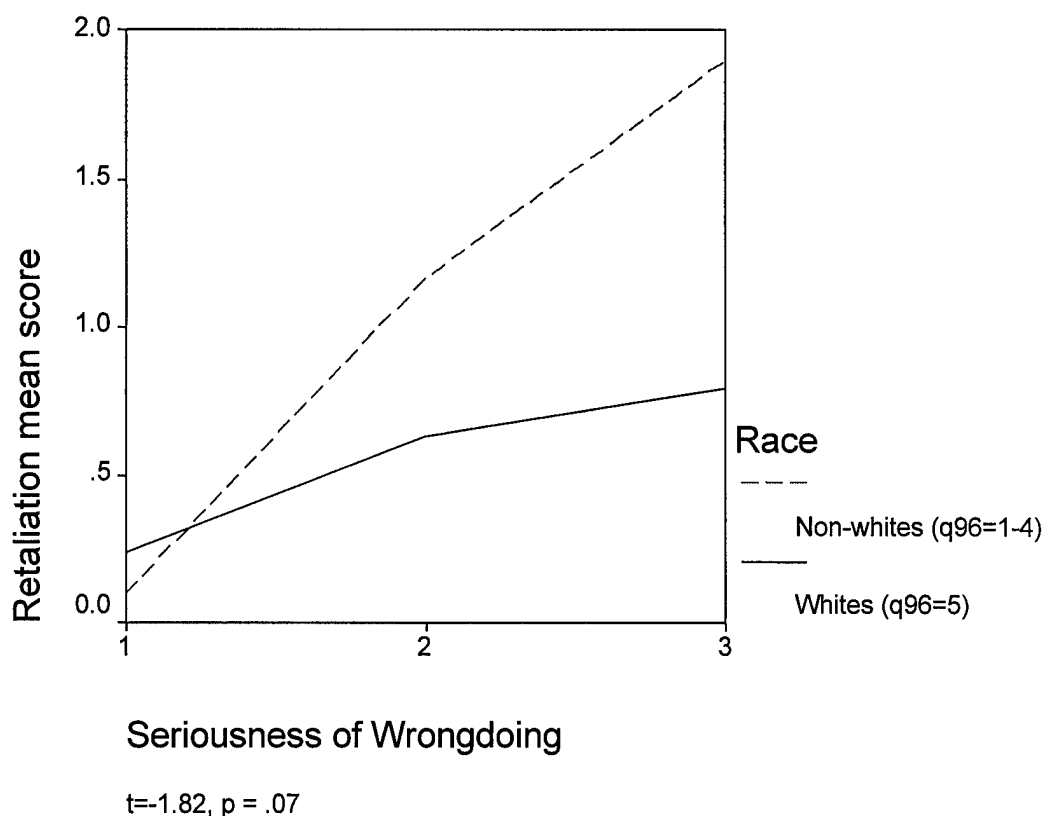


Figure 5.
Interaction between seriousness of wrongdoing and race using 1992
sample of identified whistle-blowers (n=463)

The graphs in figures 3-5 show that for pay, supervisor support and race, whistle-blowers holding the low-status or power characteristic (i.e., low pay, non-white, or non-support) are at more risk when blowing the whistle over serious events as opposed to non-serious ones. Retaliation levels for lower pay grades and higher pay grades are essentially the same for wrongdoing of low seriousness. At medium seriousness, the lowest pay grades suffer more retaliation, and at high seriousness, there is even more of an effect, as the highest pay grades suffer the least, the middle

three pay grades suffer somewhat greater amounts, and the lowest pay grades suffer the most retaliation. In the area of supervisor support, for non-serious wrongdoing supervisor support is not a factor in retaliation, but it quickly becomes important as the seriousness increases to medium and high levels, and non-supported whistle-blowers suffer more retaliation. The same effect is present in the race-seriousness interaction. At low levels of seriousness, race is not a factor, but as the seriousness of the wrongdoing increases, non-whites suffer greater retaliation than whites who are identified whistle-blowers.

H9 predicted that individuals who blow the whistle over more serious wrongdoing would be more likely to report to external channels than individuals who blow the whistle over less serious wrongdoing.

In order to perform a linear regression on the use of external channels as a dependent variable, all the external channels that each whistleblower reported wrongdoing to were added together. Previously, the use of external channels was considered a dummy variable, with the difference being simply the fact that an employee went external to the organization to report wrongdoing. Using a count variable instead of a dummy variable produces a small amount of variation in measuring the use of external channels, and provides some interesting insights. The variable ranged from zero, or no external channels used, to three external channels used. Only one case occurred in which four external channels were used.

Table 11.
Descriptive characteristics of the external channel count variable,
using samples of identified whistle-blowers

NUMBER OF EXTERNAL CHANNELS USED	1980	1992
0	543	343
1	71	63
2	22	22
3	6	1
Mean (SD)	0.21 (.55)	0.26 (.57)

The first characteristic that is apparent when looking at this variable is the consistent lack of the use of external channels. In 1980, 85 percent of whistle-blowers did not use external channels, and in 1992, 80 percent did not use these channels. The second characteristic is that when whistle-blowers do use external channels, most of them only use one external channel (72 and 73 percent in 1980 and 1992 respectively). Nevertheless, the 20 to 25 percent of whistle-blowers who use multiple external channels demonstrate H9's prediction: as the type of wrongdoing progresses from less to more serious, greater numbers of employees use multiple external channels to report the wrongdoing. Thus it is advantageous to create a summation variable on the use of external channels, similar to the creation of the comprehensiveness of retaliation variable.

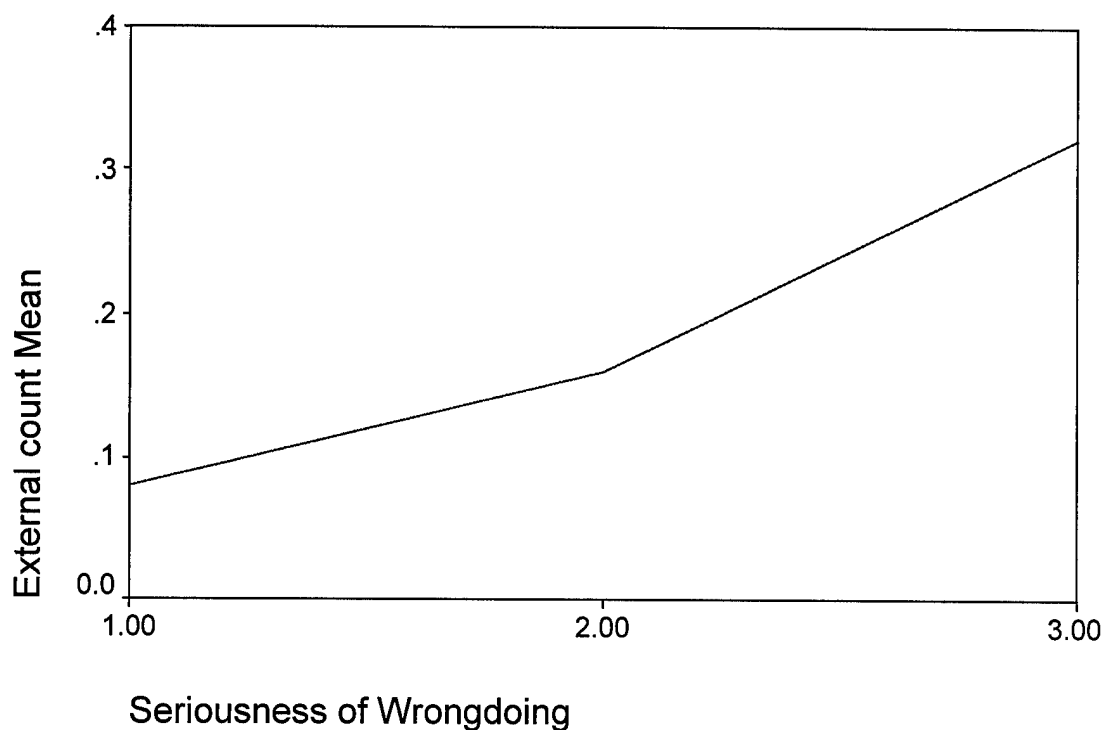


Figure 6.
Relationship between external reporting and seriousness of wrongdoing, using 1980 sample of identified whistle-blowers (n= 671)

Table 12.
Results of regression of the dependent variable: use of external channels by seriousness of wrongdoing using identified whistle-blowers

SERIOUSNESS	1980 (N= 671)	1992 (N=428)
Mean (SD)	2.14 (.86)	2.41 (.67)
Pearson's r	.17***	.09*
B Coefficient (SE)	.106*** (.024)	.078 (.041)
t-value	4.34***	1.91
R ²	.03	.008
F-value	18.84***	3.63

Note *** = $p < .001$; channel use was not measured in 1983.

Despite the trend exhibited upon examining the data, correlation and regression analysis using these two variables provides a more rigorous test of the hypothesis.

In Table 12, we see low correlations between seriousness and external channels in year one and year three ($r = .17$, $p < .001$ and $r = .09$, $p < .05$ respectively). In regressing external channels by seriousness, very little variance is explained in 1980 ($R^2 = .03$ and even less in 1992 ($R^2 = .008$), but this is not surprising given the dynamics of whistle-blowing situations. Notwithstanding the low variance, the Beta coefficient for seriousness is significant in 1980 ($t = 4.34$, $p < .001$) and approaches significance in 1992 ($t = 1.91$, $p < .06$). Although strongly suggestive, the results provide mixed support for hypothesis nine. The relationship between seriousness of the wrongdoing and the use of external channels will be discussed in the next section.

Comparing the Regression Equations

In an effort to assess differences in results over time, only the independent variables and respondents from the 14 agencies that had been measured at all three time periods were used. I used LISREL to analyze the correlation matrices from each year. Overall, the results suggest that the basic model of prediction did not vary over the years. A LISREL analysis of the basic model produced a strong goodness of fit measure (GFI) of .99, suggesting that none of the three models were significantly different from the basic model. The Comparative Fit Index (CFI) was .97. The regressions are somewhat different, since the samples are not identical to those used in the SPSS regression analysis, but generally the results using LISREL support the SPSS results.

Table 13.
Regression equations compared using LISREL

YEAR	PAY	EDUCA TION	COWORKER LACK OF SUPPORT	SUPERVISOR LACK OF SUPPORT	MANAGEMENT LACK OF SUPPORT	SERIOUS- NESS OF WRONGDOING
1980 (n=640)	-0.18** (0.06)	0.12 (0.07)	-0.13 (0.21)	0.87*** (0.15)	0.67*** (0.14)	0.16* (0.07)
1983 (n=202)	-0.18 (0.10)	0.16 (0.11)	0.43 (0.46)	1.77*** (0.30)	1.17*** (0.25)	0.14 (0.13)
1992 (n=424)	-0.04 (0.10)	0.03 (0.08)	0.54* (0.19)	0.77*** (0.16)	1.31*** (0.16)	0.17 (0.09)

Note: Only nine types of wrongdoing common to all three surveys were used in the analysis. * = $p < .05$, ** = $p < .01$, *** = $p < .001$ GFI = .99; CFI = .97

DISCUSSION

This large-scale field experiment suggests that legislative changes designed to encourage and protect whistle-blowers in the Federal government, and to discourage wrongdoing, have achieved mixed success. Two findings suggest that the CSRA, as amended by the WPA, has had important and desirable effects. First, over time, the rate of perceived wrongdoing declined significantly, and second, the proportion of those who believed they had observed wrongdoing, who then reported it to authorities, increased. If the rate of actual wrongdoing decreased and propensity to report it increased, obviously this would be good news with respect to these particular organizations. More broadly, such findings would suggest that the legal changes supporting merit principles, including protections for whistle-blowers, had at least two desired effects. However, it is also possible that the perception of what constitutes wrongdoing changed, despite the similarity in the wording of the items describing categories of wrongdoing. It is also possible that social acceptability of whistle-

blowing may have increased over time, leading more people to say that they reported wrongdoing once it was observed. Another possibility is that internal channels became institutionalized over time, leading to increased access to whistle-blowing channels. For instance, the enactment of the Inspector General Act of 1978 created the Office of Inspector General in 12 of the executive agencies, which may have improved the ease of reporting wrongdoing. The Department of Agriculture and the Department of Housing and Urban Development had already established inspector general offices prior to the act (Office of the Inspector General, 1988).

The results in Table 4 show that some differences between years were not significant. For instance, the four percent decrease in wrongdoing from 1983 to 1992 (18 to 14 respectively), was not significant. It is possible that the initial success of both the Civil Service Reform Act of 1978 and the Inspector General Act of 1978 combined to produce the big drop in wrongdoing from 1980 to 1983 (45 to 18 percent respectively). To get a significant decline from 18 percent would be more difficult, since the initial effort to reduce wrongdoing was so successful. It could be that some base rate of wrongdoing is inevitable, and attempts to decrease it will be less and less effective. In addition, the Whistle-blower Protection Act of 1989 was only a fine-tuning of the protections afforded whistle-blowers by the CSRA of 1978, and this would be expected to have a less significant effect on wrongdoing than the initial legislation protecting whistle-blowers.

A somewhat different trend is present in the whistle-blowing rates. The increase in whistle-blowing from 26 to 40 percent from 1980 to 1983 was not significant, nor was the increase from 1983 to 1992 (40 to 48 percent respectively).

The overall increase from 1980 to 1992, however, was significant. This gradual rise in whistle-blowing may be due to the poor performance of the agencies set up by the CSRA of 1978. The Merit Systems Protection Board and the Office of Special Counsel were criticized for their ineffectiveness in the initial years of their existence, which prompted the fine-tuning of the system with the 1989 WPA (Devine & Aplin, 1988). Therefore, the decrease in wrongdoing and increase in whistle-blowing would not be due to a large increase in decisions favoring whistle-blowers in those years; perhaps the effect was caused by the publicity over the formation of the offices, and the knowledge that whistle-blowing was being encouraged by the government.

Two other findings suggest that the legislation had unintended effects as well: the proportion of whistle-blowers who remained anonymous increased over time as did the proportion of identified whistle-blowers who perceived they were retaliated against. These results can be interpreted in several ways.

It could be that whistle-blowers are identified against their wishes. It may be that just as many whistle-blowers at Time 1 would have liked to remain anonymous as at Time 3 but that they were unable to do so because safeguards protecting their identity were not as effective at that time as at Time 3.

It is also possible that the law encouraged the development of mechanisms and norms supporting anonymous whistle-blowing (e.g., through increased availability of hot lines that did not require whistle-blowers to identify themselves). While anonymous whistle-blowing is seen by some people as inappropriate and unethical, because it does not permit the accused to face the accuser, anonymous whistle-blowing may be justified by the power imbalance between the individual and the organization

and other factors (Elliston, 1982a). Thus, it is difficult to interpret these data definitively; we cannot determine why the increase in anonymity occurred.

The increase in retaliation from 1980 (17 percent) to 1983 (21 percent) was not significant, while the increase from 1980 and 1983 to the 1992 level (38 percent) was significant. Again we can only speculate as to why there was not a significant difference in one of the comparisons. One caution about the data is that the number of cases found in 1983 for retaliation was very low ($n=20$), so obtaining significant results may have been impaired by this data restriction.

The survey data do not allow disproving the possibilities mentioned above, but they also point to another conclusion: as retaliation against whistle-blowers increases, fewer people are willing to step forward and identify themselves when they blow the whistle. In essence, the organization creates a negative environment through a reputation effect - the word about how a fellow employee was treated spreads through the social network, and the result is a fear factor that suppresses identified whistle-blowing. But this fear evidently doesn't prevent employees from blowing the whistle, since that figure actually rose over the 13-year period. However, by increasing anonymous reports, retaliation may decrease the effectiveness of whistle-blowing, since anonymous reports are hard to substantiate. If the fear of retaliation leads to more anonymous whistle-blowing, that is less effective in halting the wrongdoing, then wrongdoers may be encouraged to retaliate against identified whistle-blowers to maintain the fearful climate.

However, even if retaliation does have a negative effect on identified whistle-blowing, the basic question of *why* retaliation increased over the years still remains. If

we assume that the findings do reflect reality, and that retaliation actually increased from 1980 to 1992, what explains this result?

The regressions show that lack of support from supervisors and higher managers is the strongest predictor of increasing amounts of retaliation against whistleblowers. But this does not explain why the whistle-blower was not supported. Lack of support has been argued to be a measure of power, and in the absence of this support, we would conclude that the whistle-blower did not have the means to influence those above them and avoid increasing amounts of retaliation. This argument is somewhat weakened by the knowledge that upper level managers report the same reasons for experiencing retaliation as the rest of the population: they experienced a lack of support from supervisors and higher management (see Table 8). What this may indicate is that a lack of power – as evidenced by an inability to influence organizational superiors – has a universal effect, no matter what level in the organization the whistle-blower resides.

Unfortunately the survey data do not permit us to determine why whistleblowers who experienced retaliation did not get the support of their superiors. It's possible that idiosyncrasy credits were a factor in the influence measures (although the correlations between the two types of measures were low). Only two of the idiosyncratic measures were significant predictors at any of the three time periods for higher level whistle-blowers, gender and performance (both significant in 1992 only). However, upper level managers are composed mainly of higher performing white males, which makes those variables low in variation and less valuable as predictors.

But this composition of upper level managers actually provides an opportunity to focus on the influence measures. Selecting upper level managers as the unit of analysis provides a control of idiosyncratic characteristics, effectively holding that type of power constant. Using this procedure, the influence measures are still highly significant. Perhaps whistle-blowers avoided retaliation by possessing valuable skills or knowledge that enabled them to gain the support of management, as Pfeffer and Salancik's (1978) resource-dependence theory would predict. Conversely, the results may be showing that blowing the whistle is simply too great of a violation of a social taboo. Black (1976) stated that individuals who have been labeled "deviant" are more likely to be charged with a crime than are conventional employees. These findings show that whether whistle-blowers are high or low ranking, their behavior is still deviant, and results in sanctions being applied as Black (1976) predicted. Their behavior may still violate the social norm against "tattle-taling, " or that bringing internal problems to light in public is frowned upon in American society.

The universal effect of the lack of influence power possessed by whistle-blowers at all levels may also be a reflection of the huge amount of power residing in an organization, especially these large federal agencies. Individuals of any rank simply do not have the resources, or the access to resources that organizations have or can tap into. Perry (1993) also discussed this phenomenon, and Black's (1976) behavior of law theory also predicts that individuals are at a disadvantage in the legal-social environment when confronting an organization. Overall, these findings show that as the whistle-blower's power increases, they are less likely to experience retaliation.

Obtaining mixed results for eight different measures of power should come as no surprise, given the difficulty of measuring power. This seems especially true of measuring idiosyncrasy credits (Hollander, 1958), which received mixed support. While members with higher pay and better performance would presume to have greater status, these characteristics did lead to less retaliation. Conversely, members with more education, presumed to be associated with increased status, suffered increased amounts of retaliation. Additionally, being non-white presumably decreases an employee's status in a white-dominated workforce, but non-whites were also found to suffer less retaliation.

More variance was explained using the smaller sample of upper level managers, which reduced the variation of variables such as race, pay, education and professional job status. In the sample of upper managers, findings concerning idiosyncrasy credits were again contradictory. While higher performance decreased the amount of retaliation suffered, female employees, presumed to be lower in status in a male-dominated workforce, also suffered decreased amounts of retaliation. Perhaps measures of idiosyncrasy credits dealing with demographics such as race and gender have lost their association with status in government organizations, and are no longer useful as predictors of power imbalances.

Seriousness and Comprehensiveness of Retaliation

Seriousness of the wrongdoing has been a fairly consistent, although somewhat weak predictor of retaliation comprehensiveness. It is significant at Time 2 and Time 3 at the $p < .05$ level, and at the $p < .11$ level at Time 1. A number of factors may be responsible for this, one being the nature of issues that evoke a whistle-blowing

response. As Perry (1993) pointed out, they often do not have a direct bearing on the organization's performance, and thus are simply less threatening. Thus, wrongdoing with no specific dollar value (like a safety issue), or wrongdoing that is general in nature (such as waste) may be less likely to elicit negative reactions from supervisors and managers. Indeed, they may result in positive reactions towards the whistleblower, as organizations would likely benefit by correcting these discrepancies. This would lead one to suspect that analyzing different types of wrongdoing may uncover different predictors of retaliation.

Another possibility is that the seriousness of the event is already established by the act of blowing the whistle, leading to a measure that is low in variance, and unable to predict retaliation. Additionally, as Black (1979) explained, the seriousness of the event may be more related to the social structural context in which it occurs, as opposed to the nature of the act itself. Thus, in blowing the whistle, employees may be taking an action likely to produce negative consequences for them given the *social context* –that is, their lack of power or credibility in the organization makes them more vulnerable to the application of law (sanctions). The theory, all else being equal, would consider the act of a subordinate blowing the whistle on a supervisor as deviant behavior, and a more serious offense in a socially stratified society. According to Black (1976: 28), “upward deviance” (that directed from a person of lower status towards one higher in status) is the most serious kind of deviant behavior, and likely to evoke the greatest sanction. Hembroff (1987) found support for this proposition, in that offenses committed by less conventional employees were judged to be more serious than offenses committed by conventional employees. Pfeffer (1981: 6) notes that

legitimization of authority “occurs in a specific social context, and what is legitimate in one setting may be illegitimate in another.” The findings here about power are supportive of these theories.

These findings do have implications for the model of whistle-blowing and retaliation. First, most whistle-blowing (51 % in 1992) occurs over wrongdoing that is highly serious in nature. Thus, it is more of a predictor of whether whistle-blowing will occur as opposed to whether retaliation will occur. Secondly, if Black’s theory is true, then the mere act of a subordinate blowing the whistle on a superior is a serious matter that superiors respond to negatively.

Violating norms about whistle-blowing by using external channels is significantly associated with an increase in retaliation in 1980, while only moderately significant ($p = .052$) in 1992 (it was not measured in 1983) (See Table 8). Since federal employees have a number of internal whistle-blowing channels available to them (e.g., Office of Inspector General within each agency), use of external channels may be seen as inappropriate and deserving of disapproval, despite prescriptions against retaliation. Since nearly all external whistle-blowers also report internally, we cannot ascertain whether those who experienced retaliation then went outside to pursue the complaint further, or whether going outside triggers more retaliation, or both. Differences can be seen in the cases of Judith Neal, who reported wrongdoing internally, and Tina Schenherr, who reported wrongdoing both internally and externally (Reidinger, 1996). Neal was an employee of Honeywell who reported the company selling defective ammunition to the government to internal channels. Although the company did an internal investigation and settled out of court, Neal was

harassed and physically threatened, and eventually quit her job. Schenherr was a manager at U.S. Homecare Corp. and reported fraudulent billing practices internally, to no apparent avail. She later went to the FBI over the continuing fraud, and was fired a few weeks later. These cases may not be typical of internal and external whistle-blowers, but differences in the process of retaliation for internal and external whistle-blowers have been postulated, and have quantitative and qualitative support (Dworkin & Baucus, 1995).

An interesting phenomenon appears when examining seriousness of the wrongdoing, use of external channels, and retaliation, which was done for hypothesis nine. Although external reporting is a significant predictor of retaliation (H7), and multiple external channels are more likely to be used as the seriousness of the wrongdoing increases (see Figure 6), the seriousness of the wrongdoing does not have a significant direct effect on the amount of retaliation experienced. That should lead to the examination in more detail of a model linking seriousness of the wrongdoing, use of external channels and comprehensiveness of retaliation. Do whistle-blowers who report to multiple external channels suffer greater amounts of retaliation than those who report to only one external channel?

The LISREL analysis comparing the three regression equations shows that retaliation that occurred in 1992 did so for basically the same reasons as in 1980, just after the passage of legislation to protect federal whistle-blowers from retaliation--despite the fact that the incidence of retaliation doubled over the same time period. However, the results suggest that top management and co-workers played a larger role in retaliation in recent years, while supervisors had a stronger effect in earlier years of

the study. The total variance explained has also varied substantially over the years (see Table 8), from .19 to .41.

Limitations to Study One

One of the limitations of using standardized measures across all three years of this study is that the data collected with the 1992 survey is not fully examined. More detail was collected in regards to the seriousness variable and the retaliation variable in 1992 than in earlier years. In order to preserve comparability across the three time periods, only measures used in times 1 and 2 could be used in time 3.

Slight differences in the order and wording of questions between the three surveys may also have produced different effects. Because the MSPB uses the survey to research several aspects of the civil service system, topics can vary from one year to the next, resulting in slightly different surveys. In 1983, very few questions were dedicated to whistle-blowing, and in 1980, some priming effect may have occurred, as the first group of questions deals with observation of wrongdoing in general, and may have served to focus respondents on the subject of whistle-blowing in general.

Other limitations of Study One that are also common to Study Two will be noted in chapter seven.

Summary and Future Research Questions

Some of the findings in this study point to some future research questions. Interactions between seriousness and other independent variables suggest that more research is needed to quantitatively determine if the seriousness of the wrongdoing is more important in the initial stages of the whistle-blowing process. The use of external channels has always been a puzzle that survey data couldn't solve. However, a more

detailed analysis of the survey data and the use of external channels may provide some insight. What is really needed, however, is for external channels to be measured more accurately, so that the temporal order of its occurrence is possible. Dworkin and Baucus (1995) is a promising study in this regard, because the legal record which produced the data describes the events surrounding the whistle-blowing as they occurred which allows the order of events to be determined.

Findings using a standardized definition of retaliation show supervisor lack of support and management lack of support to be the only consistently significant predictors. When all 13 types of retaliation are included as part of the analysis of the 1992 data, some interesting questions are raised. The addition of the four types of retaliation results in a significant Beta value for coworker lack of support ($B = .114$, $p < .05$), a finding not discovered with the previous regressions (see Table 14).

Why do these additional four retaliation types lead to this result? The four types present on the 1992 survey that are not present on the prior year's surveys are 1) verbal harassment/intimidation, 2) denial of an award, 3) being fired, and 4) being shunned by coworkers. Two of these four types of retaliation are modes that are available at lower levels in the work force – being verbally harassed and being shunned. By measuring these other types of retaliation, the coworker response to whistle-blowing becomes more apparent. Additionally, the fact that coworkers respond differently than supervisors or upper managers suggests that more insight could be gained by analyzing retaliation as a more complex construct, a phenomenon that could occur in more than one way.

Table 14.
Results of the hierarchical regression of comprehensiveness of retaliation using all 13
types of retaliation measured in 1992, and multiple independent variables

INDEPENDENT VARIABLES ¹	BETA
1. Pay	<i>-0.010</i>
2. Education	<i>0.003</i>
3. Co-Worker Lack of Support	<i>0.114*</i>
4. Supervisor Lack of Support	<i>0.208***</i>
5. Management Lack of Support	<i>0.236***</i>
6. Seriousness of Wrongdoing	<i>0.091*</i>
7. Use of External Channels	<i>0.090</i>
8. White Racial Heritage	<i>-0.087</i>
9. Gender (Female)	<i>-0.049</i>
10. Job Tenure	<i>0.023</i>
11. Professional Job Status	<i>0.042</i>
12. Most Recent Performance	<i>-0.200***</i>
Multiple R	0.54
Adjusted R ²	0.27
F value	12.25***
N	369

¹ Analysis on responses of identified whistle-blowers only. Pay and education entered first in block one; other independent variables entered simultaneously in block two.

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

In Chapter Five, the retaliation process will be examined in more detail, and literature pertinent to retaliation will be reviewed. Previous descriptions and models of the retaliation process will also be discussed. Hypotheses generated from the application of theory to the retaliation concept are proposed, along with the specific methodology for testing these hypotheses.

CHAPTER FIVE

STUDY 2: A SYNTHESIS AND EXTENSION OF RETALIATION MODELS

Introduction

In this chapter, I will review current retaliation models, and present some revised concepts to examine in more detail the construct of retaliation. The proposed hypotheses will help to shed light on the process of retaliation against whistle-blowers, a process which has not heretofore been quantitatively examined in great detail. In addition, it is a process which has been assumed to be homogenous—the same for all types of retaliation—an assumption which Study Two will test.

Retaliation Theory

Descriptive frameworks of retaliation against whistle-blowers previously developed include Ewing (1980) and Devine and Aplin (1988). Also, Miceli and Near (1992) include retaliation as part of Stage 4 in their model of whistle-blowing.

Ewing (1980) described seven steps that bureaucrats may take against dissidents: 1) Put them in brown shoes (reassign them to less desirable duties), 2) Make them flies in amber (give them an obscure job), 3) Eliminate the job, 4) Stonewall them (void evidence that might support charges), 5) Make them come unbuttoned (harass them until they lose their composure), 6) Ice the puck (cut their budget, pull secretary, close office, do not promote), and 7) Imitate mushroom farming (keep dissident in dark, then fire them).

Another descriptive framework was put forth by Devine and Aplin (1988), and consisted of six steps to “neutralizing dissenters.” These steps include: 1) Make the dissenters, instead of their message, the issue, 2) Isolate the dissenters, 3) Put them on a pedestal of cards (set them up for failure), 4) Display chutzpah in selecting charges (make outrageous charges against them), 5) Eliminate the job, and 6) Destabilize dissenters' support base.

While the Ewing (1980) piece and the Devine and Aplin (1988) piece are mainly descriptive in content, their frameworks overlap with the four stages of retaliation proposed by O'Day (1974), and can be effectively integrated.

O'Day (1974) described retaliation as a reaction to reform, in which four stages of reaction are experienced, nullification, isolation, defamation, and expulsion. He used the term “intimidation rituals” to describe the reactions of middle managers to “reform-minded subordinates” (e.g., whistle-blowers), divided into two parts--indirect and direct--which escalated at each step of the process. This escalation of the process is echoed by Deutsch's view of destructive conflict as one “characterized by a tendency to expand and escalate” (Deutsch, 1973: 151).

Indirect intimidation is essentially passive, where the organization absorbs the accusations of the reformer. The two steps in this part are nullification and isolation. Nullification consists of *extralegal* pressure (i.e., outside of the legal system) on complainants to desist from blowing the whistle, whereas isolation is an attempt to separate complainants from others, restrict their activities, reduce their allocation of organizational resources, and transfer them to less visible positions.

Table 15.
Categorizing the Ewing (1980) and Devine and Aplin (1988) frameworks into O'Day's (1974) description of the four steps in the retaliation process.

O'DAY'S STEP 1: NULLIFICATION (INFORMAL STAGE)	O'DAY'S STEP 2: ISOLATION (INFORMAL STAGE)	O'DAY'S STEP 3: DEFAMATION (FORMAL STAGE)	O'DAY'S STEP 4: EXPULSION (FORMAL STAGE)
Stonewall them (Void evidence that might support charges) (Ewing)	Put them in brown shoes (reassign to less desirable duties) (Ewing)	Make them come unbuttoned. (i.e., lose their composure) (Ewing)	Put them on pedestal of cards (Set them up for failure) (Devine & Aplin)
	Make them flies in amber (give them obscure job) (Ewing)	Make outrageous charges against the dissenter (Devine & Aplin)	Eliminate job (Devine & Aplin)
	Ice the puck. (cut their budget, pull secretary, close office, do not promote) (Ewing)	Make the dissenters, instead of their message, the issue (Devine & Aplin)	Eliminate Job (Ewing)
	Imitate mushroom farming (keep dissident in dark, then fire them) (Ewing)		
	Isolate them (Devine & Aplin, 1988)		
	Destabilize support base (Devine & Aplin, 1988)		

Forms of direct intimidation as described by O'Day (1974) include defamation and expulsion. Defamation is an attempt to publicly lower the status of whistle-blowers to reduce the chance of them gaining support from others in the organization. Expulsion represents the most severe form of intimidation, but not the preferred one because it results in the involuntary exit of reformers from the organization. This may actually serve to increase the support for reformers, by making martyrs of them. However, it is a means of control, by showing to those remaining in the organization what happens to reformers who do not desist in their efforts.

In their model of whistle-blowing, Miceli and Near (1992) describe the reactions of the complaint recipient in terms of the factors that affect the complaint recipient's actions and the reactions of other organization members to whistle-blowing. They can be based on characteristics of the individual, the situation, the organization, or the power relationships between actors. These factors can include the role of the complaint recipient, attributions about the whistle-blower, and organizational norms surrounding whistle-blowing in the organization, among others. Miceli and Near (1992) group them into two types of responses--resistance (processes that help the group resist change and maintain stability) and accommodation (processes that allow the group to change its norms), which taken together account for the consequences to the whistle-blower. These include being disliked, being persuaded of making errors, getting increased communication from the group (such as to inform them of norms they may not be aware of), and being punished (Miceli & Near, 1992).

The four frameworks mentioned above are not entirely on the same level of analysis. Ewing's (1980) model refers to "bureaucrats" who are reacting to dissenters.

These include people at a variety of levels including superiors, management, top management, administrators of federal agencies, and the agency itself. Devine and Aplin (1988) do not specify the level of the reaction to whistle-blowers but do separate actions geared toward suppressing the complainant from the actions taken to suppress the complaint process itself. These first two frameworks are more *descriptive* of how organizations retaliate--specific actions they take against whistle-blowers.

O'Day's (1974) model is based on the reactions of middle management to "reform-minded subordinates." It categorizes these actions into a pattern, or series of stages which together describe the overall *process* of retaliation.

The Miceli and Near (1992) model includes reactions from all levels of management as well as co-workers. It is geared to *predicting* the occurrence of retaliation, by taking into account various factors affecting the entire process of whistle-blowing.

Currently, the two descriptive frameworks and the process model have not been incorporated into the more general predictive model developed by Miceli and Near (1992), although at first glance, they do not appear to be in conflict. Some overlapping variables have been used in past research to build the models. This presents an excellent opportunity to link models that describe the "what" and "how" of the retaliation process with the model of "why" retaliation occurs. It is the aim of this research to examine the descriptive nature of retaliation—the specific actions taken against individuals—in hopes of gaining some insights which can improve the predictive power of the Miceli and Near (1992) model.

Extending Retaliation Models

At least two curiosities strike one when looking at past whistle-blowing research. One is that anecdotal evidence appears almost weekly in newspapers and magazines detailing the retaliation suffered by whistle-blowers at the hands of their employers. Results from quantitative survey research, on the other hand, reveal that the vast majority of identified whistle-blowers do not, in fact, suffer retaliation. While this difference may only reflect the methods used by each type of research, an integration of the models generated by these different methods should help to inform and further the research stream.

It is the other curiosity--the paucity of knowledge surrounding retaliation itself--that this research is undertaken to address. For although the retaliation phenomenon is commonplace in case study research, and its various stages have been described, explaining or predicting it quantitatively has remained a mystery, due somewhat to the lack of data. Retaliation had to be treated as a unitary construct, even in the Miceli and Near (1992) model, which is one of the most complete descriptions of the whistle-blowing process to date.

Nevertheless, in stage four of their model, Miceli and Near (1992) elaborate on the retaliation process. They note the need to subdivide organizational responses into positive, negative, and neutral responses, as organizations rarely respond as one entity.

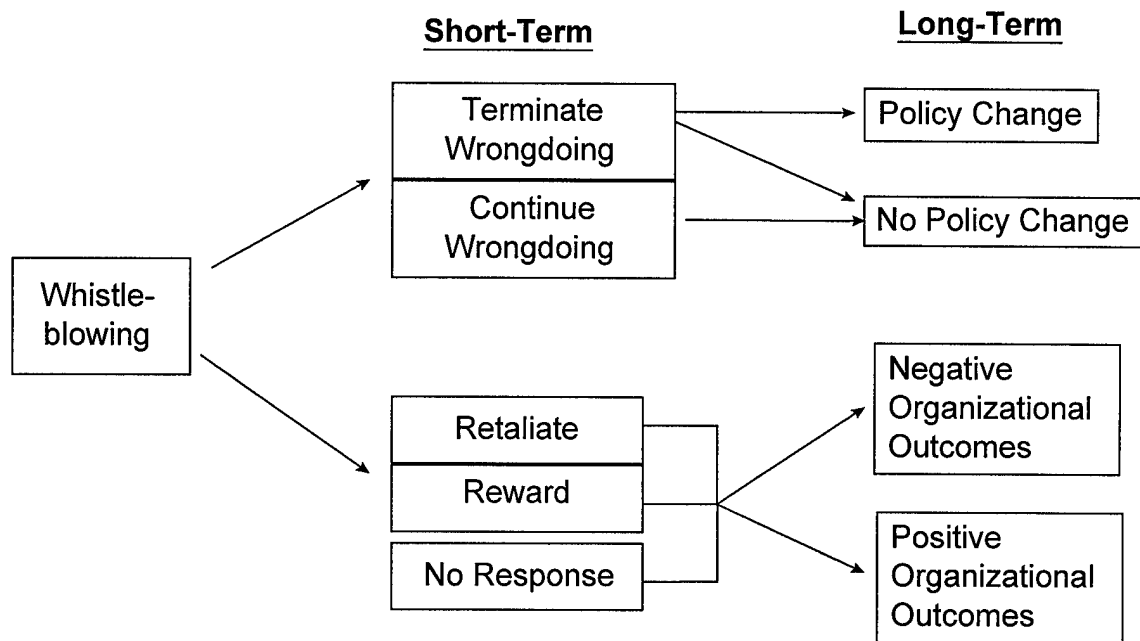


Figure 7. Short-term and Long-term outcomes of Whistle-blowing (from Miceli and Near, 1992).

Reactions can differ from one group to another--coworkers, supervisors, and upper management may be differentially affected by the wrongdoing--and this could result in a variety of reactions to whistle-blowing. If upper management is involved in the wrongdoing, they may see the whistle-blower as a threat and react by retaliating. Coworkers may not be involved in the wrongdoing, and side with the whistle-blower. In other cases, co-workers may feel threatened by the whistle-blower to the same degree as management, causing both to retaliate. Perry found that the involvement of the dominant coalition in the wrongdoing increased the amount of retaliation against whistle-blowers (Perry, 1992)

The question this research is addressing is why are the reactions different--what makes an organization react in a hostile or favorable manner towards whistle-blowers? Is

it the characteristics of whistle-blowers, the organization, or the situation that elicits a hostile response, and what causes different types or degrees of retaliation?

It is apparent from the sources already mentioned--O'Day (1974), the process framework, Ewing (1980), and Devine and Aplin (1988), the descriptive frameworks--and Miceli and Near (1992), the predictive framework, that a lack of connectivity exists among these frameworks. No author from the descriptive side has gone beyond the mere listing of various actions except O'Day (1974), who categorized them into direct and indirect forms of intimidation rituals. On the quantitative side, Miceli and Near (1992) treated retaliation in the context of the whistle-blowing model, but lack of data prevented further exploration into the retaliation phenomenon. They did, however, recognize the need to investigate retaliation in more depth. They postulated that differences in the amount of dependence on the wrongdoing may elicit different responses from co-workers and management. Co-workers not dependent on a particular type of wrongdoing may not retaliate against a whistle-blower, while management may retaliate due to their dependence on the same wrongdoing. Finding this difference "suggests that separate measures of retaliation are needed: one representing actions of retaliation under the control of management, and the other representing retaliation carried out by co-workers" (Miceli & Near, 1992: 207; from Miceli & Near, 1988b). This suggestion runs parallel with the dichotomy between Weber's bureaucratic or formal organization and the Human Relations schools' endorsement of the informal organization. Clegg and Dunkerley (1980) described these:

“Formal organization refers to official rules and behavior which is stipulated or governed by these rules. Informal organization refers to values and patterns of behavior which are independent of these formal rules and which develop out of the interaction of persons in groups in the organization.” (p. 132)

This is the dichotomy that will be used to examine retaliation behavior.

Control Theory

Organizational control has been defined as any process that helps align the actions of individuals with the interests of their employing firm (Tannenbaum, 1968).

Two processes to be examined here are bureaucratic control and social control.

Bureaucratic control includes the use of hierarchy, rules, policies, etc. to standardize procedures and assess performance. Social or cultural control relies on the informal mechanisms such as norms, values and traditions to maintain the organization's functions. Ouchi described it as clan control, which “relies for its control upon a deep level of common agreement between members on what constitutes proper behavior...” (Ouchi, 1979: 838).

All organizations are bureaucratic to some extent (Perrow, 1970). The first characteristic of Weber's bureaucracy refers to a rule-based order (Daft, 1995). When people associate with each other through organizations or on an individual level, rules are necessary to prevent chaos. The existence of many rules and regulations connotes a rigid organization, while few rules and regulations connote a free, loose, or ad hoc organization. If rules are the means to control, and various degrees of these rules exist, then different degrees of control result. It may be assumed that the more rules, the more control, the fewer rules, the less control. But this assumption does not hold unless both written and unwritten rules are included. In some organizations, for

instance, many written rules are present, but few are actually followed. The unwritten rules of the organization take precedence. The issue becomes not whether the rules are written down, but whether they are followed, and how strictly are they enforced? In other words, whether the rules are formal or informal, the organization depends on a certain amount of obedience to them. Deviations from the rules draw sanctions. Organizations vary on the amount of deviance allowed from the rules, so the question for the employee becomes, is there room for dissent to the rules?

On the organizational side, the question is one of enforcement. Formal control can be expensive, requiring a lot of monitoring on the part of management (O'Reilly & Chapman, 1996). In addition, as task uncertainty increases, there is a need for greater flexibility, and this decreases the effectiveness of formal systems, while increasing the cost (Caldwell & O'Reilly, 1995). This brings about the use of informal means. Eisenhardt (1985: 135) also argued that socialization or clan control would be used in tasks that were "imperfectly programmable" with low "outcome measurability."

Control, then, can be either formal or informal. If retaliation is a means of control, there should be two types that segregate along these lines of formality. If there are two types of retaliation, they should differ in their predictors and effects, including their effectiveness in achieving the silence or absence of the whistle-blower.

If O'Day's (1974) four stages are valid, then further testing with quantitative data should reveal these stages. Parmerlee et al. (1982) examined the first two stages while Dworkin and Baucus (1995) classified retaliation into the stages proposed by O'Day (1974), using 33 cases only of whistle-blowers who were fired. The results did show support for O'Day's (1974) four stages, and call for analysis of all types of retaliation

outcomes (not just being fired) into the model. With the collection of data on retaliation in the federal surveys, enough cases are now available to test O'Day's (1974) four stages of retaliation.

A Proposed Retaliation Model

Previous studies of whistle-blowing have considered retaliation only as a unitary construct, to determine what factors affected the extent of the retaliation.

Characteristics of the whistle-blower have been shown to influence the extent of retaliation, but they also may affect different types of retaliation in different ways. In addition, the reactions of others to the whistle-blowing may be different for different types of retaliation, which suggests that retaliation may induce a mixed response--i.e., co-workers may respond differently than management. By grouping all types of retaliation into one category, important differences in their predictors and effects could go unnoticed. Perhaps this, in part, explains why past studies have obtained mixed results--the retaliation construct is not a unitary one, but multidimensional. Although we do have to be careful when assigning value to retaliatory actions, we can say organizations "choose" different modes of responding to various situations. These considerations, when linked to theories of organizational control, lead to a more refined breakdown of retaliation into informal and formal modes.

Informal retaliation is defined as those actions that do not require approval from superiors, and can be implemented without initiation of paperwork. Formal retaliation would include those actions that involve written documentation, or are governed by rules and procedures for how and when they are implemented. The Code of Federal Regulations, for example, describes the rules for giving notice to terminate employees

(Code of Federal Regulations, 1997). A supervisor cannot fire a federal employee without following formal procedures as set down in this code.

Past studies have shown consistently that lack of support for reporting the wrongdoing by the whistle-blowers' supervisor and upper management is a significant predictor of retaliation. Co-worker lack of support has not been a consistent predictor of retaliation in its unitary form. With a more refined gradation of retaliation however, we should expect to find co-workers to be the ones to carry out negative informal responses to whistle-blowers, as a type of clan control (Ouchi, 1979), or the work group's control of deviance (Schachter, 1951). Informal interactions with co-workers are a more likely arena for reactions such as harassment or social exclusion to occur, although higher-level managers may also practice it. More formal responses should occur on a higher level and involve supervisors and upper managers who have the authority to make those types of bureaucratic responses.

H10: Co-worker lack of support will be significantly positively associated with informal retaliation and will not be significantly associated with formal retaliation.

H11: Supervisor lack of support will be significantly positively associated with formal retaliation, and will not be significantly associated with informal retaliation.

H12: Upper management lack of support will be significantly positively associated with formal retaliation, and will not be significantly associated with informal retaliation.

As reactions to whistle-blowing escalate, the means necessarily become more formal. It has been shown in the courtroom that if informal controls are ineffective, formal sanctions are imposed. A judge may start with informal actions--dealing with improper behavior with a glance, frown, inflection of the voice, or pounding of the gavel. If the infractions continue, formal means are used (Antonio, 1972). So the judge's reaction moves from an informal one to a formal one, and from relative ease of implementation, to relative difficulty. O'Day (1974) also mentioned ease as a motivation for the organization to start out with indirect responses, since their objective was the silence or absence of the reformer, *whichever was easier to achieve* (O'Day, 1974: 374, emphasis added). Expulsion, the most extreme form of response, usually involves formal proceedings, keeping of records, and formal submission of evidence (O'Day, 1974). Since informal retaliation will discourage some percentage of whistle-blowers from continuing their dissent, it follows that formal retaliation will not be used as often as informal means.

Hypothesis 13: Whistle-blowers who suffer formal retaliation only will be more likely to subsequently report the retaliation than whistle-blowers who suffer informal retaliation only.

METHODS

The design of Study Two is very similar to that of Study One. The major difference is that Study Two uses only the MSPB mail survey conducted in 1992. As with the 1980 and 1983 surveys, the 1992 survey was designed to determine the effectiveness of the changes to the Civil Service Reform Act of 1978, and included

questions to determine the experiences of employees who reported wrongdoing while at work.

Sample

Data for Study Two were obtained from the 1992 Merit Principles Survey conducted by the U. S. Merit Systems Protection Board. The survey was distributed to over 20,000 employees in 22 federal agencies; 13,432 surveys were returned for a 64% response rate. Analysis of these data found only 2188 respondents who reported observing wrongdoing in their organizations (USMSPB, 1993). From this sample, only observers who reported the wrongdoing to someone above the level of coworker, in accordance with the definition of whistle-blowing, were included. The last filter to screen the data selected only those whistle-blowers who were identified as the whistle-blower. Only identified whistle-blowers are considered to be able to suffer retaliation, although some whistle-blowers who began the process anonymously and were subsequently identified could also have suffered retaliation. The identified whistle-blowers consist of four sub-groups: 1) those who did not suffer retaliation, 2) those who suffered informal retaliation only, 3) those who suffered formal retaliation only, and 4) those who suffered both types of retaliation (see Figure 8).

Measures

The dependent variables, informal retaliation and formal retaliation, are both counts of retaliation experiences similar to the comprehensiveness of retaliation described in Miceli and Near (1989), Near and Miceli (1986) and Near et al. (1995).

No Retaliation (286)

Retaliated
Against (177)

Formal Retaliation Only (22)

Formal and
Informal
Retaliation (91)

Informal Retaliation Only (64)

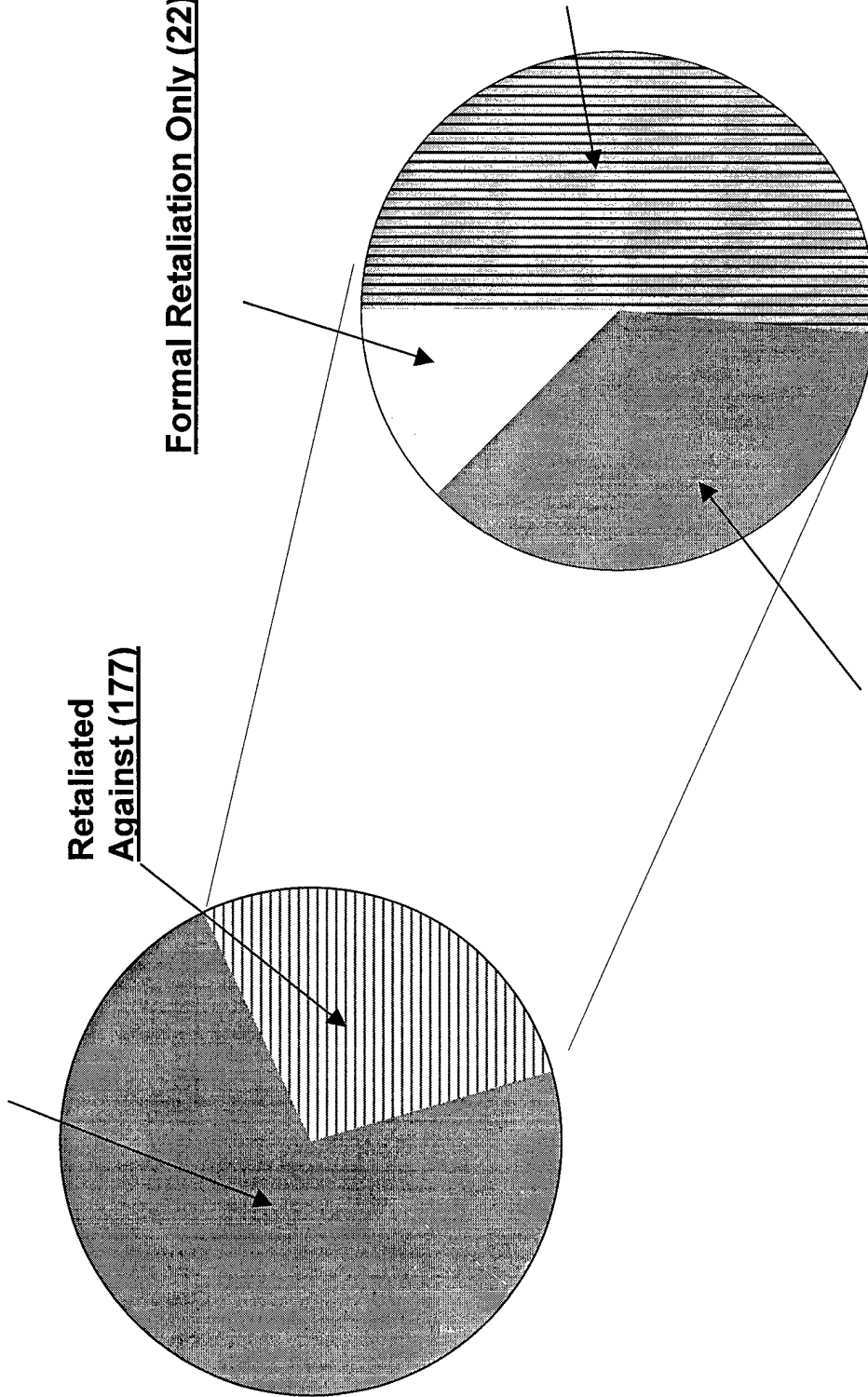


Figure 8. Categories of Retaliation experienced by Identified Whistleblowers in the 1992 sample (N=463)

Within each of the two types, they indicate a general response of the organization to the whistle-blower. Informal responses are actions that do not require paperwork to initiate. Respondents could indicate on the survey whether they were threatened with an action or actually experienced an action. Informal retaliation was measured as the number of times a respondent cites retaliation that is non-written in nature - which includes all threats of retaliation actions - as well as actual experiences that do not require documentation to carry out. Actions considered to be informal included "verbal harassment or intimidation," "shunned by coworkers or managers," "denial of opportunity for training" and "assignment to less desirable or less important duties." While harassment or being shunned are easily categorized as informal actions, being denied training and being assigned less desirable duties are not as obvious. However, being assigned less desirable duties is assumed to occur within the employees' current job, and thus not require written changes. This is distinguished on the survey from the action of being assigned or transferred to a different job, an action which would be more likely to require documentation. Although being denied training may involve the revoking of a scheduled training slot, the item actually centers on the denial of an *opportunity* for training, which brings into question the formal nature of the action. Therefore, it was considered informal in nature.

Formal modes of responding are governed by specific rules and procedures, such as those set down by the Code of Federal Regulations governing job actions for government workers. Formal retaliation was measured as the number of times a

Table 16.
Frequencies of retaliation types from the 1992 Merit Systems Protection Board survey

TYPE OF RETALIATION	CATEGORY	THREATENED	ACTUAL
1. Poor performance appraisal	Formal	25	71
2. Denial of promotion	Formal	14	38
3. Denial of opportunity for training	Informal	7	34
4. Denial of award	Formal	6	49
5. Assignment to less desirable or less important duties	Informal	15	52
6. Transfer or reassignment to a different job with less desirable duties	Formal	8	36
7. Reassignment to a different geographical location	Formal	3	11
8. Suspension from my job	Formal	7	5
9. Fired from my job	Formal	2	1
10. Grade level demotion	Formal	3	5
11. Shunned by coworkers or managers	Informal	10	79
12. Verbal harassment or intimidation	Informal	21	86
13. Required to take a fitness for duty exam	Formal	4	3
14. Other	Informal (Threat only)	7	22
Totals		132	492

respondent cited retaliation that was written in nature, which included "poor performance appraisal," "denial of promotion," "denial of award," "transfer or reassignment to a different job with less desirable duties," "reassignment to a different geographic location," "suspension from my job," "grade level demotion," and "fired from my job," (See Appendix B). No threats were considered formal in nature.

Although the Code of Federal Regulations does not cover all these actions, it does outline procedures for demotion, suspension, and firing of federal employees. Other choices assigned to formal retaliation were done using face validity. Performance appraisals are written and are covered under civil service regulations. It was assumed

that transferring an employee to a different job or a different location would involve documentation, as would denial of a promotion or an award.

The dependent variable for both types of retaliation, dual-mode, is also a count variable. To receive a score above zero on this measure a whistle-blower had to suffer at least one type of informal retaliation *and* at least one type of formal retaliation. Thus, although it is a summation, the value of one is non-existent, since both types of retaliation had to be present in some form. Whistle-blowers who did not suffer any retaliation received a value of zero. This results in values jumping from zero to two, and continuing on from there for as many kinds of retaliation that were experienced.

The dependent variable for hypothesis 13, persistence of the whistle-blower, was measured as a count variable as well. Whistle-blowers who suffered retaliation were asked if they had taken any actions in response to the retaliation. Persistence was created by summing all the channels marked on the survey that the whistle-blower complained to about the retaliation from the following question:

In response to the reprisal or threat of reprisal, did you take any of the following actions? (Please mark ALL that apply)

Response choices included "I took no action," "Complained to a higher level of agency management," "Complained to the Office of Inspector General within my agency," "Complained to some other office within my agency," "Filed a complaint through my union representative," "Filed a formal grievance within my agency," "Filed an EEO (discrimination) complaint," "Filed a complaint with the Office of Special Counsel," "Filed an action with the Merit Systems Protection Board" and "I took an action not listed above."

Table 17.
Frequencies of items used to create Persistence measure,
from question 61 of the 1992 MSPB survey

ACTION TAKEN AFTER SUFFERING RETALIATION	FREQUENCY
1. Complained to a higher level of agency management	58
2. Complained to the Office of Inspector General within my agency	15
3. Complained to some other office within my agency	52
4. Filed a complaint through my union representative	20
5. Filed a formal grievance within my agency	21
6. Filed an EEO (discrimination) complaint	23
7. Filed a complaint with the Office of Special Counsel	4
8. Filed an action with the Merit Systems Protection Board	4
Totals	197

Independent variables include the measures of idiosyncrasy credits from Study One - pay, education, job tenure, last performance appraisal, gender and race. Additionally, the three influence measures - lack of coworker support, lack of supervisor support and lack of management support - are used in multiple regression analysis on the dependent variables of informal-only, formal-only, and dual-mode retaliation. These are described in more detail in Appendix A.

Additionally, the dependent variables from hypotheses ten through twelve were used as independent variables for H13, regression on persistence, with slight modification. As independent variables, they were also summed, but only for mutually exclusive retaliation cases. For instance, the sum of informal retaliation was computed only for cases where informal-only retaliation occurred. Cases used to compute the sum of informal-only retaliation excluded whistle-blowers who suffered any formal retaliation, even if they had suffered informal as well as formal. Without this restriction, too much overlap is present with the summation of the dual-mode

retaliation, since it contains instances of informal retaliation (Pearson's $r = .85$). The same procedure was followed to compute the other two variables, the sum of formal retaliation and the sum of dual-mode retaliation. These computations are preferred over dummy variables to reduce collinearity between the three measures and improve predictive power and interpretability of the results.

For the formal-only sum, only whistle-blowers who experienced formal retaliation but did not suffer any kind of informal retaliation had their score summed, even if they had suffered both types. A count variable was also created for those whistle-blowers who suffered both types of retaliation, which I have labeled "dual-mode." To compute this variable, only cases of whistle-blowers who suffered both types of retaliation had their retaliation scores summed. Whistle-blowers who did not suffer retaliation of any kind received a value of zero for these independent variables.

Analysis

Three separate multiple regression analyses were performed using informal-only, formal-only and dual-mode retaliation as dependent variables. The samples for these regressions included only identified whistle-blowers who had not suffered any retaliation (group 1), and the group that pertained to the dependent variable in question (group 2, 3, or 4) (see Table 18). This creates a sample of identified whistle-blowers who had either not suffered retaliation at all, or had only suffered retaliation of the dependent variable type. It is important to exclude individuals who suffered any other type of retaliation from the sub-sample because they represent situations that would contaminate the dependent variable measures, and confound the regressions. Study One

already included all identified whistle-blowers in predicting the occurrence of retaliation in general. For Study Two, however, we are only interested in whether formal and informal retaliation have different predictors and thus, must restrict the sample to people who had only suffered one or the other type, to find these differences. This screening of the data helped produce sub-samples relevant to the analysis being conducted.

For the test of the persistence of whistle-blowers who suffer retaliation, only identified whistle-blowers who suffered some form of retaliation are included in the analysis (N=177). By definition, the persistence is in response to the retaliation, which necessarily excludes those who did not experience some form of retaliation.

Table 18.

Determination of sub-samples for regression on dependent variables formal-only retaliation, informal-only retaliation, dual-mode retaliation and persistence of the whistleblower

RETALIATION EXPERIENCE OF IDENTIFIED WHISTLE-BLOWER	SIZE OF SUB- SAMPLE	INFORMAL- ONLY REGRESSION	FORMAL- ONLY REGRESSION	DUAL-MODE REGRESSION	PERSISTENCE REGRESSION
No Retaliation	286	286	286	286	
Informal-only	64	64			64
Formal-only	22		22		22
Dual-Mode	91			91	91
Total Sample	463	350	308	377	177
N of cases with missing data		70	55	71	23
Final sub-sample		280	253	306	154

Data analysis was done using the Statistical Package for the Social Sciences (SPSS), version 7.5. Most of the hypotheses are an attempt to explain what happens to whistle-blowers, given their personal and situational characteristics, and the organizational context in which they blow the whistle, making regression analysis the

appropriate tool. Three separate regressions were performed using informal-only, formal-only and both types of retaliation as dependent variables for hypotheses 10 through 12. Hypothesis 13 was tested using multiple regression analysis on the dependent variable persistence of the whistle-blower. Since no theory was proposed on other variables previously studied in relation to retaliation, they are entered in the above regressions in a stepwise fashion.

Table 19.
Type of analysis performed and results for each hypothesis in Study Two

#	HYPOTHESES - STUDY TWO	DEPENDENT VARIABLE	INDEPENDENT VARIABLES	TYPE OF ANALYSIS	RESULTS
H10	Co-workers take informal retaliation	Informal-Only Formal-Only Dual-Mode	See appendix B	Multiple Regression	Supported
H11	Supervisors take formal retaliation	Informal-Only Formal-Only (Dual-Mode)		Multiple Regression	Not Supported
H12	Upper management takes formal retaliation	Informal-Only Formal-Only (Dual-Mode)		Multiple Regression	Supported
H13	Effect of informal /formal retaliation on persistence of the whistle-blower	Persistence of Whistle-blower	Informal-only, Formal-only, Dual-mode retaliation	Multiple Regression	Partially Supported

Summary

Examination of existing retaliation theory and models has demonstrated that the construct can be improved upon. Integration of the models and the application of control theory literature may provide some interesting insights into whether retaliation does exist as two distinct types. In the next chapter, results of the data analyses on the new hypotheses are presented, and their implications are discussed. In addition, some limitations of Study Two are also presented.

CHAPTER SIX

STUDY TWO: RESULTS AND DISCUSSION

Introduction

In this chapter I will present the results of the analysis described in the methods section in the last chapter. Implications of the results to the retaliation models and to employees and organizations in general are discussed.

Informal vs. Formal Retaliation

Hypotheses 10, 11 and 12 predict a difference in the relationships of the support measures to the two types of retaliation, formal and informal. Means, standard deviations, and correlations for the three regressions, formal-only, informal-only and dual-mode retaliation are at tables 20-22. Unless otherwise noted, “formal-only” retaliation is referred to as “formal retaliation” and “informal-only” retaliation is referred to as “informal retaliation.”

H10 predicted that co-worker lack of support will be significantly positively associated with informal retaliation and will not be significantly associated with formal retaliation.

This hypothesis was supported. Coworker lack of support was significantly positively related to informal retaliation (Beta = .11, $t=2.00$, $p < .05$) and was not significantly related to formal retaliation (Beta = -.08, $t=-1.31$).

Table 20. Means, standard deviations, and correlation between informal-only retaliation and independent variables in the 1992 data

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Extent of Informal-only Retaliation	0.34	0.97	1.0												
2. Pay Grade	3.24	0.87	-08	1.0											
3. Educational Level	3.80	0.94	09	53***	1.0										
4. Use of External Channels	0.15	0.35	-03	-04	-04	1.0									
5. Coworker lack of support	0.12	0.33	19**	-11*	-07	06	1.0								
6. Supervisor lack of support	0.21	0.41	21***	-23***	-04	08	21***	1.0							
7. Management lack of support	0.25	0.43	36***	-10	07	14*	17**	31***	1.0						
8. Seriousness of wrongdoing	2.32	0.71	10	-02	02	00	03	09	18**	1.0					
9. White Race	0.87	0.34	02	07	09	-17**	08	-06	-05	05	1.0				
10. Gender	0.39	0.49	01	-32***	-15**	06	08	27***	02	08	-04	1.0			
11. Job Tenure	2.61	0.86	13*	02	-01	-01	08	-02	08	05	-00	-23***	1.0		
12. Professional Job Status	0.75	0.43	-07	49***	54***	07	-14**	-15**	04	08	03	-07	-05	1.0	
13. Most Recent Performance Rating	4.20	0.72	-10	07	11*	07	-01	-04	01	03	-03	15**	-04	08	1.0
14. Seriousness x White interaction	0.01	0.27	05	-10	-02	10*	01	10*	-04	04	-26***	15**	-02	-04	04

N = 280; * = $p < .05$; ** = $p < .01$; *** = $p < .001$ (Decimal places excluded for correlations)

Table 21. Means, standard deviations, and correlation between formal-only retaliation and independent variables in the 1992 data

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Extent of Formal-only Retaliation	0.11	0.42	1.0												
2. Pay Grade	3.30	0.88	09	1.0											
3. Educational Level	3.82	0.92	06	52***	1.0										
4. Use of External Channels	0.15	0.35	06	-00	-01	1.0									
5. Coworker lack of support	0.09	0.28	-05	-15**	-11*	07	1.0								
6. Supervisor lack of support	0.19	0.40	16**	-11*	01	08	13*	1.0							
7. Management lack of support	0.19	0.40	28***	04	12*	19**	13*	27***	1.0						
8. Seriousness of wrongdoing	2.29	0.72	04	02	04	02	05	10	18**	1.0					
9. White Race	0.87	0.33	04	10	15*	-18**	03	-05	-02	04	1.0				
10. Gender	0.38	0.49	-06	-30***	-15**	03	08	16**	-09	09	-07	1.0			
11. Job Tenure	2.57	0.85	-06	02	-02	-01	06	-03	-01	-03	02	-26***	1.0		
12. Professional Job Status	0.77	0.42	00	49***	53***	12*	-17**	-14*	10	15**	02	-06	-04	1.0	
13. Most Recent Performance Rating	4.18	0.73	-22***	04	05	02	00	-08	-07	04	-00	13*	-02	03	1.0
14. Seriousness x White Interaction	0.00	0.27	02	-10	-04	15*	04	05	-04	07	-27***	16**	-06	-03	03

N = 253; * = $p < .05$; ** = $p < .01$; *** = $p < .001$ (Decimals have been omitted in correlations)

Table 22. Means, standard deviations, and correlation between dual-mode retaliation and independent variables in the 1992 data

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Extent of Dual Retaliation	1.0	2.05	1.0												
2. Pay Grade	3.25	0.85	-08	1.0											
3. Educational Level	3.79	0.90	-05	52***	1.0										
4. Use of External Channels	0.19	0.39	24***	-13*	-11*	1.0									
5. Coworker lack of support	0.13	0.34	23***	-19**	-08	10*	1.0								
6. Supervisor lack of support	0.28	0.45	42***	-14**	-02	15**	29***	1.0							
7. Management lack of support	0.27	0.45	40***	-04	04	21***	28***	43***	1.0						
8. Seriousness of wrongdoing	2.35	0.70	16**	-00	01	06	04	16**	20***	1.0					
9. White Race	0.86	0.35	-13*	17**	19***	-21***	-01	-09	-09	00	1.0				
10. Gender	0.37	0.48	-02	-32***	-19***	03	14**	13*	-01	07	-08	1.0			
11. Job Tenure	2.61	0.85	07	05	-02	03	04	05	08	01	-02	-22***	1.0		
12. Professional Job Status	0.77	0.42	00	47***	50***	04	-16**	-08	-01	10*	10*	-12*	-02	1.0	
13. Most Recent Performance Rating	4.09	0.80	-28***	09	04	-06	-06	-16**	-10*	00	-01	18**	-04	-03	1.0
14. Seriousness x race interaction	00	0.27	-08	-09	-01	12*	02	05	-04	01	-13*	12*	-02	-02	05

N = 306; * = p < .05; ** = p < .01; *** = p < .001 (Decimal points have been omitted for correlations)

H11 predicted that supervisor lack of support will be significantly positively associated with formal retaliation, and will not be significantly associated with informal retaliation.

This hypothesis was partially supported. The relationship between supervisor lack of support and informal retaliation was non-significant ($Beta = .08$, $t = 1.35$) as expected, but the relationship between supervisor support and formal retaliation was also non-significant ($Beta = .10$, $t = 1.60$), contrary to prediction.

H12 predicted that upper management lack of support will be significantly positively associated with formal retaliation, and will not be significantly associated with informal retaliation.

This hypothesis was also partially supported. The results of the regression on informal retaliation showed management lack of support to be significantly positively related to informal retaliation ($Beta = .31$, $t = 5.18$, $p < .001$), which was not predicted by the hypothesis. The relationship between management lack of support and formal retaliation was positive and significant as predicted ($Beta = .25$, $t = 3.94$, $p < .001$).

Although other predictor variables for formal and informal retaliation were not included in the hypotheses, the two types of retaliation may be affected differently by other factors previously examined in Study One. These include: pay, education, use of external reporting channels, job tenure, professional job status, most recent performance, gender, and race. Since no theory was advanced on how these variables would be related to informal or formal retaliation, they were entered in the regressions in a stepwise fashion. Pay, education and external channels were entered in block one as control variables, to replicate the procedure conducted in Study One.

Table 23.

Comparison of standardized beta weights from multiple regression analysis on the dependent variables informal-only, formal-only and dual-mode retaliation using independent variables from Study One

INDEPENDENT VARIABLES	INFORMAL RETALIATION ¹	FORMAL RETALIATION ²	DUAL-MODE RETALIATION ³
1. Pay	-0.08	0.08	0.04
2. Education	0.12	-0.02	-0.04
3. Use of External Channels	-0.09	0.01	0.14**
4. Co-Worker Lack of Support	0.11*	-0.08	0.07
5. Supervisor Lack of Support	0.08	0.10	0.25***
6. Management Lack of Support	0.31***	0.25***	0.21***
7. Seriousness of Wrongdoing	0.03	0.00	0.07
8. White Racial Heritage	0.01	0.05	0.07
9. Gender (Female)	-0.02	0.00	-0.03
10. Job Tenure	0.10	-0.06	0.02
11. Professional Job Status	-0.11	-0.08	0.03
12. Most Recent Performance	-0.09	-0.20**	-0.21***
13. Seriousness x White	0.06	0.05	-0.09
Multiple R	0.43	0.38	0.55
Adjusted R ²	0.16	0.12	0.29
F value	8.64	5.72	16.5
N	280	253	306

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

¹ Sample includes only identified whistle-blowers who did not suffer retaliation or suffered informal retaliation only (i.e., they did not suffer formal retaliation or both types of retaliation).

² Sample includes only identified whistle-blowers who did not suffer retaliation or suffered formal retaliation only (i.e., they did not suffer informal retaliation or both types of retaliation).

³ Sample includes only identified whistle-blowers who did not suffer retaliation or suffered both types of retaliation only (i.e., they did not suffer informal retaliation or formal retaliation exclusively).

None of these other variables were significantly related to informal retaliation, while

most recent performance was significantly negatively related to formal retaliation (Beta = -0.20 , $t = -3.32$, $p = .001$).

A third regression was run to further explore the differences between informal and formal retaliation. Significant variables in this regression on the dependent variable of dual-mode retaliation included supervisor lack of support (Beta = $.25$, $t = 4.48$, $p < .001$), management lack of support (Beta = $.21$, $t = 3.83$, $p < .001$), most recent performance

(Beta = -.21, $t=-4.26$, $p < .001$) and use of external channels (Beta = .14, $t=2.76$, $p < .01$).

For ease of interpretation, these variables are shown in a path diagram format in Figure 9.

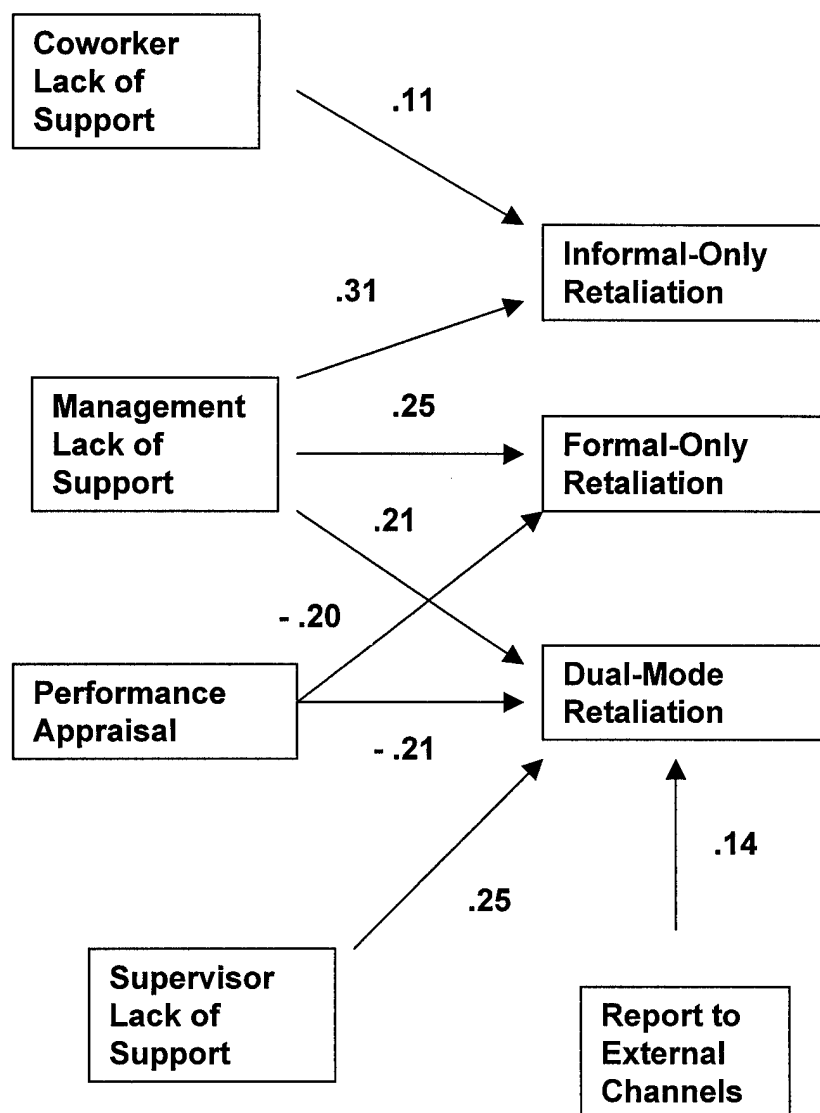


Figure 9. Path diagram of retaliation types and their predictors, using standardized coefficients from three regression equations, with sub-samples of all identified whistle-blowers who suffered retaliation (N=253 - 306). Only significant loadings shown.

Persistence of the Whistle-blower

One might expect that the two stages of the process of retaliation could have not only different predictors, but different outcomes as well. Means, standard deviations and correlations are shown in Table 24.

H13 predicted that whistle-blowers who suffer formal-only retaliation would be less likely to complain about the retaliation than whistle-blowers who suffered informal-only retaliation.

This hypothesis was marginally supported. Regression on persistence of the whistle-blower by the independent variables for informal-only retaliation and formal-only retaliation showed that although neither variable was significantly related to persistence, informal retaliation (Beta = .15, $t = 1.94$, $p < .06$) approached significance and had a stronger positive effect on persistence than formal retaliation (Beta = .10, $t = 1.46$, $p < .15$). However, the dual-mode retaliation variable, entered last in the analysis, was so strongly associated with persistence that it explained most of the variance in the model (Beta = .55, $t = 6.80$, $p < .000$). The results indicate that respondents who suffered both types of retaliation were likely to report the retaliation, while those who experienced either formal or informal retaliation exclusively were unlikely to report the retaliation (see Table 25).

Other variables were included in the regression, in the belief that the dynamics of the process would show other factors related to persistence over and above the type of retaliation suffered. Those that were significant predictors included the dummy for white race (Beta = -.19, $t = -2.9$, $p < .01$) and the control variable for use of external channels (Beta = .22, $t = 3.44$, $p < .01$).

Table 24. Means, standard deviations, and correlation between persistence and independent variables in the 1992 data

VARIABLES	MEAN	SD	1	2	3	4	5	6	7	8	9
1. Extent of Persistence	1.05	1.56	1.0								
2. Pay Grade	3.08	0.82	-15*	1.0							
3. Education	3.78	0.91	-11	41***	1.0						
4. External Channel Use	0.27	0.44	37***	-16*	-06	1.0					
5. White Race	0.82	0.38	-37***	16*	10	-15*	1.0				
6. Seriousness x Race Interaction	0.02	0.23	-21**	-01	07	-08	-03	1.0			
7. Informal-only	0.36	0.48	-20**	-06	07	-21***	09	05	1.0		
8. Formal-only	0.13	0.34	-12	15*	07	-05	04	05	-20**	1.0	
9. Dual-mode	0.51	0.51	58***	-01	-03	-26**	-27***	-24**	-47***	-28***	1.0

Note: Only identified whistle-blowers who suffered retaliation are included. Listwise comparison of data resulted in 23 missing cases for a final N = 154; * = $p < .05$; ** = $p < .01$; *** = $p < .001$ (Decimal points have been omitted for correlations)

Table 25.
Results from hierarchical regression analysis on the dependent variable persistence of
the whistleblower using multiple independent variables from Study One

INDEPENDENT VARIABLES ¹	BETA	UNSTANDARDIZED B (SE)	T-VALUE (P-VALUE)
1. Pay	-0.07	-0.14 (.13)	-1.07 (.285)
2. Education	-0.04	-0.07 (.11)	-0.636 (.526)
3. External Channel Use	0.22**	0.76 (0.22)	3.436 (.001)
4. White Racial Heritage	-0.19**	-0.74 (0.26)	-2.905 (.004)
5. Seriousness x White	-0.07	-0.49 (0.41)	-1.185 (.238)
6. Informal-only Retaliation (sum)	0.15	0.176 (0.09)	1.942 (.054)
7. Formal-only Retaliation (sum)	0.10	0.29 (0.20)	1.459 (.147)
8. Dual-Mode Retaliation (sum)	0.55***	0.29 (0.04)	6.802 (.000)
Multiple R	0.52		
Adjusted R ²	0.25		
F value	11.1		
N	154		

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$;

¹ Variables 1-3 were entered together in block one as controls; variables 4-5 were entered stepwise in block two; variables 6 - 8 were entered hierarchically in blocks three, four and five.

DISCUSSION

Predictors of Informal Retaliation

Although hypotheses 10 through 12 showed mixed results, there is evidence that the two types of retaliation are predicted by different variables, not only in the influence measures but also in other factors related to the retaliation process itself. Informal-only retaliation is significantly predicted by coworker lack of support but more strongly by management lack of support, both in the positive direction. Coworker lack of support is more important in informal-only retaliation than in formal-only retaliation, although control by management is still the most important predictor of informal-only retaliation.

These findings can be compared to those of the general measure of retaliation in Study One. Performance appraisal, which was significantly related to retaliation in

general, is not significantly related to the informal retaliation process. This may be due to the fact that coworkers are not usually involved in an employee's performance appraisal; thus it is not an outlet for retaliation at the informal level.

Despite the strong association found in Study One between retaliation in general and supervisor lack of support, neither informal-only nor formal-only retaliation was significantly associated with supervisor lack of support. Perhaps its not surprising that supervisors are not a factor in the use of informal-only retaliation against whistle-blowers. Supervisors often fall into both the work group social structure and the management hierarchy (Dornbusch & Scott, 1975; Kanter, 1979, Tannenbaum, 1968), giving them a dual role in the organization. It's possible that whistle-blowers differ in whether they consider supervisors to be coworkers or a part of management, which could be reducing the predictive power of the measure.

Somewhat surprisingly, informal-only retaliation is strongly related to management lack of support. From this one might conclude that management does have an effect on the coworker social network. Actions taken by management against whistle-blowers may be creating the impression that the organization disapproves of employees who step out of their boundaries (e.g., deviants), and essentially "opens the door" for coworkers to follow with retaliation at the lower level. For instance, management may move the whistle-blower's desk or cut his or her budget, sending the signal to employees that the whistle-blower is a deviant. This social isolation and decreased status then leads to increased actions against the whistle-blower by coworkers, who may feel justified retaliating since sanctions against the whistle-blower are "officially" approved. Or, as described by Black (1976), once an employee is labeled a deviant - in this case a

“whistle-blower” - they are more likely to be retaliated against again. The results may show that whistle-blowers hold management responsible for allowing informal-only retaliation to occur or be tolerated, essentially creating an anti-whistle-blower climate in the organization.

Predictors of Formal Retaliation

Results of the multiple regression at the formal level of retaliation show that management lack of support is strongly associated with increasing amounts of formal retaliation when it occurs alone. Since managers have the authority to use more formal methods to retaliate against whistle-blowers, this is not a surprising result. Good performance ratings decrease the amounts of formal-only retaliation whistle-blowers suffer, suggesting that they have enough power from this idiosyncratic characteristic to avoid it, or managers have a hard time justifying using formal sanctions by themselves against employees who have been top performers.

It is noteworthy that formal-only retaliation was not associated with supervisor lack of support, contrary to the prediction of H11, and strong associations with general retaliation in past research (Miceli & Near, 1989; Near & Miceli, 1986; Near et al., 1995). Although the correlation between supervisor lack of support and the formal retaliation dependent variable was significant, high correlation with other independent variables makes its explanatory power low. In formal retaliation (and informal as well), supervisor lack of support was more highly correlated with management lack of support than with the dependent variable. This underscores the dynamics of the retaliation process, and the necessity of analyzing the data from a multivariate perspective.

These results lend support to the basic purpose behind this research, that different types of retaliation have different predictors and effects.

Table 26.
Crosstabs of mode of retaliation by number of retaliation experiences

NUMBER OF RETALIATION EXPERIENCES	FORMAL-ONLY RETALIATION	INFORMAL-ONLY RETALIATION	DUAL-MODE RETALIATION	TOTALS
1	12	22	1	35
2	8	25	17	50
3	2	10	17	29
4		4	22	26
5		2	11	13
6		1	11	12
7			4	4
8			4	4
9			2	2
10			1	1
11				0
12			1	1
Total	22	64	91	177

The Dual-Mode Retaliation Phenomenon

When looking at the breakdown of retaliation types in Figure 8, it's apparent that a large group of identified whistleblowers who suffered retaliation has been excluded. This is the group that suffered *both* formal and informal retaliation, and they have purposely been excluded in order to examine the informal-only and formal-only retaliation types separately. These three groups of whistle-blowers are mutually exclusive. "Membership" in one group prohibits membership in either of the other two groups (see Table 26). How different is the dual-mode group's predictors from the others and, since it contains both informal and formal events of retaliation, are its

predictors significantly different from predictors of the general measure of retaliation from Study One?

Although predictors for the dual-mode group were similar to those in Study One, the existence of a dual-mode group demonstrates a phenomenon that may be important in the retaliation process. With 91 cases of people who suffered both types of retaliation, the combined group is larger than both of the other groups, which means that formal and informal retaliation are more likely to occur together than separately. Thus, retaliation is not a process that usually occurs on one level or the other, but on both levels. Informal retaliation by itself is not likely to be enough to effectively sanction whistle-blowers, at least in the minds of the retaliating party. As informal sanctions are the most expedient

Table 27.
Crosstabs of identified whistle-blowers by type of retaliation experience

NUMBER OF INFORMAL RETALIATION EXPERIENCES	NUMBER OF FORMAL RETALIATION EXPERIENCES						Total
		0	1	2	3	4 or more	
	0	286	12	8	2		308
	1	19	18	8	3		48
	2	28	7	10	3	3	51
	3	9	7	7	3	3	29
	4	3	2	4	2	3	14
	5	3	2	1		1	7
	6 or more	2	1	1		2	6
	Total	350	49	39	13	12	463

method of negatively reacting to a whistle-blower, they are most likely to be used before more difficult formal responses (O'Day, 1974). Once the situation escalates, however, it may develop into a more volatile conflict which then results in formal action (Deutsch,

1973). But for whatever reason, the combination of informal and formal sanctions is the most prevalent reaction when organizations retaliate against whistle-blowers (Table 27).

Responding through the informal social system as well as the formal bureaucratic system is more common than using either system alone. Informal retaliation was used as the sole means of retaliation in 36 percent of retaliation cases, while formal retaliation was used as the sole means of retaliation only 12 percent of the time. These results support the theory that informal retaliation is more likely to occur than formal retaliation (O'Day, 1974). However, by splitting retaliation into informal and formal types, it appears that they are most likely to occur together in an effort to silence the whistle-blower, as seen by the dual-mode incidence rate of 51 percent of retaliation situations.

Given the "popularity" of this type of reaction, what determines this dual-mode of retaliation towards whistle-blowers? What is different about the situation when dual-modes of retaliation occur than when only one type of retaliation occurs? Comparing the regression results of the three situations reveals that the lack of supervisor support and the use of external channels are significantly related to dual-mode retaliation, while not related to situations when the other two types of retaliation occur exclusively (see Table 23).

The findings concerning supervisor lack of support, which has been an important predictor in past research, demonstrates the usefulness of the two-staged retaliation model. It appears that supervisors are less involved in (or blamed for) retaliation of one type only occurring. But when both types are experienced, the supervisor's lack of support has the strongest effect of any variable. Supervisors, then, could be the lynch-pin to the process – they seem to make or break the whistle-blower's chances of suffering

increasing or decreasing retaliation. Coworkers responding at the informal-only level and upper managers responding with formal-only means are less likely occurrences, and ones in which supervisors play less of a role. But when supervisors do “join the fray” the result is a combined response on both levels against whistle-blowers and the situation escalates with all of its associated damage done to both sides.

This presents a strategic opportunity that proactive organizations could exploit. Supervisors were the first to be notified in over 60 percent of the whistle-blowing cases in the 1992 MSPB data (USMSPB, 1993). If supervisors gave their support to subordinates who blew the whistle, the organization could benefit from less negative publicity, and potentially better bottom-line performance, depending on the nature of the wrongdoing involved. Naturally, if the supervisor is the source of the wrongdoing, they won't be supportive when they are threatened by the whistle-blower. In other cases, however, they may help the organization solve problems before they get out of hand. But supervisors may feel uneasy about supporting an unpopular whistle-blower's claim against higher management, and may take a safer non-committal approach, allowing management to take the action.

Another finding of interest to the process of retaliation concerns the use of external channels. The results of the regression on dual-mode retaliation are enlightening in several ways (see Table 23). Here the use of external channels is significant in the positive direction on the dependent variable, suffering dual-mode retaliation (Beta = .14, $t = 2.8$, $p < .01$). Considering the dual-mode variable's mean of 1.00, this represents a 14% increase in retaliation associated with the use of external channels. Since the temporal order of events is unknown, these results cannot be interpreted as causal.

However, the lack of an association with informal- or formal-only retaliation indicates that whistle-blowers who report to external channels are more likely to experience retaliation at both levels, either before or after they have gone to an external channel. They have either suffered both kinds of retaliation for reporting the wrongdoing internally, and have nowhere else to go and/or nothing to lose by reporting to external channels, or they have violated a social norm of breaking the "chain of command," or going over the supervisors'/management's head in going to an outside agency, bringing on increased retaliation. Until more specific data are collected, this dilemma of the temporal order between external channel use and retaliation will continue.

The above discussion of the three types of retaliation situations does help to shed light on the process of retaliation. As previously noted, case studies seem to capture only sensational events, often whistle-blowers who suffered many kinds of formal retaliation. But harsh measures are not the predominant mode of retaliation, a phenomenon which was not observed when retaliation was examined as a general construct. Informal retaliation appears to be especially important in the process, a fact that may have been underestimated in previous research. This could have implications for organizations striving to push authority down to lower levels in an effort to "empower the employee." If coworkers are given more authority over each other, will it result in an increase in retaliation against whistle-blowers? Would top management be aware of wrongdoing occurring at lower levels if members of the work group could sanction the "deviants" without having to report to management? These are important questions for top management to consider when redesigning their organizations.

Predictors of Persistence of the Whistle-blower

Hypothesis 13 proposed that the use of formal-only sanctions would be more likely to lead whistle-blowers to file further complaints, while informal-only sanctions would be less provoking in nature. The results did show persistence to be greater with informal-only than with formal-only retaliation, although both had a positive and non-significant effect. Essentially, suffering only one type of retaliation did not have a significant effect on persistence. More substantive findings occurred in the relationship between persistence and dual-mode retaliation.

Since a third group of whistle-blowers who suffered retaliation has been found to be important in the retaliation process, the effect of suffering dual-mode retaliation on persistence was examined as well to gain more insight into the outcomes of the retaliation process. The results show that organizations that take only one type of retaliation against whistle-blowers are less likely to induce further complaints from the whistle-blower. If both types are taken, whistle-blowers are much more likely to file a complaint about the retaliation. Assuming that whistle-blowers will give up complaining about the wrongdoing as well as complaining about the retaliation, then these findings shed new light on previously held theory. O'Day (1974) postulated that less "direct" methods (i.e., informal) are more effective in silencing the whistle-blower (O'Day, 1974, Ewing, 1980). O'Day's (1974) first two stages, Nullification and Isolation, are intended to have this effect, to reduce the need for the last two stages, Defamation and Expulsion. But the results show that more extreme measures such as expulsion can be used without incurring the persistence of the whistle-blower if used as the only type of retaliation. Once organizations take a total negative response to the whistle-blower (or as a result of doing

so), at both the formal and informal level, then the whistle-blower is more likely to elevate the complaint to outside agencies. Dworkin and Baucus (1995) also found that organizations used firing as a sole means of retaliation in only nine out of 33 cases that went to legal action, while informal and formal means were used in concert in 23 of the cases.

This points out the ironic nature of retaliation against whistle-blowers.

Organizations and managers intending to silence whistle-blowers or cover up wrongdoing only exacerbate the situation by attacking the whistle-blower at the informal (social) and formal (bureaucratic) levels. This would suggest that if whistle-blowers do not have some avenue of safety – either the social support from coworkers or the refuge provided by management – they may report their negative treatment to another outlet. The more complete the retaliation, the more likely whistle-blowers are to complain further.

Regardless of whether the wrongdoing is corrected, this further complaining can only do harm to the organization, especially in creating a reputation as an organization that has a negative climate towards positive organizational change. Obviously many managers do not perceive this kind of change as positive, but again this would hinge on the factors previously examined, including the type of wrongdoing and characteristics of the whistle-blower.

Limitations to Study Two

Sensitive issues are difficult to research. Whistle-blowing falls into this category and creates some limitations that affect this study. One of the biggest problems is the lack of data -- not enough cases of retaliation are collected to withstand rigorous statistical tests. As categories of respondents are created, fewer cases fall into each one,

and soon the numbers are too small to analyze. For instance, the data contained only 22 cases of formal retaliation being used exclusively. It is possible that whistle-blowers who suffered this kind of retaliation were expelled from the organization, making the available sample smaller. Conclusions about this category, then, are somewhat tentative, and further subdivision of formal – only cases are difficult to statistically analyze.

With more cases, it would be possible to break down retaliation by category of wrongdoing, to gain further insight into the process. Some types of wrongdoing may elicit negative formal responses right away, while others may be predisposed to informal sanctions. However, one characteristic of the wrongdoing, its seriousness, was not significant in either singular mode of retaliation. With dual-mode retaliation it was significant prior to management lack of support entering the equation. What the results may be showing is that reporting more serious wrongdoing is associated with lack of support from management, which in turn brings about retaliation in both informal and formal means. The seriousness is more highly correlated with lack of support variables than with the retaliation itself. This would suggest that seriousness is more important as a catalyst in creating negative reactions from supervisors and management that leads to the retaliation actions.

Other characteristics of wrongdoing may also be important. For example, blowing the whistle over an individual stealing funds or material may suggest a different process than blowing the whistle over organizational transgressions in general, such as waste. This type of analysis might show the effect of the power distribution on the process. Depending on the position of the individual wrongdoer and the whistle-blower, blowing the whistle on an individual may be safer than blowing the whistle on the entire

organization, which could threaten multiple actors, who might then bring all the organization's capabilities to bear against the whistle-blower. These questions could be important in future research on retaliation.

There is also some difficulty defining informal and formal retaliation. With the limited information available from the survey, some decisions had to be made on face validity of the items as to whether written or non-written means were used in the retaliation. Denial of an award, for instance, may be written if the organization rejects an award to the employee in writing, or non-written, as when an employee is purposely omitted from consideration for receiving an award. Given the wide variety of organizations surveyed, some measurement error is inevitable at this stage.

Related to the low number of cases of retaliation is the sensitivity of the analysis to the definition of the sample. Results drastically change when the sample is not pertinent to the analysis, or the size of the sample changes, sometimes by as few as 20 cases. This puts the burden on the researcher to act conservatively in making judgements about the data, but in the end, the results that do hold up should be the stronger findings.

Another type of sensitivity occurs with the number of variables entered into the regression equation. As more cross-correlated variables are introduced, variance explained on the dependent variable is lost, leading the researcher to determine which variables are the really important ones to include in the analysis.

Summary

In the next chapter I will summarize the dissertation findings and its contributions to whistle-blowing research, as well as limitations which should be considered when interpreting the results. Finally, future research directions will be discussed.

CHAPTER SEVEN

GENERAL SUMMARY AND CONTRIBUTIONS

Introduction

This chapter will summarize the findings from both studies in the dissertation, and discuss their implications to the field of retaliation research. Additionally, limitations applicable to both studies are also described. Finally, ideas for future analyses are discussed, with an aim to furthering the research conducted to date on retaliation against whistle-blowers.

Summary

Past studies of whistle-blowing seem to show that whistle-blowing legislation has resulted in an increase in whistle-blowing and a decrease in wrongdoing (Near et al., 1995). At the same time, retaliation against whistle-blowers seems to be on the increase. This dissertation was conducted to study the construct of retaliation, and whether it can be better understood by breaking it into two different types-informal and formal responses to whistle-blowing. Study One examined the effectiveness of the laws across time in regards to whistle-blowing and retaliation, and looked at what variables appear to best predict retaliation in general. Trends across time showed mixed success of the legislation aimed at protecting whistle-blowers. Wrongdoing decreased from 1980 to 1992, while whistle-blowing increased. However, identified whistle-blowing decreased, and retaliation increased in the same time period. Across the three time periods, lack of support from supervisors and management was the strongest and most

consistent predictor of the comprehensiveness of retaliation. Lawmakers' attempts at controlling retaliation have thus far proven ineffective, at both the federal and state levels (Near & Dworkin, 1997). Perhaps it's time that this society realized that legislative attempts are not enough to halt a phenomenon that is more informal than formal in nature. However, legislation such as the amended False Claims Act of 1986, gives employees a financial incentive to report wrongdoing to outside agencies. While this may benefit some whistle-blowers, it may also promote a climate of distrust between employees and management, which may increase retaliation. Other mechanisms which may help control retaliation include establishing formal internal reporting channels, and training employees on how to handle sensitive issues brought to their attention.

Study Two is an in-depth look at retaliation against whistle-blowers. Four models of retaliation are considered in this study, two of them descriptive in nature (Ewing, 1980; Devine & Aplin, 1988), one categorical (O'Day, 1974), and one predictive (Miceli & Near, 1992). The results of this study can be used to integrate these models of retaliation against whistle-blowers.

Predicting the occurrence of retaliation has met with limited success. The two-dimensional aspect of retaliation was first proposed by O'Day (1974), but limited quantitative verification had been attempted. I set out to improve the predictive power of the retaliation models, a goal which I thought would be achieved by breaking the construct into two types. New insights have been gained, however, perhaps not surprisingly, more questions have been raised than answered.

The multiple regressions of Study Two still do not capture a majority of the variance of the retaliation process. Situations in which informal and formal retaliation are used exclusively are especially prone to low R^2 values (.16 and .12 respectively), while the dual-mode situation only explains 30 percent of the variance. Since the data were collected by self-reports from respondents, some amount of unexplainable variance may be present in the data, resulting in a limit to the explainable variance, and the R^2 values. Interestingly, more variance was explained in Study One using samples of upper managers only – possibly controlling for confounding individual differences. While it would be theoretically interesting to control for these differences, the lack of data mentioned above would result in a sample too thin for statistical analysis. Additionally, generalizability to lower level employees would be lost.

But this confounding of individual differences points out an important consideration. The process of retaliation may be fundamentally different for different employees, with different amounts of power, reporting different types of wrongdoing, to different complaint recipients, while working in different organizations. This makes for a tangled logic trail, and a model whose complexity makes very difficult the accurate prediction of any one whistle-blowing case.

Study Two showed that the process is dynamic, and cannot be explained by looking only at univariate relationships. By dividing retaliation into informal and formal types, different processes were discovered. Different forces are at work at the informal level of retaliation than the formal level. Legislators must realize that formal rules prohibiting retaliation will not be entirely effective. Managers should realize that even with formal protections, employees who blow the whistle might still suffer informal

actions that intimidate them into silence. Study Two showed that these informal actions are more common than more publicized formal responses that organizations take against whistle-blowers. Proactive managers, striving for a legal and ethical organization, need to be aware of the strength of informal sanctions that work groups take against an employee who may be perceived as "rocking the boat." The wrongdoing that is not reported may be costly in an economic and moral sense. Further analysis of the process is needed to produce greater insights into whistle-blowing in organizational life.

Overall Limitations

Several limitations affect the results of this dissertation. First, this research uses archival sources of data, which allows no flexibility on what questions to ask or how to phrase them, what organizations to study, or the causality between whistle-blowing and retaliation. On the plus side, the three questionnaires used similar formats, were conducted by the same organization using a similar distribution strategy, and were conducted in organizations falling under the same regulatory environment, 14 of which were common to all three data collection efforts. Further, this quantity of high quality data would be prohibitively expensive to collect on my own.

Secondly, the generalizability of the study could be questioned. Since the data were all collected in agencies of the United States Federal Government, its not known whether the results will generalize to private sector employees or organizations. However, there is no whistle-blowing research which suggests significant differences between public and private sector employees (Miceli & Near, 1984). Additionally, Dworkin and Near (1997) point out that fully half of the state statutes covering whistle-blowing apply to both public and private employees. Also, the agencies in these

federal surveys are very different in size, missions and goals, so that they are potentially more similar to private corporations in similar industries than they are to each other. The research probably does not generalize to other countries, as whistle-blowing in some cultures is not seen as appropriate social behavior (Puffer & McCarthy, 1995).

Thirdly, the data were collected using a self-report questionnaire, and thus is subject to various biases including social desirability effects and common method variance effects. For example, respondents may have answered certain questions to be consistent with answers to previous questions. Other possible biasing effects include the respondent's mood state when filling out the survey.

Notwithstanding these problems, these data are still useful for studying the retaliation process. The data do not reflect hypothetical behaviors, but actual experiences. Research by Crampton and Wagner (1994) showed that surveys dealing with respondents' recall of actual events versus opinions were less susceptible to method covariance. Being anonymous surveys, respondents could feel more comfortable reporting their experiences openly. In addition, to improve recall, these questionnaires limited the time frame to the past 12 months. And even though retaliation is a matter of individual perception, by reporting specific incidences respondent bias is likely to be reduced. Further, whistle-blower's perceptions are important in determining the process they go through after reporting wrongdoing. The experience of retaliation is, of necessity, one that must be evaluated through the eyes of the victim.

In summary, for the purposes of looking at the process of retaliation, these data are not only relevant, but also truly exceptional in their completeness.

Directions for Future Research

Despite the efforts of researchers over the past two decades, and the results of this study, we still have much to learn about the process of retaliation against whistle-blowers. Rarely has more than one-third of the variance in retaliation been explained using past data and models. Splitting the process of retaliation into informal and formal modes has shed some much-needed light on the construct. Clearly, there is still ample room for improvement. The following areas need to be better explored in future studies of retaliation against whistle-blowers.

Individual Differences. One area which needs to be explored further, is the influence of individual characteristics of the whistle-blower on the retaliation process. Past surveys have overlooked the effect of personality variables on the whistle-blowing process, where they may be important. Positive and Negative Affect (Watson et al., 1988), organizational commitment (McGee & Ford, 1987), job and life satisfaction (Miceli & Near, 1988) and perceived organizational support (Eisenberger et al., 1986), are variables that have been proposed to affect whistle-blowing behavior (Miceli et al., 1998), but their direct effect on retaliation is less likely. The act of blowing the whistle serves as a filter on individual differences, which may reduce the variability of these individual level variables in predicting retaliation. Other variables, however, such as leader-member exchange theory (LMX) (Graen & Scandura, 1987) may have more direct effects, considering the importance of the supervisor in the retaliation process.

A study linking LMX to different modes of retaliation would be a useful advance to the literature.

Organizational Level Differences. Another area not well defined is the organizational influence on retaliation. The climate of the organization towards whistle-blowers has been looked at in the past, with some significant results (Miceli & Near, 1985; Perry, 1993), but more work needs to be done. With the recent changes taking place in organizations today (such as downsizing and outsourcing), organizational level variables may be significant predictors of retaliation against whistle-blowers. One area that should be examined is the effect of the perceived ethical climate of the organization on whistle-blowing and retaliation.

Cultural Level Differences. Whistle-blowing does occur in other countries, but given differences in values, customs and beliefs that exist across cultures, the process of retaliation is likely to be different. Tough questions remain for managers in multinational corporations who must deal with clashes between local cultures and the culture of their parent country. Cross-cultural studies in this area need to be explored in future research.

Power Variables. Power has been researched in many contexts, and defining it has been problematic. Since the whistle-blowing and retaliation process seem to be so heavily influenced by the power of various actors, defining power becomes that much more important. Perhaps whistle-blowing researchers need to focus on the aspects of the power construct most applicable to the whistle-blowing and retaliation processes in particular. Whether that means examining a particular power base or better definition

of other conceptualizations, such as idiosyncrasy credits or resource dependence, is open to question.

Idiosyncrasy credits like tenure, gender, and race are easy to measure, but others, such as the credibility of the whistle-blower, and the interaction of all these variables are more difficult to capture.

Resource dependence is particularly difficult to measure. The intricacies of power plays between individuals, due to relative differences in their dependencies, would be difficult to measure in a non-threatening way. Given the sensitivity of whistle-blowing research, measuring power becomes even more difficult. Perhaps the answer to advancing whistle-blowing and retaliation research is a better integration with other organizational research.

Methodological Issues. Finally, the realization that both whistle-blowing and retaliation are complex, dynamic processes should lead to more sophisticated analytic approaches to the data. Regression analysis limits us to additive effects of variables, when in reality, the variables are relating to each other as much as they are to what is trying to be explained. Path analysis and structured equation modeling may produce more complete findings. What is needed is a complete modeling of the process, so that effects of both macro and micro level variables can be included together.

Effect on Performance. One last note about whistle-blowing and retaliation research is the difficulty of associating these issues to the bottom-line performance of the organization (Perry, 1993). While the related area of corporate wrongdoing has been shown to affect the bottom-line (Baucus and Baucus, 1997), retaliation against whistle-blowers is harder to connect to performance of the firm. However, Weinstein

(1979) notes that even when reprisals are successful in silencing whistle-blowers, organizational performance may be negatively affected by the environment of fear created among employees. Retaliation against whistle-blowers may give other employees a sense that unfairness exists in the organization. Perceptions of fairness have been found to have an effect on job satisfaction, satisfaction with supervisor, and loyalty to the organization (Alexander & Ruderman, 1987; Folger & Konovsky, 1989). Furthermore, employees may view this retaliation as organizational wrongdoing. We know that job satisfaction is negatively correlated with employees' perception of organizational wrongdoing, retaliation may also reduce their job satisfaction, with a negative impact on productivity variables such as absenteeism and turnover. The problem reduces to one of accurate measurement of these potentially latent effects, made more difficult by the probable lag time between their occurrence and their effects. Nonetheless, it seems clear that both organizational wrongdoing and retaliation have some negative impact on overall organizational performance.

Implications for Practice

Whistle-blowing, when not done as antisocial behavior (Miceli & Near, 1997), has the potential to make organizations more effective, as noted in the section above. If it does have some positive effects, what can managers and subordinates do to increase its occurrence, in a productive way?

One action managers can take is to ensure that internal channels are well-established and functioning properly. Employees must be able to report misconduct internally without fear of retaliation. This is not an easy barrier to overcome, since the person receiving the complaint may also hold a position within the route through which

internal reporting is encouraged, as when the wrongdoer is an employees' supervisor. Even if supervisors are not directly involved in the wrongdoing, they may feel responsible by the position they hold. Weinstein (1979: 58) stated that "even if they [the authorities] are generally honest, they will feel threatened by breaches in the chain of command." Additionally, as organizations have become "flatter," the increased accessibility of upper management to lower level employees may increase the threat posed to middle management by complaints from below.

Thus, some irregularities in reporting through a strict "chain of command" must be available to employees, with confidence that their identity will be protected. Sheppard et al., (1992) describe five attributes of effective voice systems to be "elegance," "accessibility," "correctness," "responsiveness" and "non-punitiveness." Designing voice systems with these criteria in mind can help improve the chances of an employee reporting perceived wrongdoing. However, even with these characteristics, organizations and employees take a different perspective to voice systems, and expect different outcomes. For instance, individuals may want the organization to respond thoroughly and promptly to a concern that is personally important. Organizations, on the other hand, want to frame a problem in more "acceptable" terms, and respond in a way that maintains an air of unbiased treatment to all employees, thereby minimizing a "personalized" response (Sheppard et al., 1992: 159). Additionally, while employees want to minimize power differences, organizations want to maintain them. These areas of conflict may result in some base level of dissatisfaction with the "system." But proactive organizations can strive to reach this level by promoting trust, the open exchange of information, and constructive conflict resolution.

What actions can employees take to minimize the risk of reporting wrongdoing?

Devine and Aplin (1988: 236) list eight "survival strategies" to prevent whistle-blowers from committing "professional suicide." While some of these strategies are geared to situations where retaliation is expected, others emphasize the possibility of a positive outcome. These include taking a tactful internal approach first, to try and work within the system both informally and formally. Secondly, they recommend potential whistle-blowers discuss their perceptions carefully with co-workers, both as a check on the accuracy and legitimacy of their complaints, and to determine what their support base is in their workplace if the situation does deteriorate.

Essentially the decision to blow the whistle may represent a "reality check" for employees over the amount of trust present in their organizations and the quality of their relationships with their co-workers and supervisors. It may also serve as a check on their own character, and their willingness to compromise their ethical standards.

While recognizing that whistle-blowing is risky, the steps mentioned above can minimize the chances of suffering retaliation. But the picture is not necessarily bleak. Although cases of retaliation appear often in the media, surveys have shown that retaliation does not occur in the majority of whistle-blowing cases. Like media coverage of aerospace disasters, the worst retaliation cases are brought to our attention, leading to the perception that their occurrence is commonplace. What is important is for managers to realize that retaliation may be taking place despite legislation, and may have to take steps to reduce the occurrence of both informal and formal retaliation. The benefits to both organizations and employees are well worth the effort.

REFERENCES

- Aiken, L. S., & West, S. G. 1991. **Multiple Regression: Testing and Interpreting Interactions**. London: Sage.
- Alexander, S., & Ruderman, M. 1987. "The role of procedural and distributive justice in organizational behavior," **Social Justice Research**, 1: 177-198.
- Antonio, R. J. 1972. "The processual dimension of degradation ceremonies: the Chicago conspiracy trial: Success or failure?" **British Journal of Sociology**, 23: 287-297.
- Associated Press, 1996. "Panel faults FAA for allowing dangerous cargo on passenger jets," **Bloomington Herald-Times**, November 24, 1996.
- Baucus, M. S., & Baucus, D.A. 1997. "Paying the piper: An empirical examination of longer-term financial consequences of illegal corporate behavior," **Academy of Management Journal**, 40: 129-151.
- Black, D. 1976. **The Behavior of Law**. New York: Academic Press.
- _____. 1979. "Comment: Common sense in the Sociology of law," **American Sociological Review**, 44: 18-27.
- Bok, S. 1980. "Whistleblowing and professional responsibility," **New York University Education Quarterly**, 10 (Summer): 2-10.
- Boulding, K. E. 1962. **Conflict and Defense: A General Theory**. New York: Harper & Row.
- Bruning, J. L., & Kintz, B.L. 1968. **Computational Handbook of Statistics**. Glenview, IL: Scott, Foresman.
- Caldwell, D. & O'Reilly, C. 1995. **Promoting team-based innovation in organizations: The role of normative influence**, Paper presented at the annual meeting of the Academy of Management. Vancouver, British Columbia.
- Callahan, E.S. & Dworkin, T. M. 1994. "Who blows the whistle to the media and why: Organizational characteristics of media whistle-blowers," **American Business Law Journal**, 32: 151-184.
- Chalk, R., & von Hippel, F. 1979. "Due process for dissenting whistleblowers," **Technology Review** (June-July): 49-55.

Child, J. & Mansfield, R. 1972. "Technology, size and organization structure," **Sociology**, 6: 369-393.

Clegg, S., & Dunkerley, D. 1980. **Organization, Class and Control**. London: Routledge & Kegan Paul Ltd.

Crampton, S.M., & Wagner, JA , III. 1994. "Percept-percept inflation in microorganizational research: An investigation of prevalence and effect," **Journal of Applied Psychology**, 79: 67-76.

Code of Federal Regulations, Title 5, Ch 1. Sec. 432.105. Jan 1997.

Dahl, R. A. 1957. "The concept of power," **Behavioral Science**, 2: 201-215.

Daft, R. L. 1978. "A dual-core model of organizational innovation," **Academy of Management Journal**, 21: 193-210.

_____. 1995. **Organization Theory and Design**, 5th ed. St. Paul, MN: West Publishing.

Deutsch, M.1973. **The Resolution of Conflict**. New Haven, CT: Yale University Press.

Devine, T. M., & Aplin, D. G. 1988. "Whistle-blower protection - the gap between the law and reality," **Howard Law Journal**, 31(2): 223-240.

Dornbusch & Scott, 1975. **Evaluation and the Exercise of Authority**. San Francisco: Jossey-Bass.

Dworkin, T.M., & Baucus, M.S. 1995. **Internal vs. external whistle-blowers: A comparison of the whistle-blowing process**. Paper presented at the annual meeting of the Academy of Management, Vancouver, British Columbia.

Dworkin, T. & Near, J. P. 1987. "Whistle-blowing statutes: Are they working?" **American Business Law Journal**, 25: 241- 264.

Dworkin, T. & Near, J. P. 1997. "A better statutory approach to whistle-blowing," **Business Ethics Quarterly**, 7: 1-16.

Eisenberger, R., Huntington, R., Hutchinson, S., and Sowa, D. 1986. "Perceived organizational support," **Journal of Applied Psychology**, 71: 500-507.

Eisenhardt, K. 1985. "Control: Organizational and economic approaches," **Management Science**, 31: 134-149.

Elliston, F. A. 1982a. "Anonymity and whistle blowing," **Journal of Business Ethics**, 1: 167-177.

Elliston, F. A., Keenan, J., Lockhart, P. & Van Schaick, J. 1985. **Whistleblowing Research: Methodological and Moral Issues**. New York: Prager Publishers.

Enz, C.A. 1986. **Power and shared values in the corporate culture**. Ann Arbor, MI: UMI Research Press.

_____. 1988. "The role of value congruity in intraorganizational power," **Administrative Science Quarterly**, 33: 284-304.

Ewing, D. W. 1980. "How bureaucrats deal with dissidents," in W. Clay Hamner (ed.) **Organizational Shock**: 328-331. New York: Wiley.

Ewing, D. W. 1983. **"Do It My Way Or You're Fired!" Employee Rights and the Changing Role of Management Prerogatives**. New York: John Wiley and Sons, Inc.

Festinger, L. 1950. "Informal social communication," **Psychological Review**, 57: 271-282.

Folger, R., & Konovsky, M. A. 1989. "Effects of procedural and distributive justice on reactions to pay raise decisions," **Academy of Management Journal**, 32: 115-130.

French, J. R. P. & Raven, B. H. 1959. "The bases of social power," in D. Cartwright (ed.), **Studies in Social Power**, Ann Arbor: University of Michigan Press.

Glazer, M.P., & Glazer, P. M. 1989. **The Whistle-blowers: Exposing corruption in government and industry**. New York: Basic Books.

Gleick, E. 1996. "Tobacco blues." **Time**, 147 (11): 54-60.

Graen, G. B., and Scandura, T. A. 1987. "Toward a psychology of dyadic organizing," in L.L. Cummings and B.M. Staw (eds.) **Research in Organizational Behavior** (Vol 9, 175-208). Greenwich, CT: JAI Press.

Graham, J.W. 1986. "Principled organizational dissent: A theoretical essay," in L.L. Cummings and B.M. Staw (eds.) **Research in Organizational Behavior** (Vol 8, 1-52). Greenwich, CT: JAI Press.

Hembroff, L. A. 1987. "The seriousness of acts and social contexts: A test of Black's theory of the behavior of law," **American Journal of Sociology**, 93: 322-347.

Hirschman, A. O. 1970. **Exit, voice and loyalty: Responses to decline in firms, organizations, and states**. Cambridge: Harvard University Press.

Hogan, R., & Emler, N. P. 1981. "Retributive justice," In Lerner, M. J., & Lerner, S. C. (Eds.) **The Justice Motive in Social Behavior: Adapting to Times of Scarcity and Change**: 125-143. New York: Plenum Press.

Hollander, E. P., 1958. "Conformity, status, and idiosyncrasy credit," **Psychological Review**, 65: 117-127.

James, F. "Whistleblower crucial to tobacco settlement," **Dayton Daily News**, June 22, 1997, p.5.

Jones, T.M. 1991. "Ethical decision making by individuals in organizations: An issue-contingent model," **Academy of Management Review**, 15: 366-395.

Kanter, R. M. 1979. "Power failure in management circuits," **Harvard Business Review**, 57 (4): 65-75.

Keenan, J. P., & McLain, D. L. 1992. **Whistle-blowing: A conceptualization and model**. Paper presented at the Annual Meeting of the Academy of Management. Las Vegas, NV.

King, G., III. 1997. "The effects of interpersonal closeness and issue seriousness on blowing the whistle," **Journal of Business Communication**, 34: 419-436.

Lauderdale, P. 1976. "Deviance and moral boundaries," **American Sociological Review**, 41: 660-676.

Levine, J.M., Saxe, L., & Harris, H. J. 1976. "Reaction to attitudinal deviance: Impact of deviate's direction and distance of movement," **Sociometry**, 39: 97-107.

Levine, J. M., Stoka, K. R., & Snyder, H. N. 1977. "Group support and reaction to stable and shifting agreement/disagreement," **Sociometry**, 40: 214-224.

Maass, A., & Clark, R. D. 1984. "Hidden impact of minorities: Fifteen years of minority influence research," **Psychological Bulletin**, 95: 428-450.

Marquardt, D.W. 1980. "You should standardize the predictor variables in your regression models," **Journal of the American Statistical Association**, 75: 87-91.

McGee, G.W., and Ford, R. C. 1987. "Two (or more?) dimensions of organizational commitment: Reexamination of the affective and continuance commitment scales," **Journal of Applied Psychology**, 72: 638-642.

Meithe, T. D., & Rothschild, J. 1994. "Whistleblowing and the control of organizational misconduct," **Sociological Inquiry**, 64: 322-347.

Miceli, M.P., Dozier, J. B., and Near, J. P. 1991. "Blowing the whistle on data fudging: A controlled field experiment," **Journal of Applied Social Psychology**, 21: 301-325.

Miceli, M. P., & Near, J. P. 1984. "The relationships among beliefs, organizational position, and whistle-blowing status: A discriminate analysis," **Academy of Management Journal**, 27: 687-705.

_____. 1985. "Characteristics of organizational climate and perceived wrongdoing associated with whistle-blowing decisions," **Personnel Psychology**, 38: 525-544.

_____. 1988. "Individual and situational correlates of whistle-blowing," **Personnel Psychology**, 41: 267-282.

_____. 1988b. **Retaliation against role-prescribed whistle-blowers: The case of internal auditors**. Paper presented at the 48th annual meeting of the Academy of Management, Anaheim, CA.

_____. 1989. "The incidence of wrongdoing, whistle-blowing, and retaliation: Results of a naturally occurring field experiment," **Employee Responsibilities and Rights Journal**, 2: 91-108.

_____. 1992. **Blowing the Whistle: The Organizational and Legal Implications for Companies and Employees**. New York: Lexington Books.

_____. 1997. Whistle-blowing as anti-social behavior, in **Anti-Social Behavior in Organizations**, Jerald Greenberg and Robert A. Giacalone (eds). New York: John Wiley and Sons.

Miceli, M.P., Van Scotter, J.R., Near, J. P., and Rehg, M. T. 1998. **Responses to perceived organizational wrongdoing: Does the observer make a difference?** Paper presented at the Ethics and Social Influence Conference, Northwestern University.

Muscovici, S., Lage, E., & Naffrechoux, M. 1969. "Influence of a consistent minority on the responses of a majority in a color perception task," **Sociometry**, 32: 365-379.

Near, J. P., & Jensen, T. C. 1983. "The whistle-blowing process: "Retaliation and perceived effectiveness," **Work and Occupations**, 10: 3-28.

Near, J. P. & Miceli, M. P. 1985. "Organizational dissidence: The case of whistle-blowing," **Journal of Business Ethics**, 4: 1-16.

_____. 1986. "Retaliation against whistle-blowers: Predictors and effects," **Journal of Applied Psychology**, 71: 137-145.

_____. 1988. **The internal auditor's ultimate responsibility: The reporting of sensitive issues.** Altamonte Springs, FL: The Institute of Internal Auditors Research Foundation.

_____. 1995. "Effective whistle-blowing," **Academy of Management Review**, 20: 679-708.

_____. 1996. "Whistle-blowing: Myth and reality," **Journal of Management**, 22: 507 - 526.

Near, J. P., Ryan, K. C., & Miceli, M. P. 1995. "Results of a human resources management 'experiment': Whistle-blowing in the federal bureaucracy, 1980-1992," in **Proceedings of the Academy of Management**, 369-373 Vancouver, Canada.

Nemeth, C.J., & Staw, B.M. 1989. "The tradeoffs of social control and innovation in groups and organizations," **Advances in Experimental and Social Psychology**, 22: 175-210.

Neter, J., Wasserman, W., & Kutner, M. H. 1989. **Applied Linear Regression Models (2nd edition).** Homewood, IL: Irwin.

O'Day, R. 1974. "Intimidation rituals: Reaction to reform," **Journal of Applied Behavioral Science**, 10: 373-386.

Office of the Inspector General, 1988. **Agents for Preventing and Detecting Fraud and Waste: A Report on the Tenth Anniversary of the Inspector General Act of 1978**, Department of the Treasury.

Onuf, N. G. 1974. "Reprisals, Rules, Rituals, Rationales," **Center of International Studies**, research monograph 42. Princeton University.

O'Reilly, C. A., & Chapman, J. A. 1996. "Culture as social control: Corporations, cults, and commitment," In L.L. Cummings and B. M. Staw (eds.), **Research in Organizational Behavior** Vol 18, 157-200. Greenwich, CT: JAI Press.

Ouchi, W. G. 1979. "A conceptual framework for the design of organizational control mechanisms," **Management Science**, 25: 833-848.

Parmerlee, M. A., Near, J. P., & Jensen, T. C. 1982. "Correlates of whistle-blowers' perceptions of organizational retaliation," **Administrative Science Quarterly**, 27: 17-24.

Perrow, C. 1970. **Organizational Analysis: A Sociological View**, Belmont, CA: Wadsworth Publishing.

- Perry, J.L. 1992. "The consequences of speaking out: Processes of hostility and issue resolution involving federal whistleblowers," **Best Papers Proceedings of the Academy of Management**, Las Vegas, Nevada.
- Perry, J.L. 1993. "Whistleblowing, organizational performance, and organizational control," in H. George Frederickson, ed. **Ethics and Public Administration**, 79-99, Armonk, NY: M.E. Sharpe.
- Pfeffer, J. 1981. **Power in Organizations**. Marshfield, MA: Pitman Press.
- Pfeffer, J. & Salancik, G. R. 1978. **The External Control of Organizations**. New York: Harper & Row.
- Pooley, E., 1996. "Nuclear warriors," **Time**, 147 (10): 146-154.
- Puffer, S. M. & McCarthy, D. J. 1995. "Finding the common ground in Russian and American business ethics," **California Management Review**, 37: 29-46.
- Pugh, D. S., & Hickson, D. J. 1976. **Organizational structure in its context: The Aston programme**, I. London: Saxon House.
- Pugh, D. S., Hickson, D. J., & Hinings, C.R. 1969. "An empirical taxonomy of work organizations," **Administrative Science Quarterly**, 14: 115-126.
- Reidinger, P. 1996. "Fraud doctors," **ABA Journal**, May 1996: 50-54.
- Scarlicki, D. P., & Folger, R. 1997. "Retaliation in the workplace: The roles of distributive, procedural, and interactional justice," **Journal of Applied Psychology**, 82: 434-443.
- Schachter, S. 1951. "Deviation, rejection, and communication," **Journal of Abnormal and Social Psychology**, 46: 190-207.
- Seagull, L. M. 1995. "Whistleblowing and corruption control: the GE case," **Crime, Law and Social Change**, 22: 381-390.
- Sheppard, B.H., Lewicki, R. J., & Minton, J. W. 1992. **Organizational Justice: The Search for Fairness in the Workplace**. New York: Lexington Books.
- Soeken, K. L., & Soeken, D. R. 1987. "A survey of whistle-blowers: Their stressors and coping strategies," **Proceedings of the Hearing on H.R. 25**, 156-166. Washington, D.C.: U.S. Government Printing Office.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. 1981. "Threat-rigidity effects in organizational behavior: A multi-level analysis," **Administrative Science Quarterly**, 26: 501-524.

Tannenbaum, A. 1968. **Control in Organizations**. NY: McGraw-Hill.

Tedeschi, J.T., Schlenker, B.R., & Bonoma, T.V. 1973. **Conflict, Power, and Games**. Chicago: Aldine Publishing.

United States General Accounting Office. 1993. **Whistleblower Protection: Employees' awareness and impact of the Whistleblower Protection Act of 1989**, GAO/T-GGD-93-19, Washington, D.C.

United States Merit Systems Protection Board. 1984. **Blowing the Whistle in the Federal Government: A comparative analysis of 1980 & 1983 survey findings**. Washington, DC: U.S. Government Printing Office.

United States Merit Systems Protection Board. 1993. **Whistle-blowing in the Federal Government: An update**. Washington, DC: U.S. Government Printing Office.

Vinten, G. 1994. "Whistle-blowing: Fact and Fiction. An introductory discussion," in G. Vinten (ed.), **Whistle-blowing: Subversion or Corporate Citizenship**, 1-20, New York: St. Martin's Press.

Wall Street Journal, 1996. "Allegheny Teledyne Inc.: Settlement of \$11.5 million is reached with the U.S.," December 24: B3.

Watson, D., Clark, L. A., and Tellegen, A. 1988. "Development and validation of brief measures of positive and negative affect: The PANAS scales," **Journal of Personality and Social Psychology**, 54: 1063-1070.

Websters, 1981. **3rd International Dictionary**. Springfield, MA: G.C. Merriam.

Weinstein, D. 1979. **Bureaucratic Opposition**. New York: Pergamon Press.

APPENDIX A. MEASURES FOR STUDY ONE

The following variables are defined using questions from the 1980, 1983 and 1992 MSPB surveys sent to 15, 22 and 22 federal agencies respectively. There were slight changes in wording and question order between surveys, due to changes to other parts of the surveys exclusive of the whistle-blowing questions.

Incidence of Wrongdoing. This was calculated by taking the number of respondents who observed wrongdoing and dividing by the total number of respondents for each year of the study. Respondents answered "yes" or "no" to the following questions (q15-1980, q14/15-1983, q50/51-1992):

During the last twelve months did you PERSONALLY OBSERVE or OBTAIN DIRECT EVIDENCE OF one or more illegal or wasteful activities involving your agency? (Note: Do not answer "yes" if you only read about the activity in the newspaper or heard about it as a rumor.) (Emphasis in the original).

If you said "yes" to question 50, please see the 10 types of activities listed below, select the one that represents the most serious problem, and mark it. (Please mark ONE only).

- a. (employee(s)) stealing federal funds
- b. (employee(s)) stealing federal property
- c. (employee(s)) accepting bribes or kickbacks
- d. waste (of federal funds) caused by ineligible people (or organizations) receiving funds, goods or services
- e. waste (of federal funds) caused by (buying) unnecessary or deficient goods or services
- f. waste (of federal funds) caused by a badly managed (federal) program
- g. use of an (employee(s) abusing his/her) official position for (to obtain) personal benefits (or favors)

- h. unfair advantage given to a (particular) contractor, consultant, or vendor (for example, because of personal ties or family connections, or with the intent of being employed by that contractor later on)
- i. (employee(s)) tolerating a situation or practice which poses a danger to public health or safety
- j. (employee(s)) committing a serious violation of law or regulation (other than those described above)
- k. other (1983 only)

Incidence of Whistle-blowing. This was calculated by taking the number of respondents who reported wrongdoing to a level above family members or co-workers, and dividing by the total number who observed wrongdoing. In 1983, (q19), respondents were not asked to whom they reported the activity, only whether they did report it, with the following note: "Merely discussing the matter with family members or mentioning it informally to co-workers is not a report." Respondents answered the following question (q32-1980, q55-1992):

Did you report this activity to any of the following? (Please mark all that apply.)

I did not report the activity (emphasis in original)

Family member or friend (1992 only)

Coworker

Immediate supervisor

Higher level supervisor

Higher level agency official (1992 only)

Agency Inspector General

Office of Special Counsel

Law enforcement official (1992 only)

General Accounting Office

Union representative

News media

Congressional staff member or member of Congress

Advocacy group outside the Government (1992 only)

Other (1992 only)

In 1983 "Personnel office" was included as a choice.

Incidence of Identified Whistle-blowing. This was calculated by totaling the number of people who reported having identified themselves when blowing the whistle by the total number of people who blew the whistle. In the 1992 and 1983 surveys respondents were asked the following question (1983-q21, 1992-q57):

If you DID report this activity, were you identified as the source of the report?

I did not report the activity. (Emphasis in original) (1992 only)

No, I was not identified.

Yes, I was identified.

In 1980, respondents indicated whether they were identified by the following question (q2701):

If you were identified as the person who reported the activity, what was the effect on you

personally? (Please X all the boxes that apply.)

I was *not* identified as the source of the report. (emphasis in original)

Incidence of Retaliation. This was calculated by dividing the total number of respondents who marked at least one form of retaliation by the total number who reported wrongdoing. Respondents could check whether the action was threatened or actually carried out, making a total of 26 possible affirmative responses to the following question (1980-q34; 1983- q24, 1992 – q60):

Did the reprisal or threat of reprisal take any of the following forms? (Please mark ALL that apply.)

- a. Poor performance appraisal
- b. Denial of promotion
- c. Denial of opportunity for training
- d. Denial of award (1992 only)

- e. Assignment to less desirable or less important duties
- f. Transfer or reassignment to a different job with less desirable duties
- g. Reassignment to a different geographical location
- h. Suspension from my job
- i. Fired from my job (1992 only)
- j. Grade level demotion
- k. Shunned by coworkers or managers (1992 only)
- l. Verbal harassment or intimidation (1992 only)
- m. Required to take a fitness for duty exam (1992 only)
- n. Other

Regression Variables

Comprehensiveness of Retaliation (DV) – The sum of threatened or actual retaliation actions listed under the incidence of retaliation measure.

Race. (measured in 1983 and 1992 only). This is a dichotomous variable to test whether non-whites were subject to greater retaliation (1983-61; 1992-q96). All non-white categories (Blacks, Hispanics, Asian or Pacific Islander Americans and American Indian or Alaskan Native) are put in one category. (0 = non-white, 1 = white).

Gender. (measured in 1983, q60, and 1992, q89, only). This is a dichotomous variable to test whether females are more susceptible to greater retaliation (0= male, 1= female).

Coworker lack of support. This is a dichotomous variable based on the response to the question (1980-q2704; 1983-q2203; 1992-q5804): "My coworkers were unhappy with me for having reported the problem." (0 = support, 1 = non-support).

Supervisor lack of support. This is a dichotomous variable based on the response to the question (1980-q2705; 1983-q2204; 1992-q5805): "My supervisor was unhappy with me for having reported the problem." (0=support, 1=non-support).

Management lack of support. This is a dichotomous variable based on the response to the question (1980-q2706; 1983-q2205; 1992-q5806): "Someone above my supervisor was unhappy with me for reporting the problem." (0=support, 1=non-support).

Seriousness of wrongdoing. Based on a combination of the estimated dollar figure of the observed wrongdoing and the frequency of occurrence of the wrongdoing. Dollar figures broke down as

- | | |
|------------------------|---|
| 1 = less than \$100 | 4 = \$5,000 to \$100,000 |
| 2 = \$100 - \$999 | 5 = over \$100,000 |
| 3 = \$1,000 to \$4,999 | 6 = A dollar value cannot be placed on the activity |

Frequency followed a scale of:

- 1 = Once or rarely 2 = Occasionally 3 = Frequently 4 = Don't know/Can't judge

Where the wrongdoing could not be classified in monetary terms, frequency of occurrence was used. It was assumed that wrongdoing that was expensive or occurred frequently was more serious than wrongdoing that was relatively low-cost or rare.

Responses range from 1 = least serious to 3 = most serious. In 1980 only, respondents could not assign a dollar amount to four of the choices: employee abuse of

position, giving an unfair advantage to a contractor or vendor, tolerating a dangerous situation, and committing a serious violation of Federal law or regulation. In these cases, the frequency of the wrongdoing served as the seriousness value. The following table shows the combination of dollar values and frequencies that were used in assigning a seriousness value to the wrongdoing:

Dollar Value	Frequency	Seriousness value
\$999 or less	Rare, Occasional or Frequent	1
\$1,000 – \$99,999	Rare, Occasional or Frequent	2
over \$100,000	Rare, Occasional or Frequent	3
No dollar value available	Rare	1
No dollar value available	Occasional	2
No dollar value available	Frequent	3

Upper Management Position. This variable was based on the pay category and pay grade of the respondent, which has been shown to correlate highly with job position in the federal government. It combined the answers to two questions (1980 q38 & 39; 1983-q66 & 67; 1992-q92 & 93). Individuals over the grade of 12 who also marked General Schedule, GM, or Executive, SES or equivalent were considered to be in an upper management position (0 = no, 1 = yes).

External Channels Used. This is a dummy variable based on whether the whistleblower used external channels to report the wrongdoing (q32-1980, q55-1992; not measured in 1983):. Those who marked reporting wrongdoing to the Office of Special Counsel, General Accounting Office, union representative, a member of congress, law enforcement official (1992), advocacy group (1992) or the news media were considered to have reported to external channels. (0 = no, 1 = yes).

Pay. Respondents were also asked to indicate their current federal service pay grade, categorized as follows (1980-q39;1983-q67; 1992-q93): 1) grades 1-4; 2) grades 5-8; 3) grades 9-12; 4) grades 13 - 15; 5) over grade 15

Education. Respondents were asked to indicate their highest education level (1980-q44;1983-q65; 1992-q91). The response categories consisted of (1) less than high school diploma; (2) high school diploma or GED; (3) high school diploma or GED plus some college or technical school; (4) four-year college degree; or (5) graduate or professional degree.

Length of Service. This was measured in 1983 and 1992 with the following question:

How long have you worked in your current position?

<u>1983 survey</u>	<u>1992 survey</u>
less than 6 months	less than one year (1992)
6 months to 2 years	1 to 3 years
2 to 5 years	4 to 10 years
6 to 10 years	More than 10 years
More than 10 years	

Job performance. In 1992, respondents were asked to indicate which of the following most closely described the performance rating they received at their last appraisal. Response categories included (1) unacceptable; (2) minimally successful; (3) fully successful; (4) exceeds fully successful; and (5) outstanding.

APPENDIX B. MEASURES FOR STUDY TWO

Informal retaliation – This was a sum of retaliation items listed at q60 of the 1992 survey, which stated:

Did the reprisal or threat of reprisal take any of the following forms? (Please mark ALL that apply):

shunned by coworkers or managers (60112)

verbal harassment or intimidation (60122)

assignment to less desirable or less important duties (6052)

denial of opportunity for training (6032)

In addition, all *threats* to any form of retaliation are considered informal.

Formal retaliation – Using the same survey question as informal retaliation, this was a sum of the following forms of retaliation. They include only actions that actually occurred, not just threatened:

poor performance appraisal (6012)

denial of promotion (6022)

denial of award (6042)

transfer or reassignment to a different job with less desirable duties (6062)

reassignment to a different geographic location (6072)

suspension from my job (6082)

grade level demotion (6092)

fired from my job (60102)

required to take a fitness for duty exam (60132)

Persistence of whistle-blower – this is a sum of the responses to q61 (1992), excluding the first choice and the last choice:

In response to the reprisal or threat of reprisal, did you take any of the following actions? (Please mark ALL that apply)

I took no action

Complained to a higher level of agency management

Complained to the Office of Inspector General within my agency

Complained to some other office within my agency

Filed a complaint through my union representative

Filed a formal grievance within my agency

Filed an EEO (discrimination) complaint

Filed a complaint with the Office of Special Counsel

Filed an action with the Merit Systems Protection Board

I took an action not listed above.

Informal-only retaliation – this was a dichotomous variable created by using the same question used for informal retaliation, q60. In this case, it received values of one if any of the responses were marked, and values of zero if none of the responses were marked.

Formal-only retaliation - this was a dichotomous variable created by using the same question used for formal retaliation, q60. In this case, it received values of one if any of the responses were marked, and values of zero if none of the responses were marked.

Dual-mode retaliation – this was a dichotomous variable created by assigning a value of one to any respondent who marked at least one type of informal and one type of formal retaliation from q60.

VITA

NAME: Michael Thomas Rehg
BORN: St. Louis, Missouri, June 20, 1958

DEGREES: B.S. University of Wyoming, 1980
Wildlife Conservation and Management

M.S. Air Force Institute of Technology, 1990
Logistics Management

Ph.D. Indiana University, 1998
Major: Strategic Management
Minor: Organizational Behavior